

## 2024-2025 College Catalog

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## HOME

Morrisville's 2,000 students, who hail from diverse backgrounds across the state and around the globe, choose from more than 50 bachelor's and associate degree programs that embrace agriculture, technology, business, social sciences and professional studies. Among them are strong programs in specialized areas such as renewable energy and resources, aquaculture, automotive technology, equine science, dairy management, nursing, wood technology, hospitality management, and information technology.

The SUNY Morrisville College Catalog describes our academic programs, including associate and bachelor's degrees, certificates and minors, and the criteria for completing them when starting in the indicated academic year. Along with a list of classes offered, the publication also provides a summary of student services, academic requirements and procedures, and other planning information.

### Disclaimer

SUNY Morrisville makes every reasonable effort to provide accurate information in the contents of this catalog; however, the college reserves the right to make changes at any time without prior notice. It is strongly recommended that students regularly check this catalog for possible changes.

SUNY Morrisville reserves the right to make such changes as it determines, in its sole discretion, to be necessary or advisable in its regulations, course offerings, staff and financial policies without notice. Changes to rules and policies may occur at any time and could be applied to currently matriculated students.

The college also reserves the right to change or discontinue graduation requirements, department majors, individual courses, instructors and all other aspects of college operations. In the event the college determines to make changes in curriculum, it will post these changes as soon as practical within this online catalog.

If colleges or majors are discontinued, or if substantial changes in requirements for degrees are made, the college will endeavor to allow students disadvantaged by the change to continue under existing programs and requirements. As a general rule, these types of substantial changes will only be made effective each fall semester.

## **ABOUT SUNY MORRISVILLE**

### The College

Located in scenic Central New York, SUNY Morrisville is a model of innovative applied education — a place where students begin crafting exciting careers through real-world experiences.

Morrisville's 2,000 students, who hail from diverse backgrounds across the state and around the globe, choose from more than 50 bachelor's and associate degree programs that embrace agriculture, technology, business, social sciences and the liberal arts. Among them are strong programs in specialized areas such as renewable energy, environmental conservation, aquaculture, automotive technology, equine science, dairy management, nursing, wood technology, hospitality management and information technology.

The college's Norwich Campus, located 30 miles south of Morrisville, also offers associate degree programs in industrious career and technical areas, as well as liberal arts transfer programs.

As home of the Mustangs, SUNY Morrisville boasts 16 intercollegiate athletics programs which compete at the NCAA Division III level.

Established in 1908 as a college of agriculture, the institution became a founding member of the State University of New York (SUNY) in 1948 under the name New York State Agricultural and Technical Institute at Morrisville. The college underwent various name changes as it expanded its offerings throughout the following decades, before undergoing a new brand identity and establishing the name SUNY Morrisville in 2018.

# A College that Works in a System that Excels

#### Vision

SUNY Morrisville aspires to be a recognized leader in innovative applied education.

#### Mission

SUNY Morrisville works to offer diverse learning experiences so that graduates may pursue rewarding lives and careers, become engaged citizens, and contribute to our collective future.

Morrisville Works to:

#### **Inspire Learning through Experience**

Goal 1: To offer career-focused, experiential learning

Goal 2: To promote inquiry and scholarship at all levels

Goal 3: To enhance cultural competency and promote equity and inclusion

#### **Build Community**

Goal 4: To create a vibrant campus community for personal interaction and growth

Goal 5: To engage the local community in civic and cultural affairs

Goal 6: To promote regional, statewide and international partnerships

#### Achieve a Sustainable Future

Goal 7: To develop campus resources and operations with minimum resource footprint

Goal 8: To achieve effective and sustainable levels of required resources

Goal 9: To assess and document success in achieving the College's mission

### The SUNY Morrisville Campus

The Morrisville campus stretches over 150 acres of bucolic land in Morrisville, NY. More than 48 buildings, athletics fields, service roads, parking facilities and more than 1,000 acres of farm and woodland create an original instructional environment.

Emphasizing a hands-on approach of learning by doing, SUNY Morrisville features action-oriented learning labs and true-to-life facilities — many of which are rare or one-of-a-kind in higher education. This commitment to applied education includes a wide array of campus-based enterprises and institutes which are run by students. These operations are campus-supported and integrated into aligned academic programs, with course outcomes requiring that students become engaged in the plans, operations and sustainability of these enterprises.

The college's 10 on-campus residence halls offer a range of lifestyle options, including a "quiet" dorm, single and double rooms, split-double and split-triple rooms, and suite-style apartments. Special housing accommodations also can be arranged through the Office of Residence Life. The campus also boasts a Student Activities Center, Fitness Center, Recreation Center, IcePlex and numerous dining options.

SUNY Morrisville is located in the Village of Morrisville on Route 20, 30 miles southeast of Syracuse and 30 miles southwest of Utica, while being a half-hour drive from the New York State Thruway to provide easy access to Albany (two hours), Rochester (two hours), Buffalo (three hours) and New York City (four hours). Travel connections to the college by air are made at Hancock International Airport in Syracuse and train connections are made in both Syracuse and Utica. The college is serviced directly by Chenango Valley Bus Lines on a daily basis, with connecting service from Utica or Binghamton via Shortline Bus Lines.

### **The Norwich Campus**

The Norwich Campus (http://www.morrisville.edu/norwich/ programs/) offers quality, personalized education and training to residents and employers of Chenango County and south central New York. The campus is located 30 miles south of Morrisville in downtown Norwich, NY, in the state-of-the-art Roger W. Follett Hall.

Currently serving approximately 250 commuter students, the campus offers a supportive and technologically infused learning environment that complements a variety of associate degree programs and features "smart" classrooms, computer and science laboratories, a library, a café and other campus services.

SUNY Morrisville began its commitment to Norwich and Chenango County in 1968, when an agreement was reached between the SUNY Morrisville Office of Continuing Education and the Norwich City School District to offer courses at Norwich Senior High School. SUNY Morrisville operated as an extension site in Norwich until 1988, when branch campus status was attained and provided the opportunity to offer degree programs in their entirety. The Norwich Campus has since served more than 21,000 full- and part-time students. Headquartered at the Norwich Campus and serving Chenango County Schools, The Liberty Partnerships Program (http://www.morrisville.edu/ contact/liberty-partnerships-program/) is a cooperative 12-month program designed to inspire and empower middle and high school students to complete high school and seek college admission or advanced workforce- training opportunities.

# Syracuse Educational Opportunity Center (EOC)

The Syracuse Educational Opportunity Center (EOC) (http:// www.morrisville.edu/educational-opportunity-center/), administered by SUNY Morrisville, provides the urban community of Syracuse with innovative academic programs leading to higher education, as well as vocational and workforce development training programs leading to gainful employment and economic self-sufficiency. The Syracuse EOC is part of a statewide network of 10 education opportunity centers and two outreach and counseling centers that function as the 65th campus of the State University of New York (SUNY).

The Syracuse EOC, established in February 1969 by SUNY, was first known as SEEK (Search for Education, Elevation, and Knowledge) and operated through a network or Cooperative College Centers. The center's name was changed to the Educational Opportunity Center in 1973 and administration was assumed by SUNY Morrisville. During its history, the SEOC has grown in the number of students served and in the variety of programs offered. Today, SEOC offers over 20 programs as well as employment services and computer access. Their mission remains the same: to provide qualified and motivated individuals with valuable education and career resources.

### The State University of New York

The State University of New York (SUNY) (http://www.suny.edu/) is the largest comprehensive university system in the United States. Our impact in New York State and across the globe begins with our 64 institutions, including research universities, academic medical centers, liberal arts colleges, community colleges, colleges of technology and an online learning network. We serve nearly 1.3 million students, including nearly 600,000 in credit bearing courses and programs and more than 700,000 through continuing education and community outreach programs. Our nearly 3 million SUNY alumni are located around the globe, each making their own unique impact.

### **Registration & Accreditation**

The College is chartered by the Board of Regents of New York State, which has registered all of its degrees and programs. Authorization is granted by the New York State Department of Education - Division of Higher Education (http://www.highered.nysed.gov/) to confer the degree of Bachelor of Science (BS), the degree of Bachelor of Technology (B.Tech.), and the degree of Bachelor in Business Administration (B.B.A.)., the degree of Associate in Applied Science (A.A.S.), Associate in Science (A.S.), and Associate in Arts (A.A.), and the degree of Associate in Occupational Studies (A.O.S.).

SUNY Morrisville is an accredited institution and a member of the Middle States Commission on Higher Education (http://www.msche.org/) (MSCHE) www.msche.org. SUNY Morrisville's accreditation status is Accreditation Reaffirmed. The Commission's most recent action on the institution's accreditation status on June 21, 2022 was to reaffirm accreditation. MSCHE is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation (CHEA).

Morrisville also holds specialized program accreditation from the following accreditors:

- · Accreditation Commission for Education in Nursing
- · Accreditation Council for Business Schools and Programs
- · Accreditation Council for Education in Nutrition and Dietetics
- Society of American Foresters
- The National Automotive Technicians Education Foundation

## **COLLEGE COMMUNITY**

### **Student Affairs**

The staff in the Student Affairs Division focus on developing an engaging community, supporting student success, and engaging in diversity, equity, and inclusion initiatives. Our Mustang community is representative of many ages, backgrounds, cultures, and experiences.

A wide range of activities and services for all students complement and enhance the educational experience. The following Departments are all key parts of the Student Affairs Division: Athletics & Intramurals; Diversity, Equity, & Inclusion; the Health Center; Residence Life; Student Activities; Student Rights & Responsibilities; Title IX; and University Police.

#### **Athletics & Intramurals**

Athletics (http://morrisvillemustangs.com/) at SUNY Morrisville are as much a part of college as academics. We believe the total college experience should be a balance of activities both in and out of the classroom. We offer the opportunity for students to get involved in a variety of intercollegiate and intramural activities.

Morrisville is a member of the National Collegiate Athletic Association (NCAA) Division III and administers 17 intercollegiate athletic teams.

The student-athletes who wear green and white for the Morrisville Mustangs are part of a proud tradition of team competition and enjoy a school spirit that fosters a dedicated following, and an equal commitment to a tradition of academic and athletic excellence.

#### **Diversity, Equity & Inclusion**

The staff of the Office of Diversity, Equity and Inclusion (http:// www.morrisville.edu/contact/offices/diversity-equity-inclusivity/) is dedicated to creating and supporting an environment that promotes diversity in all forms. The college carries out this initiative through international coffee hours, cultural fairs, International Education Week activities, student clubs and organizations, and much more.

Each year the Sheila Johnson Institute (SJI) awards grants to faculty and staff that fund opportunities for students who promote leadership and diversity. SJI also provides matching funds for the Empire State Diversity Honors Scholarship Program, CSTEP, STEP, and EOP, all of which benefit students from historically underrepresented backgrounds.

#### Office of Student Rights and Responsibilities

The Office of Student Rights and Responsibilities (http:// www.morrisville.edu/contact/offices/office-of-student-rights-andresponsibilities/) (OSRR) promotes a campus climate where community members feel safe and secure in their environment to engage in their academic program of study and socialize in a safe and responsible manner.

The OSRR is responsible for communicating the College's behavioral expectation via enforcement of the Student Code of Conduct and other college policies. This is accomplished through the judicial system that is educational and progressive, as it seeks to educate students about the consequences of their behavior by holding them accountable for the choices they make. It is progressive in sanctioning in that students who continue to make poor choices and violate the Student Code of Conduct

or College policies, regardless of severity, are held accountable and may be removed from the College community, if deemed necessary.

#### OSRR goals:

- To address student misconduct through a multi-partial, educational, judicial system.
- · To promote a positive, safe, and civil campus climate.
- · To treat students in a fair and respectful manner.
- To educate the campus community on the Student Code of Conduct, judicial processes, and restorative justice processes.

SUNY Morrisville utilizes Maxient, a secure, web-based application for Case Management for administering the Campus Judicial Process. The application will send you important notifications. The emails will come from "notifications@maxient.com." These are authentic emails from the application. They are not SPAM or phishing attempts. Please add them to your contacts so you won't miss any important updates. These notifications will come to your SUNY Morrisville email only.

In addition to a brief explanation, the body of the email will contain a link to your notification letter. You will access your letter through a login page, using your SUNY Morrisville username and password.

Once logged in to the Maxient portal, you can access your letter, which will be a PDF document. Print or download and save the letter for your records.

#### **Residence Life**

As a college of agriculture and technology, SUNY Morrisville is a unique educational institution combining technical and academic offerings in a residential campus setting. Residence Life (http:// www.morrisville.edu/life-on-campus/residence-life/) at SUNY Morrisville provides a comfortable living environment with a range of resident halls including double rooms, suites, apartments with full kitchens, single rooms and quiet-study halls. Residence halls provide an opportunity for autonomy and affiliation in a supportive environment and serve as centers for organized social, cultural and educational activities.

#### **Student Activities**

Your Student Activities Office (http://www.morrisville.edu/contact/ offices/student-activities/) offers a variety of academic, cultural, recreational and social programs, events and opportunities for students to participate in at SUNY Morrisville. The office encourages all students, new and returning, to get involved in clubs and organization and activities, there is something for everyone!

The staff is ready to assist and advise students in many areas. Student Activities produces the Co-Curricular Transcripts, and develops and/or participates in organizing many of the programs and services that occur throughout the school year, including Welcome Weekend and Mustang Weekend.

The Student Activities program includes more than 30 clubs, 10 organizations, intramurals, open recreation, theater, music and numerous events and services implemented throughout the Student Government Organization (SGO) and the Campus Activities Board (CAB). Events and programs offer alcohol and drug free alternates for students. The mandatory student activity fee supports these programs and events.

There is never a reason to be bored at Morrisville; there is always something to do. We offer movies, basketball tournaments, dances, live performers, game shows, plays, concerts and soccer tournaments; just to name a few events.

Check out our events list for a complete list of events with dates and times. Weekends and nights are worth staying around for; see what we have to offer.

The Student Activities Office offers students the opportunity to enhance or start their Co-Curricular Transcript (CCT). Students that participate in worthwhile campus or off-campus activities may complete a CCT that can serve as a valuable supplement to your college transcript for scholarships, awards, and future job searches. The CCT is an official record that is verified by either an advisor or supervisor listing the various developmental activities outside the classroom. Activities that can be put on your CCT are leadership development, professional and educational development, awards, honors and recognitions, student organizations, club and activity participation, community service, intercollegiate athletics and peer advising.

#### **Student Government Organization**

The Student Government Organization (SGO) (http:// www.morrisville.edu/sgo/) is an integral part of Student Activities at SUNY Morrisville, serving the entire student body. SGO's goals are to promote the general welfare of the student body, to stimulate interest in and support activities contributing to cultural, social, educational and physical improvement, and to establish a just college community.

SGO supports many programs and events on campus including the Music Department, Theatre Department, Mustang Radio, Campus Activities Board (CAB), Mustang Outreach and Volunteer Efforts (MOVE), Norwich Campus Activities Board (N-CAB), Intramurals, Open Recreation and the clubs. There are many clubs and organizations at SUNY Morrisville that students may participate in depending on their interests and career objectives. Participation in co-curricular activities will enrich students total college and life experiences. The best way to discover more about a single group is to attend a meeting, visit the club advisor or inquire at the Student Activities Office.

SGO funds many educational and social activities during the year such as dances, intramurals, and performers. They achieve this with funds gathered through the Mandatory Student Activity Fee. SGO maintains an off-campus housing list as an alternative to living in the residence halls.

Get involved with SGO and help make your experience here at SUNY Morrisville successful and memorable.

## **STUDENT SERVICES**

### Student Support Services Accessibility Services

The philosophy of the Accessibility Services Office (https:// www.morrisville.edu/contact/accessibility-services/) at SUNY Morrisville is to provide students with the opportunity to obtain an education which will aid them in living a full and independent life. Accordingly, assistance is available for those students with physical, psychological, and learning impairments.

Available services include individual assistance for academic, personal, and career concerns; liaison with the student and the Adult Career and Continuing Education Services - Vocational Rehabilitation (ACCES-VR) and other services agencies; assistance in obtaining tutors, interpreters, note takers, audio-visual and library materials designed for specific assistance; special parking accommodations, preferential housing, ramps, and elevator keys. Service animals are also permitted pending proper documentation. Note: service animals should perform work or tasks directly related to the person's disability. Class scheduling, housing arrangements and rest room facilities are designed to facilitate access. These support services are intended to encourage students to participate in all phases of college life.

While Section 504 of the Rehabilitation Act of 1973 designates responsibilities of the institution, we recognize that the student is responsible for notifying the college of any disability so that appropriate attention may be given.

#### **Academic Advising**

At SUNY Morrisville, faculty are actively involved in academic advising. All matriculated students are assigned a faculty adviser in their major area. Students are encouraged to meet with their adviser regularly throughout each semester. Students may also take advantage of the Campuswide Advising Center (http://www.morrisville.edu/contact/campuswide-advising/).

#### **Campus Store**

The Campus Store (http://www.morrisville.edu/contact/offices/campusstore/), operated by Morrisville Auxiliary Corporation (MAC), is located on the lower level of the Butcher Library. In addition to facilitating necessary textbooks and course materials, the store has a large selection of merchandise items designed to enhance the college experience.

#### **Career Services**

Career Services (http://www.morrisville.edu/contact/offices/careerservices/) provides a range of services and resources to assist students in defining and achieving their individual career goals. The office educates and guides students on all aspects of the career development process, from identifying and exploring career options to writing resumes, cover letters, and personal statements; networking; conducting internship and job searches; preparing for interviews; negotiating job offers; and applying to transfer and graduate programs. Career Services is also the central resource for finding on-campus jobs and for information on the employment and educational outcomes of alumni within the first year of graduation.

Students can connect with the office through individual advising inperson or phone appointments, drop-in hours, campus-wide and in-class workshops, and events such as the Job & Internship Fair, Healthcare Employer Expo, and guest speakers. The office offers many resources through its website, including Handshake, the college's new career management system; FOCUS2, one of the most effective self-assessment tools for students; and CandidCareer.com, and What Can I Do With This Major? for career exploration. Career Services works with students from both the Morrisville and Norwich campuses, as well as recent alumni.

#### **Children's Center**

The Children's Center (http://www.morrisville.edu/contact/offices/ childrens-center/), located on the SUNY Morrisville campus, is an Early Care and Education Program setting the example of quality in Madison County. Licensed and nationally accredited, the center offers programming that stimulates the minds of young children while building a foundation of learning through play.

The Children's Center strives to provide a learning environment that welcomes families and children into a safe, caring community that promotes a healthy lifestyle. Fostering an environment of respect and continuity, the program works closely with each child's family to provide individualized care. Collaborations and connections with community agencies expand the opportunities offered to families and children.

#### **College ID Services**

Your College ID Card (http://www.morrisville.edu/contact/college-idservices/college-id-faq/) is a necessary part of life on campus. It is used as a picture ID for admission to student functions on campus, meal plan and Dining Plus Points usage at dining facilities, building entrance at resident halls, computer labs and select classrooms, and it carries Campus Cash (declining balance account that can be used at any dining facility on campus, vending machines, Campus Store, and select off-campus locations including the Copper Turret). It also provides identification to check out materials at the campus Library.

#### **College Science Technology Entry Program (CSTEP)**

CSTEP (http://www.morrisville.edu/contact/offices/cstep-step/cstep/) is a New York State Education Department (NYSED) grant-funded program geared to increase the number of historically underrepresented students and/or economically disadvantaged students interested in careers in science, technology, engineering, mathematics (STEM) fields, health-related & licensed professions. Services provided include research/internship/professional development opportunities, individual advisement, hands-on activities, and dedicated study space. These initiatives are geared to support and challenge the students' academic, professional, and personal growth as scholars. The CSTEP office is located in Helyar Hall, 315-684-6009.

#### **Dining Services**

Dining Services (http://www.morrisville.edu/contact/offices/dining/ dining-services/) believes that providing great food at a great value to our campus community is the starting place. From there, we have provided dining spaces that are welcoming environments that our students enjoy. Our involvement and interest for our students does not end with a meal; we are active in supporting their educational experience in addition to providing events that are just plain fun!

#### **International Student Services**

The International Student Resources team (https://www.morrisville.edu/ contact/offices/international-student-resources/), in conjunction with other college offices, attempts to meet the individual academic, social and other intangible needs of international students. At SUNY Morrisville, an emphasis is placed on students becoming actively engaged in learning from their American experience. The college encourages and supports this approach to international education. International students at SUNY Morrisville are successfully participating in the classroom, living with their American counterparts in residence halls, competing on sports teams and are leaders in student clubs.

#### Library

The SUNY Morrisville Library (https://www.morrisville.edu/library/) is an innovative learning environment dedicated to empowering all members of the college community to become confident and independent thinkers guided by the effective use of information resources.

The Donald G Butcher Library (http://www.morrisville.edu/donald-gbutcher-library/) is located on the Morrisville Campus and The Everett A. Gilmour Memorial Library (http://www.morrisville.edu/library/about/ about-norwich-campus-library/) serves the Norwich Campus.

The Donald G. Butcher Library provides a wide array of information services and resources and is open weekdays, nights, and weekends when classes are in session. The Norwich campus library is open on weekdays. Services include wireless access, comfortable study areas, computer work stations, a document scanner, and quick print computer stations as well as reference consultations, interlibrary loan, and information literacy instruction. Librarians are available to assist all members of the campus community in finding, accessing, and using information from library and outside information resources. The library's online catalog, course and subject guides, digital course reserves, and electronic resources can be accessed from anywhere on or off campus, 24 hours a day, seven days a week via the library's web page.

#### **Technology Services**

Technology Services (http://www.morrisville.edu/contact/technologyservices/) at Morrisville prides itself on comprehensively incorporating technology into academic life through extensive use of state-of-the-art wired and wireless connectivity, resiliency of services and security.

The Technology Services department is responsible for the planning, implementation, and management of technology in support of college operations, in-person or remote delivery of instruction and capacities for new technology in the "Internet-of-Things" era.

Every SUNY Morrisville student access to high speed, high availability wireless and internet connectivity. Students have access to a plethora of college and academic services online such as the selection of housing, class schedules, financial aid, dining services, study groups and more.

#### Transportation

The MAX (Morrisville Area Xpress) (http://www.morrisville.edu/contact/ transportation-office/max-morrisville-area-xpress/) campus shuttle service is specifically designed to support the commuting needs of SUNY Morrisville students. MAX offers daily after-hour and weekend shuttles, Shop 'N Ride trips, transportation for academic field trips and to nursing clinical sessions.

Megabus stops on campus several times weekly. You can find the current schedule and purchase tickets at megabus.com (https:// us.megabus.com/)

#### **Tutoring Center - Morrisville Campus**

The Tutoring Center (http://www.morrisville.edu/contact/tutoringcenter/), located in Butcher Library, is the central tutorial location for the campus. The mission of the Tutoring Center is to provide learning assistance that supports students' academic success, independence, and confidence. We help students learn how to learn so they can achieve their academic goals. Academic assistance is available in most subject areas taught at the campus. The costs for tutoring are covered in the tuition and fees that students have already paid, so there is no out-ofpocket charge to work with tutors.

Part-time peer and professional tutors are available both by appointment and on a walk-in basis. Students can book tutoring appointments using Starfish. Tutoring sessions take place one-on-one between a single student and a tutor or in small groups of students working on the same course with a tutor. Both face-to-face and virtual/online tutoring sessions are available.

The Tutoring Center also offers workshops for students that are known as Student Success Seminars (SSS). Presented by Tutoring Center staff as well as faculty and staff from other departments, SSS sessions explore topics such as time management, taking notes, test anxiety, and professionalism.

For more information, please email TutoringCenter@morrisville.edu.

#### Student Health Center Health Services

### The Matthias Student Health Center (http://www.morrisville.edu/life-oncampus/health-center/), located on campus, is committed to providing

confidential, high-quality, student-centered physical and mental health care to currently enrolled SUNY Morrisville students.

Services provided at the Student Health Center are covered by your mandatory student health fee and are available at no additional cost.

#### **Counseling Services**

Counseling Services (http://www.morrisville.edu/contact/health-center/ counseling-services/) approaches all student concerns with a holistic view. Emotional health is an important component of a student's wellbeing. Counseling services are available in the Matthias Student Health Building, located behind the John W. Stewart Center for Student Activities (STUAC).

Counselors provide mental health counseling services and consultations at the Student Health Center in a confidential, respectful and safe setting. Counselors listen objectively and assist students with personal, social, and emotional concerns and guide students in the process of exploring options, identifying goals and possible outcomes in order to help them reach their full potential. Consultation services are also available regarding all mental health topics.

Counselors in the Student Health Center are involved in outreach services to the college community by presenting programs and workshops, as well as information tables on important mental health and social issues.

## **ADMISSION INFORMATION**

SUNY Morrisville Admissions Office (http://www.morrisville.edu/ admissions/) considers applicants without reference to race, color, religion, national origin, sex, age, handicap, sexual orientation, marital or parental status. The credentials of each applicant are evaluated on an individual basis and admission is granted to those who have the potential for success in the curriculum of their choice.

SUNY Morrisville does not offer an open enrollment admission policy. Students are admitted to specific curricula rather than to a general program.

Although an interview is not required for admission to the college, students are encouraged to visit the campus during the admission process, meet with program faculty members, and discuss admission and enrollment procedures directly with an admission adviser.

Admission is offered on a space available basis. All of the information provided is reviewed holistically to make the best decision possible for both the applicant and the college. Some programs may attain full enrollment and close throughout the year. A student may be admitted to an alternate major when the desired major is full or if the admissions committee deems that enhanced academic credentials are required for the requested major.

Are you ready to be a Mustang? We have all the information you need to make your decision and complete a First Year Admission (http://www.morrisville.edu/contact/admissions/i-am-a/freshman-admissions/) application.

Students who have earned college level credit after high school graduation or equivalency will apply through Transfer Admission (http://www.morrisville.edu/transfer/).

Readmission (http://www.morrisville.edu/contact/offices/admissions/ i-am-a/readmission/) to SUNY Morrisville is for students who have previously been enrolled in a degree program and wish to return to school.

### **Access Programs**

#### Advancing Success in Associate Pathways (ASAP) & Advancing Completion through Engagement (ACE) Programs

Advancing Success in Associate Pathways (ASAP) and Advancing Completion through Engagement (ACE) at SUNY Morrisville is a comprehensive program designed to help students complete their degrees on time. ASAP/ACE provides a range of financial, academic, and personal support, including intensive academic advisement and career counseling, as well as cost of attendance and textbook awards with a monthly financial stipend.

#### Arthur O. Eve Educational Opportunity Program (EOP)

The State University of New York's Educational Opportunity Program (EOP) (http://www.morrisville.edu/contact/offices/educationalopportunity-program/what-eop/) provides access, academic support and financial aid to students who show promise for succeeding in college but who may not have otherwise been offered admission. Available primarily to full-time, matriculated students, the program supports students throughout their college careers within the University. EOP strives to support all students in their efforts to become successful college students thereby progressing to successful professional careers.

#### Collegiate Science & Technology Entry Program (CSTEP)

SUNY Morrisville's Collegiate Science & Technology Entry Program (CSTEP) is a scholars program designed to increase the number of students from under-represented populations who are pursuing professional licensure and careers in mathematics, science, technology and health-related fields. CSTEP prepares students through academic enrichment opportunities including, but not limited to:

- · Semesterly financial support for books
- One-on-one success coaching
- · Academic support in gateway courses (ex. math, science, writing)
- Standardized test preparation (ex. TEAS, NCLEX, GRE)
- Personal and professional development workshops (ex. financial wellness, professional networking, resume building, entrepreneurship)
- Mentorship opportunities
- Financial support for internships, special projects, and faculty led research
- Travel to regional, state, and national conferences

### **Articulation Agreements**

SUNY Morrisville has established articulation agreements (http:// www.morrisville.edu/articulation-agreements-list/) with several high schools and BOCES campuses through the development of articulation agreements. Students who successfully complete an approved Career & Technical Education program will be granted college credits upon fulltime matriculation at SUNY Morrisville, typically after the first semester or year of coursework. Proper documentation from the student's high school and/or BOCES campus is required. Proof of program/course completion and a minimum GPA are requirements that must be met in order for credits to be granted. Students must adhere to the requirements specific to each articulation agreement in order to earn college credit.

### **New Student Orientation**

Orientation is the first step in making a smooth transition to life at SUNY Morrisville. Our Online Orientation (http:// onlineorientation.morrisville.edu/) provides you all the tools and resources you need to navigate your college career. The seven modules can be completed anytime, anywhere and at your own pace.

Topics Covered:

- Campus Technology Resources
- Student Success Network
- Community Standards & Safety
- Campus Life
- Health & Wellness
- Next Steps

## **COST & AID INFORMATION**

### **College Costs**

https://www.morrisville.edu/costs-aid/college-costs (https:// www.morrisville.edu/costs-aid/college-costs/)

We know that paying for college is a big deal. We're here to help! Here you'll find what you need to know about tuition, fees, housing and meal costs, as well as great resources for meeting those expenses through scholarships and financial aid.

### **Financial Aid**

https://www.morrisville.edu/costs-aid/financial-aid (https:// www.morrisville.edu/costs-aid/financial-aid/)

No matter which college you choose to apply to, there are steps you can take to ensure that you receive assistance in paying for your education.

We've outlined the process for you, both with facts you need to know about financial aid at any college and with details about the different forms of aid that are available at SUNY Morrisville.

- 1. To receive federal loans or grant money, you'll have to complete a FAFSA (https://studentaid.gov/h/apply-for-aid/fafsa/) (Free Application for Federal Student Aid) form and renew it every year.
- 2. If you're a New York State resident, you can complete a TAP (Tuition Assistance Program) application at Higher Education Services Corporation (http://www.hesc.ny.gov/) to determine whether you are eligible to receive New York State grant money.
- In addition, a wide variety of scholarships and awards (http:// www.morrisville.edu/scholarships/) and other forms of assistance are available at SUNY Morrisville. For more information, please go to the Financial Aid (http://www.morrisville.edu/contact/offices/ financial-aid-office/) office to learn all about them.

SUNY Smart Track (https://www.suny.edu/smarttrack/). No matter your financial situation, you'll benefit from the SUNY Smart Track Financial Literacy website. Click on the Smart Track link and register to learn how to budget your money, understand credit before you use it, and how to start saving money for an emergency fund.

### **Housing Costs & Rates**

https://www.morrisville.edu/costs-aid/housing-costs-rates (https:// www.morrisville.edu/costs-aid/housing-costs-rates/)

Residence hall life is an integral part of your college experience. You'll have several living options to choose from at SUNY Morrisville.

On-campus residency also includes a dormitory services fee of \$425 per semester — this includes laundry, cable and wifi. Please note that all residents are required to have a meal plan.

For more information regarding housing policies and to apply for housing, visit Residence Life (http://www.morrisville.edu/life-on-campus/ residence-life/).

### **Meal Plans**

https://www.morrisville.edu/costs-aid/meal-plans (https:// www.morrisville.edu/costs-aid/meal-plans/) You can choose from several meal plans at SUNY Morrisville. If you live on campus, you'll be required to purchase a meal plan that can be used at all campus dining facilities.

Your meal plan purchase includes a number of meals per week, up to 14, and a Dining Points amount, which is a declining-balance account used for additional food purchases at campus dining locations and at the Copper Turret Restaurant (https://www.morrisville.edu/contact/ offices/copper-turret/). Meal plans and Dining Points are non-taxable, non-refundable, and can be used only while classes are in session.

The minimum meal plan requirement for Commons residents is the Commons Combo.

**Campus Cash**, formerly known as Mustang Money, is a declining balance account securely encoded on your ID that can be used for purchases at MAC locations including Campus Stores, vending machines, dining centers and participating off-campus locations. Once funds are added, simply present your ID at any participating location and your account will automatically be debited for the purchase amount. Since your balance is printed on your receipt after each transaction, you will always know how much money remains in your account. No more worrying about loss or theft by carrying cash or credit cards! There are no fees associated with Campus Cash\*. Refunds can be requested at the end of the academic year in the Spring or when you separate from campus (i.e. withdrawing from school, transferring to another school, etc.). Purchases are taxable. Campus Cash may not be used for cash advances.

### **Scholarships & Awards**

https://www.morrisville.edu/scholarships (https://www.morrisville.edu/scholarships/)

Scholarships are generated from a variety of sources including from alumni, friends of the college, local foundations, and industry partners.

By filling out one application, students will be considered for all Foundation scholarships unless a supplemental application is specifically required.

Scholarships are separate from financial aid programs, like TAP and workstudy, which a student must apply for separately on an annual basis. Scholarship applications are due each year on March 1 and awards are announced by April 1. If awarded a scholarship from SUNY Morrisville, it will automatically be applied to the student's account. Scholarships are awarded based on a multitude of factors, including academic excellence, major/study, geography, and personal achievements. Because scholarships are privately funded, student recipients are required to write a note of thanks to their individual donor.

### **Student Refunds**

In cases where a student's bill is paid entirely, and there is a remaining credit on the student's account, a refund is issued and mailed home to the address of record. SUNY Morrisville does offer students the option to set up direct deposit to have these refunds issued directly to their bank accounts.

To sign up for direct deposit:

- Sign into Web for Students (http://www.morrisville.edu/webstudents/)
- · Go to Student Information & Financial Aid.
- View the student's account.

At the bottom of the student's account page, click the blue button for "E-Billing & Payments", this will redirect your to our billing and payment system.

Select "Manage refunds" and follow the prompts.

Direct deposit of refunds will hit student's bank accounts within 2-3 business days from the date the refund was processed.

## **ACADEMIC INFORMATION**

### SUNY Morrisville Institutional Learning Outcomes

Upon successful completion, SUNY Morrisville students should be able to:

- Demonstrate professional readiness through service, leadership, innovative technology, and structured reflection in applied learning and in various campus life venues.
- Use communication skills in composing written texts that effectively inform or persuade, and to engage in discussion, debate, and public speaking in a manner suitable to the listener(s) and the discourse.
- Employ critical thinking and creativity in a variety of learning, experiential, or community contexts.
- Practice quantitative and scientific reasoning in several learning settings.
- Apply information literacy abilities to effectively discover information, to understand how information is produced and valued and to use information ethically in communities of practice.
- Engage in communication and collaboration across diverse communities and organizations and reflect on the experience.
- Recognize, adapt, or apply sustainable and ethical practices within social, economic, and environmental spheres in multiple settings.

# Center for Workforce & Community Development

The Center of Workforce and Community Development's (https:// www.morrisville.edu/workforce-development/) mission is to serve students, industry partners, and community stakeholders to strengthen life-long learning through applied experiences, enrichment programming, and relevant workforce programs.

For additional information, contact the Workforce & Community Specialist at (315) 684-6390, workforce@morrisville.edu, microcredentials@morrisville.edu

The mission of the Center of Workforce and Community Development is to achieve student success and community enrichment by providing accessible, applied, and innovative quality education and support services to diverse adult learners in pursuit of lifelong learning, training, career advancement, and pathways to college.

The mission is delivered through multiple Institutes, Centers, Workforce programs, and Micro-credentialing, including but not limited to:

#### The Manufacturing Training Institute

The Manufacturing Training Institute works with organizations that seek to provide employees with professional development opportunities.

Instruction uses a hybrid method of hands-on learning and online instructional modeling, activities, and assessments; the SUNY Morrisville Manufacturing Training Institute offers a customizable and affordable solution to your company's technical training needs. Our flexible format allows you to tailor training sessions around a schedule that works best for you and your employees, and our portable equipment allows training to occur either on our campus or directly at your worksite. Serving the region at both the Morrisville and Norwich Campuses. For more information, contact the Morrisville Campus at (315) 684-6390, workforce@morrisville.edu.

#### The Human Services Institute

The role of the Human Services Institute is to be a resource for students, the college, and the community through the development of ongoing partnerships, workforce programs, and collaboration between the human service program, college faculty and staff, and human service professionals in Norwich (and Chenango and Madison counties). Contact the Norwich Campus at (607) 334-5144.

#### **The Environmental Training Center**

The Environmental Training Center (http://www.morrisville.edu/contact/ offices/environmental-training-center/) provides water and wastewater treatment courses and certification in New York State at the Morrisville Campus.

Working closely with the New York State Department of Environmental Conservation and the New York State Department of Health, we are continually evaluating and making improvements to all of the programs we offer in an effort to meet professional expectations and needs. The instructors for all courses are experienced educators and possess extensive training in the wastewater and water fields.

For additional information, contact the

Environmental Training Center Morrisville State College Crawford Hall, 3rd Floor Morrisville, NY 13408

Phone: 315-684-6082, Fax: 315-684-6609, https://etc.morrisville.edu/ (http://www.morrisville.edu/environmental-training-center/)

### **Distance Education**

Distance Education at SUNY Morrisville (http://www.morrisville.edu/ contact/offices/provost-office/distance-education/).

Courses that utilize online instructional technology at SUNY Morrisville can be divided into three categories: fully online, hybrid and hyflex. A description of each instructional method can be found on SUNY Morrisville's Distance Education webpage. Please note, that fully face-toface courses may contain required online components.

Students should be prepared for the requirement to use a computer in any course they register for at SUNY Morrisville regardless of whether it is a fully online, blended or face-to-face section. Questions regarding the types of activities required in a specific course or section should be directed to the course instructor.

#### **Online Course Access**

Students access all of their online courses through Brightspace, the SUNY Morrisville learning management system. Students log into Brightspace with their Morrisville campus login credentials.

#### **Brightspace Instruction**

SUNY Morrisville transitioned from Blackboard to a new Learning Management System (LMS) named Brightspace (https:// www.morrisville.edu/mustangs/everyone/brightspace/) by Desire2Learn (D2L) at the beginning of Summer 2023. With 55 other SUNY Campuses, SUNY Morrisville uses one unified Brightspace platform. Students and faculty could use Morrisville or other SUNY campuses' credentials to verify their identity to log in to Brightspace and access courses at all campuses.

Besides Brightspace instruction, SUNY Morrisville also provides the necessary supports of other technologies for students in the online learning environment. There are many useful technical tools and reading materials that help student succeed in the online learning. Students can get to know these resources available through their Brightspace account or they can contact SUNY Online Help Desk at 1-844-673-6786 or 1-518-320-1300 (direct).

#### **Get Course Materials**

On-campus students can pick up books at the campus store. Off-campus students can order books online or by calling the campus bookstore at 315.684.6073. Students are also responsible for providing and assuring the functionality of all technological/computer components necessary for the successful completion of online courses.

### **Center for Lifelong Learning**

The Center for Lifelong Learning (http://www.morrisville.edu/contact/ offices/registrar/center-lifelong-learning/) coordinates the SUNY Morrisville campus continuing education programs for students of all ages. Services include College registration for part-time students and credit-bearing courses at off-site locations. For additional information, contact the Registrar's Office at 315-684-6066.

### **Transcript Requests**

Official transcripts may be ordered securely online 24 hours/7 days a week using Parchment. The cost for each transcript is \$10 per transcript and must be paid by using a credit or debit card online. Additional fees may apply depending on delivery option. Holds on a student record may prevent transcript orders from being processed.

Current students with access to Web for Students can order copies of their official SUNY Morrisville transcript easily through their student portal. Alumni and recent students can order their official SUNY Morrisville transcript using the online order form on the Request Official Transcripts (https://www.morrisville.edu/mustangs/alumni/requestofficial-transcripts/) webpage by clicking on the "Submit an Order Using Parchment" button. You may check the status of your order online at any time. Support for online ordering is available by calling the Registrar's Office directly at 315-684-6066.

Unofficial transcripts are available by logging into Web for Students online. If you no longer have access to your student portal, please contact the Registrar's Office directly.

## **ACADEMIC POLICIES**

General Academic Policies - all academic policies have been approved by College Senate and the Provost. SUNY Morrisville makes every reasonable effort to provide accurate information regarding current academic policies; however, the college reserves the right to make changes at any time without prior notice. It is strongly recommended that students regularly check this catalog for possible changes.

### AP.1 Family Educational Rights & Privacy Act (FERPA) Policy

The Family Educational Rights and Privacy Act (*FERPA*) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal *law* that protects the privacy of student education records. The *law* applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

#### **AP.1.1 Definitions**

**Student:** any person who attends or has attended SUNY Morrisville, for the time period in which they were a student. Persons who are not officially enrolled for a particular term but who have a continuing relationship as a student with the College are considered students.

**Education Records:** any record (in handwriting, print, tapes, film, electronic, or other medium) maintained by and entrusted to SUNY Morrisville or an agent of SUNY Morrisville, which is directly related to a student **EXCEPT:** 

- 1. Records which are in the sole possession of the maker, used only as a personal memory aid and which are not accessible to any other person except a substitute.
- 2. University Police records created and maintained by University Police for law enforcement purposes.
- 3. Medical or psychological records maintained for diagnosis and treatment.
- 4. Employee records of student employees.
- Information relating to an applicant who does not attend SUNY Morrisville and alumni records about an individual who no longer attends SUNY Morrisville.

School Official: School officials include SUNY System Administration, and other SUNY colleges who have been determined to have legitimate educational interests (i.e., necessary to fulfill her/his professional responsibility). A school official is employed by the College in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff, a person or company with whom the College has contracted), a person serving on the Board of Trustees, or a student serving on an official committee such as a disciplinary or grievance committee or assisting another school official in performing her/his tasks.

A school official has a legitimate educational interest if the official is performing a task related to the student's education, a task related to the discipline of the student, or providing a service or benefit relating to the student or the student's family such as health care, counseling, job placement, or financial aid.

**Custodian of Record:** An office or college official responsible for maintenance of records in furtherance of her/his duties.

### AP.1.2 Right to Inspect and Amend Education Records

Students have the right to inspect and review their education records. Students should submit to the appropriate record custodian a written request which identifies as precisely as possible the record or records to be inspected. The record custodian, or an appropriate college staff person, will make the needed arrangements for access as promptly as possible and will notify the student of the time and place where the records may be inspected. Access must be given within 45 calendar days or less from the receipt of the written request. When record information contains information about more than one student, the student may inspect and review only the specific information about the requesting student. Appendix A lists Education Record Custodians at SUNY Morrisville (records and list are not exhaustive).

#### Amendment of Education Records

Students may ask the College to amend a record they believe is inaccurate, misleading, or in violation of their right of privacy. Following are the procedures for amendment of records:

- 1. The student must make a written request to the custodial office responsible for the record, precisely identify the part of the record they want changed and specify what is inaccurate, misleading, or in violation of the student's right of privacy.
- SUNY Morrisville may comply with the request or may decide not to comply. If it decides not to comply, the College will notify the student of the decision within 45 calendar days and advise the student of the right to a hearing to challenge the information believed to be inaccurate, misleading, or in violation of the student's rights.
- Upon request, SUNY Morrisville will arrange for a hearing and notify the student, reasonably in advance, of the date, place and time of the hearing.
- 4. The student shall be afforded a full and fair opportunity to present evidence relevant to the issues raised in the original request to amend the student's education record. The student may be assisted by one or more individuals, including an attorney.
- 5. If the custodial office maintaining the record reports to a Vice President, the hearing will be conducted by the Vice President (or designee) responsible for the supervision of this office.
- 6. If the custodial office maintaining the record is a Vice President, the hearing will be conducted by the President (or designee).
- 7. SUNY Morrisville will prepare a written decision, within 10 business days of completion of the hearing, based solely on the evidence presented at the hearing. The decision will include a summary of the evidence presented and the reasons for the decision.
- 8. If SUNY Morrisville determines that the challenged information is not inaccurate, misleading, or in violation of the student's rights of privacy, it will notify the student that a statement commenting on the challenged information and/or statement setting forth reasons for disagreeing with the decision may be appended to the record.

#### AP.1.3 Right of College to Refuse Access

SUNY Morrisville reserves the right to refuse a student or applicant request to access to the following records:

- 1. The financial statement of the student's parents.
- 2. Letters and statements of recommendation for which the student has waived the right of access.

- Records connected with an application for admission to attend SUNY Morrisville or another unit of the State University of New York if that application was denied.
- 4. Those records which are excluded from the FERPA definition of education records (20 USC §1232g (a) (4); 34 CFR §99.3).

For those records that contain information on more than one student, the requesting student has the right to view only those portions of the record that pertain to his or her own education record. Personally identifiable information of others may be redacted.

#### **Refusal to Provide Copies of Records**

SUNY Morrisville reserves the right to deny to the student transcripts or copies of records not required to be made available under FERPA if the student has any accrued debts or outstanding obligations, owed to the College or to any agency thereof.

#### **AP.1.4 Fees for Copies of Records**

The fee for copies of education records is identical to current processing cost of student transcript.

#### AP.1.5 Disclosure of Education Records to Third Party

SUNY Morrisville will disclose information from a student's education records only with the written or electronic consent of the student, **EXCEPT**:

- To school officials, SUNY System Administration, campus-related entities (e.g. Auxiliary Services Corporation), persons employed by or under contract to the campus to perform special tasks (e.g. attorneys or auditors), students serving on official committees (e.g. disciplinary or grievance committees) or assisting another school official in performing his or her professional responsibility and other SUNY colleges who have been determined to have legitimate educational interests.
- 2. Upon request to officials of another school in which a student seeks or intends to enroll.
- To certain federal, state, SUNY, and local education officials in connection with certain federal or state supported education programs.
- In connection with a student's request for or receipt of financial aid, as necessary to determine the eligibility, amount, or conditions of that aid.
- If required by a state law concerning the juvenile justice system which law requires disclosure and which was adopted before November 19, 1974.
- 6. To organizations conducting certain studies/research for or on behalf of the College, educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs and improving instruction, if such studies are conducted in such a manner as will not permit the personal identification of students and their parents by persons other than representatives of such organizations, and such information will be destroyed when no longer needed for the purpose for which it is conducted.
- 7. To accreditation organizations in order to carry out their accrediting functions.
- 8. To comply with a judicial order or a lawfully issued subpoena after making a reasonable effort to notify the student in advance.
- 9. To appropriate parties in a health and/or safety emergency.

- When the student and SUNY are engaged in litigation SUNY Morrisville may disclose to the court education records that are relevant to the litigation.
- 11. To an alleged victim of any crime of violence as that term is defined in Section 16 of Title 18 USC, or a non-forcible sex offense, the final results of any disciplinary proceeding conducted by the campus against the alleged perpetrator of that crime or offense with respect to that crime or offense if the College determines as a result of the disciplinary proceeding that the student committed a violation of the College's rules or policies with respect to such crime or offense.
- 12. To anyone the final results reached on or after October 7, 1998 in a disciplinary proceeding in which a student has been determined to have perpetrated a crime of violence or non-forcible sex offense and a violation of College rules or policies.
- 13. To the parents of a student under the age of 21: information that the College has determined that the student has committed a disciplinary violation relating to alcohol or a controlled substance.
- 14. To Veterans Administration Officials pursuant to 38 USC 3690 (c).
- 15. To the Military: Directory information as it is presently defined under the Solomon Amendment, even if the institution has not designated such information as directory information in its policy. (Directory information that must be released to the Military: student's name and address, telephone listing, date and place of birth, class level, academic major, degrees received, and the educational institution in which the student was most recently enrolled. Information that is not required to release to the Military: directory information, but only if the student has requested that the College not release such information to anyone, information the institution certifies it does not have, and information not defined as directory information.)
- 16. Where the information to be disclosed is designated as Directory Information.

#### AP.1.6 Record of Requests for Disclosure

SUNY Morrisville record custodians will maintain records of all external requests for, and/or disclosures of, information from a student's education records for as long as those records are maintained. The record will indicate the name of the party making the request, any additional party to whom it may be re-disclosed, and the legitimate interest the party had in requesting the information. The record of requests may be reviewed by the parents of eligible students.

Record keeping is not required if disclosure is to:

- The student
- · A school official with a legitimate educational interest
- · A party with written consent from the student
- · A party seeking directory information
- A federal grand jury or law enforcement agency pursuant to a subpoena that by its terms requires non-disclosures

#### **AP.1.7 Student Consent to Release Information**

If a student wishes to grant access to student academic information to a particular party (e.g. parent, legal guardian), they must complete the Consent for Access form found on the registrar's webpage (https:// www.morrisville.edu/contact/offices/office-of-registrar/) or in the Registrar's Office.

#### **AP.1.8 Departmental Releases**

The Dean of Students office requires signed consent to exchange information for anyone that wants to allow a third party to review their redacted discipline record. This form is available in Residence Life and the Dean of Students Offices. Discipline records are covered in the Student Handbook, Student Code of Conduct.

#### AP.1.9 Right to File a Complaint

Students are afforded the right to file a complaint with the U.S. Department of Education concerning alleged failures by SUNY Morrisville to comply with the requirements of FERPA by contacting:

Family Policy Compliance Office US Department of Education 400 Maryland Avenue, SW Washington, DC 20202-4605

#### **AP.1.10 Personally Identifiable Information**

Information may be shared by a school official in furtherance of her/his duties for educational purposes. When information is requested by nonschool officials, the request must be reviewed according to the following criteria. There are two categories of student information relevant to this policy. The first, Personally Identifiable Information, is data that SUNY Morrisville will not share without written consent of the student. The second, Directory Information, is data that may be shared without written consent of the student. Exceptions are possible based on federal and state legal statutes.

Disclosure of directory information is discretionary rather than mandatory. SUNY Morrisville has the right to disclose Directory Information to some persons/entities but not others. Requests for student directory information that meet a legitimate College interest, and which are in compliance with Information Resources security policies, must be addressed to the Student Registration and Record Services Office for approval.

#### Personally Identifiable Information (consent needed)

- · Email addresses that are not assigned by SUNY Morrisville
- · Date and place of birth
- Social Security number
- Campus ID or digital identity
- Citizenship
- Race
- Gender
- Religion
- · Grades including mid-semester evaluations
- Schedule of classes
- · Withdrawal date
- Vehicle registration plate number
- Driver's license number
- Credit card numbers
- Criminal record
- Name(s) of student family members
- · Address(es) of student family members

## AP.1.11 Directory Information (no consent needed for release)

- Name
- Permanent address
- Telephone number(s) (other than local number as listed in the Campus Information Directory)
- · SUNY Morrisville e-mail address
- · Local telephone number as listed in Campus Information Directory
- · Local Address as listed in Campus Information Directory
- Individual photograph or electronic image
- Class standing
- · Age in years (does not include birthdates of individual student)
- Academic Major
- · School of Study
- Dates of attendance
- Degree(s) earned
- · Honors, awards, special recognitions, scholarships
- Participation in officially recognized college activities, events, and sports
- · Height and weight (student athletes only)
- · Student's most recent educational institution attended

#### **AP.1.12 Student Request for Confidentiality**

Any student who wishes his/her directory information to be unlisted must submit a written request to the Registrar - advisably by the end of the first week of the semester. Thereafter, the student's directory information will remain unlisted until the student requests otherwise.

#### AP.1.13 Consent to Use of Photographic Images

Registration as a student and attendance at or participation in classes and other campus and College activities constitutes an agreement by the student to the College's use and distribution (both now and in the future) of the student's image or voice in photographs, videotapes, electronic reproductions, or audiotapes of such classes and other campus and College activities.

#### AP.1.14 Education Record Custodians at SUNY Morrisville

Records and list are not exhaustive.

- Student Registration and Record Services: maintains the academic records for all undergraduate and graduate students; and is responsible for the official college transcript for all students.
- Financial Advisement Office: maintains all records relating to student financial aid (other than students/parents/guardians income tax returns for FAFSA).
- Bursar, Student Accounts Office: maintains records relating to student payments, receipts, exchanges, refunds, residence hall damage charges, unmet financial obligations, issues related to TAP certification and New York State residency.
- Educational Opportunity Program Office: maintains records relating to EOP students including personal, financial and academic records.
- Academic Department Offices: maintains unofficial academic documents, and department information for faculty and students within each respective department.

- · Dean of Students: maintains student discipline records.
- · Payroll Office: maintains student employment records.
- Residence Life and Housing Office: maintains student housing records including current address, records of residence hall disciplinary actions, requests for single rooms and accommodations for special housing needs, residence hall damage assessments, and resident assistant employment information.
- Career Services Office: maintains records relating to career planning and job or graduate/professional school placement.
- International Programs Office: maintains records, personal data, and recommendations relating to overseas academic programs.
- Advisement Office: maintains information relating to student academic performance and advisement related information.

### **AP.2 The Grading System**

Information on Grades, Different Grade Modes (S/F, P/NP) Grade Points, Calculating GPA, Course Drops, Withdrawal from College

#### **AP.2.1 Grades & Grading**

#### Associate & Bachelor's Degree Grades & Grading

Letter grades are used to indicate student success in achieving the specific purposes of a course. The grading system designates:

LETTER GRADE	SIGNIFICANCE
A, A-	signifies a superior knowledge of a body of material, its function & interpretation.
B+, B, B-	signifies an above-average knowledge of a body of material and its function.
C+. C. C-	signifies an average knowledge of a body of material.
D+, D	signifies a minimum knowledge of a body of material.
F	signifies failure to attain a minimum knowledge of a body of material.

A letter grade of A through F is employed when both of the following criteria are met:

- the performance of each student is monitored and evaluated by the instructor with some specific measure of each student's cognitive achievement;
- 2. the nature of the course and the measure(s) of student achievement employed lend themselves to the full range of grades (A through F).

#### **Master's Degree Grades & Grading**

Letter grades are used to indicate student success in achieving the specific purposes of a course. The grading system designates:

LETTER GRADE	SIGNIFICANCE
A, A-	signifies a superior knowledge of a body of material, its function & interpretation.
B+, B, B-	signifies an above-average knowledge of a body of material and its function.

C+, C	signifies an average knowledge of a body of material, but not passing for graduate work.
C-, D+, D, F	signifies failure to attain a minimum

#### **AP.2.2 Additional Grade Modes**

#### Associate & Bachelor's Degree Additional Grade Modes

LETTER GRADE	SIGNIFICANCE
(I)	Imputed credit
S	Satisfactory indicates meeting minimum criteria for passing the course
U	Unsatisfactory indicates failure to meet minimum criteria for passing the course
Р	Passed
NP	Not passed
Х	Dropped Course
W	Withdrew from institution prior to end of week 10
WP	Withdrew from institution after week 10, passing course at time of withdrawal
WF	Withdrew from institution after week 10, failing course at time of withdrawal
I	Incomplete
NR	Not reported by faculty

#### **Master's Degree Additional Grade Modes**

LETTER GRADE	SIGNIFICANCE
Х	Dropped course
W	Withdrew from institution prior to end of week 10
WP	Withdrew from institution after week 10, passing course at time of withdrawal
WF	Withdrew from institution after week 10, failing course at time of withdrawal
I	Incomplete
NR	Not reported by faculty

#### AP.2.3 Calculating the Grade Point Average

#### **Quality Points/Grade Point Average**

A student's level of scholarship is determined by the following system of quality points per semester hour of credit:

GRADE	QUALITY POINTS
A	4.0
A-	3.67
B+	3.33
В	3.0
В-	2.67

C+	2.33
С	2.0
C-	1.67
D+	1.33
D	1.0
F	0.0

Grade point averages are determined by dividing the total number of quality points by the total number of credit hours for which a student has been graded. For example, a grade of C in a three-credit-hour course is equivalent to six quality points.

The following grades do not yield quality points and are not added into the divisor in the GPA calculation:

LETTER GRADE	SIGNIFICANCE			
S	Satisfactory indicates meeting minimum criteria for passing the course			
U	Unsatisfactory indicates failure to meet minimum criteria for passing the course			
Р	Passed			
NP	Not passed			
Х	Dropped course			
W	Withdrew from institution prior to end of week 10			
WP	Withdrew from institution after week 10, passing course at time of withdrawal			
WF	Withdrew from institution after week 10, failing course at time of withdrawal			
I	Incomplete			
NR	Not reported by faculty			

The grade point average is computed each semester to determine GPA. After the first semester, the cumulative GPA is computed by dividing the total number of quality points earned to date by the total number of credit hours completed to date. The GPA is computed only on credits earned at Morrisville. Transfer credit from other colleges is not included in the computation.

#### **AP.2.4 Imputed Credit**

Imputed credit courses are remedial/developmental courses that do not count as credit towards graduation.

Imputed credit courses are identified on the transcript by an (I) following the letter grade.

The list of courses meeting these areas can be found in the SUNY Morrisville Catalog.

#### AP.2.5 Satisfactory/Unsatisfactory

Satisfactory and unsatisfactory grades are entered on the student's transcript but are not used in computing grade point averages.

Satisfactory grades are included into total credits towards degree completion.

A grade of F in a S-F course does not disqualify the student from Dean's or President's list.

Courses which may be graded either S (satisfactory) or F (failure) are designated as such when the course is proposed and approved.

#### **AP.2.6 Pass/Not Pass**

- A grade of P will earn regular credit toward graduation but will not be included in calculation of the cumulative average.
- A grade of NP will be recorded on transcript but will not be included in calculation of the cumulative average.

This option should be considered by a student who wishes to explore an area of interest outside his/her current major degree requirements without such a course affecting the GPA, and only in consultation with their advisor and college Dean

The rules for the selection of the Pass-Not Pass option are as follows:

- it is the responsibility of the student to make sure s/he selects P-NP courses within the rules of this college and with the approval of the advisor and Dean.
- the course must be selected by the student before the end of the 20th day of each semester; the P-NP option form must be submitted to the Registrar's office before the end of the 25th day of instruction each semester.
- no more than one lower division and one upper division course of four hours or less may be selected, for a total of one course for an Associate's degree program and two courses for a Bachelor's degree program.
- Only one course may ever be taken P-NP within a minor. (Some courses are offered only on a Pass-Not Pass basis; such courses would not prevent students from selecting this additional course on a Pass-Not Pass option.)
- once the form is filed in the Registrar's office, the student may not change back to a conventional grade (A-F) for that course, nor may s/ he change from a conventional grade to a P-NPF option.
- the P-NP option is not available for imputed credit courses or courses which are designated to be graded S/F. This is effective beginning the spring semester 1994.

#### Procedure:

- Pass/Not Pass request form must filled out and signed by the student and advisor.
- the space provided under "Advisor Comment" is to be used by advisors to indicate their views concerning the P-NP selection.
- the form should be sent to the proper school office to be reviewed and signed by the Dean. It will be filed in the student's folder and forwarded to the Registrar's office. Once processed, copies of the form should be sent to the appropriate people (as indicated at the bottom of the form).
- The grade mode for the course will be updated in Banner and in the faculty & student web portals

#### AP.2.7 Dropped Course – X Grade

• Students may drop a course after the fifth instructional day and before noon of the last instructional day of week ten (10) of the semester.

- A course drop will result in an X grade on the student permanent record.
- A dropped course is not counted in total credits or in the calculation of grade point average.
- After the first two weeks of classes, a student will be charged \$20 per form for a student-initiated course drop, add, or delete.

#### AP.2.8 Withdrawal from College - W Grades

- 1. Registrar's office assigns W, WP, WF grade to all courses when student is properly withdrawn from college.
- 2. Students withdrawing within the first 10 weeks will receive a grade of "W" for all courses.
- Students withdrawing after the tenth week of the semester will receive grades of "WP" (withdraw passing) or "WF" (withdraw failing) as assigned by the faculty.
- 4. Students wishing to withdraw after completing a course of less than 15 weeks who wish to keep the earned grade will not be processed a withdrawal. The remaining ungraded courses will be processed as drops on the transcript.

#### **AP.2.9 Incomplete Grades**

- Incomplete (I) indicates that the student has not completed the course and that a grade is being withheld until the work is performed and approved.
- The Incomplete (I) will automatically change to an F for students unless the incomplete is converted to regular letter grade by the end of the last day of classes of the following semester.

#### Rules for Incomplete Grades:

- 1. An incomplete may be given only when circumstances leading to a student's failure to complete course requirements are known to be beyond the student's control. "I" may be given for extended illness, incapacity due to accident or situations producing unavoidable periods of absence from class or final exams. The form to be completed for an I grade is available in each Dean's office.
- 2. Student must meet requirements for the I graded course by the end of the week 14 week of the following semester. If not made up it becomes an "F." Extensions may be granted with agreement of the faculty member and approval of the Provost.
- 3. "I" grade is not computed in the Grade Point Average.
- 4. Students with "I" in courses graded A-F are ineligible for honors, Dean's List, President's List.
- 5. An "I" grade which does not reflect the student's actual achievement may be changed at a later date, thus qualifying the student for Dean's List status. At this time, a retroactive Dean's List letter should be issued.

### **AP.3 Course Audit Policy**

Course auditing consists of class attendance and participation at a cost of \$50.00 per course with no academic credit to the auditing Individual. A \$50.00 fee will be charged for each course audited. Auditing of courses is allowed by permission of the School Dean and course instructor. Auditing privileges shall not deny enrollment to regularly enrolled students. Per SUNY policy, senior citizens (age 60 or above) may audit courses on a space available basis free of charge. Neither adherence to normal academic requirements nor grades are required for course auditors. Restrictions on admission to courses with educationally necessary prerequisites and with extensive laboratory or individualized studio activities are subject to the discretion of the School Dean and the course instructor.

### **AP.4 Special Project Guidelines**

Students taking "Special Project" courses may earn up to three credit hours for courses designated as Special Projects in their associate degree and an additional three hours credit for Special Projects in their baccalaureate program.

A total of six Special Project credits may be awarded in a baccalaureate program with three credits coming at the lower division level and three from the upper division level. Students at the associate's level will not be given credit for upper division level Special Projects.

Students registering for three one credit Special Projects must do so by the end of the first week of the semester; students registering for two one credit Special Projects must do so by the end of the fifth week of the semester; and students registering for a single one credit Special Project must do so by the end of the tenth week of the semester.

First semester students are not restricted from registering for a Special Project. However, this course offering assumes that the student possesses a certain degree of academic maturity. For some students, it may not be in their best interest to register for a Special Project during their first semester of study.

Students who are not in their first semester of study must have maintained an overall GPA of 2.0 or better in order to register for a Special Projects course. Students are required to work at least 45 hours per credit hour. This will include any formal meetings with the instructor, any lab related work and any outside work. This should be clearly stated in the description of the Special Project course offering in the course catalog.

No non-faculty may offer a Special Project without the direct advisement and approval of faculty members from the school in which the course is being offered.

Any faculty offering a Special Projects course must submit written documentation at the beginning of the project that describes the goal, activities, and outcome of the project. This documentation must be included in the student's permanent file.

A similar form will be used for all schools. The form will require five signatures: the student, advisor, faculty supervisor, Dean of the student's school, and the Dean of the crediting school.

There is no restriction on the number of special projects students a faculty member may have during a particular semester.

### **AP.5 Cross Registration**

SUNY Morrisville supports students who wish to cross-register for a course at another SUNY College.

Cross registration is primarily intended to resolve scheduling conflicts for required courses that would delay timely program completion. By providing access to required courses at other SUNY campuses, cross registration allows students to complete requirements in situations where a course or courses are unavailable at their home campus. Home Institution = the institution where you are matriculated. Host Institution = the institution you are seeking to take additional courses with.

- 1. Students must be in good academic standing and be registered for at least half of the credits at their home institution (e.g. enrolled in a minimum of 6 credit hours at Morrisville) to cross-register.
- 2. Only courses that will transfer into your program will be approved. Credit courses must be applicable toward the student's degree at SUNY Morrisville as a required or elective course for their primary degree or certificate.
- 3. SUNY cross-registration is offered only for fall and spring semesters. Winter and summer courses are not included.
- 4. Credits earned through cross-registration are recorded on the Morrisville transcript as a transfer course.
- Cross-registered courses do not count towards residency course requirements for graduation.
- 6. You must have the approval of the Home and the Host institution. You are responsible for ensuring that the courses meet the requirements of your degree.
- Please be advised that even if you have the permission of the instructor or have satisfied the pre-requisites necessary for enrollment at the Host institution, you still need to fill out the Online SUNY cross-registration form in order to be considered to be officially cross-registered on the course.
- 8. Registration deadlines vary by college. Students are responsible for contacting the host institution for registration related dates and deadlines.
- 9. If you are not enrolled for a minimum of 12 credit hours applicable to your degree (combined enrollment between your Home and Host institution) by the date in which you incur full liability, you may be disqualified for certain aid programs (e.g. TAP, Excelsior Scholarship, etc.).
- 10. If you drop a course and your combined load is less than 12 credit hours, then you may be liable as the Financial Aid may have to be adjusted.
- 11. Student's submission of the cross-registration form through the secured online form will allow both institutions to communicate to coordinate the cross-registration process. Please have all the information about the course you intend to cross-register (course number, course title, credit hours, etc.) prior to submitting the form.
- 12. Any immunizations requirements by the Host institutions are the responsibility of the student.
- Students seeking to register at a Community College must also comply with the Certificate of Residency requirement for the Host College.
- 14. Cross-registering for a course is the responsibility of the student. Once you submit your online cross-registration form, you must check your email for communications from the Home and the Host institutions.

Students must adhere to the Host institution academic policies and procedures like dropping a course, adding a course, withdrawing from the Host institution, attendance, grades, etc. All students taking a course at another SUNY college must abide by all appropriate regulations, honor systems, parking regulations and the like at the host institution.

### **AP.6 Request to Change Catalog Year**

The catalog year is what ties the student to the catalog year curriculum that they are required to follow and determines the contract of degree requirements a student must fulfill in order to graduate.

The catalog year defaults to the same semester that the student matriculated in a degree program.

Students are eligible to change their catalog year if it is to their benefit and approved by their academic advisor and academic dean. Any changes to a student's catalog year may result in additional, reduced or updated degree requirements.

It is important to note that students must use a single catalog and cannot use a combination of catalogs for graduation.

By changing catalog terms, a student is responsible for fulfilling all of the graduation requirements in their newly chosen catalog year.

Catalog change requests must be submitted by the last day of the prior semester.

### **AP.7 Course Substitutions & Waivers**

Course substitutions should be submitted by the Academic Dean's Office to allow a course not normally permitted, to fulfill an academic requirement. The Academic Dean is responsible for ensuring that the learning outcomes, subject matter, and materials correspond or have significant overlap, in consultation with appropriate faculty.

Course substitutions should ideally be submitted prior to the student enrolling into the course as it may cause implications for financial aid otherwise.

If a student would like to request that a substitution be done within their major, they will work with their Academic Advisor to make the request by submitting the Degree Required Course Substitution/Waiver form to the Department Chair and Academic Dean.

If the request for course substitution is approved, it will be reflected on the student's Degree Works audit.

Course substitutions are applied only to the degree and program the student is matriculated into at the time of the request.

### **AP.8 Graduation**

Requirements for Graduation and Degree Conferral

#### **AP.8.1 Requirements for Graduation**

Students must meet the degree requirements of the catalog for which they are matriculated.

Major and minor degree requirements must be within the same catalog year.

A student may move into a later catalog year if it is advantageous for the student's degree completion to do so. Students must seek guidance from their academic advisor before considering changing their catalog year.

A lapse of attendance requires readmission and will result in a change in the student's catalog.

#### **Associate Degree Requirements**

To qualify for the AA, AS, AAS or AOS degree, the candidate must complete the minimum credits, must meet the course and distributive requirements of his/her program, must earn a minimum cumulative GPA of 2.00, and must satisfy the SUNY General Education requirements. No developmental courses may be applied toward the credits needed for graduation.

#### **Bachelor Degree Requirements**

To qualify for the BBA, BTech, BS degree, the candidate must complete the minimum number of credits, must meet the course and distributive requirements of his/her program, must earn a minimum cumulative GPA of 2.00 and must satisfy the SUNY General Education requirements. No developmental courses may be applied toward the credits needed for graduation.

#### **Master of Science Degree Requirements**

To qualify for the Master of Science degree, the candidate must complete the minimum number of credits, must meet the course and distributive requirements of his/her program and must earn a minimum cumulative GPA of 3.00. No more than two "C" grades may be used to meet graduation requirements. No undergraduate courses may be applied toward the credits needed for graduation.

#### AP.8.2 Conferring of Degrees

SUNY Morrisville will confer degrees and issue diplomas in May, August and December.

Students graduating from a program of study must be enrolled in that curriculum by the end of the administrative add/drop period in the semester they plan to graduate.

Students receiving an "I" grade on a course required for graduation are eligible to graduate in the semester the "I" changes to a grade.

Students using transfer credits to complete degree requirements shall be graduated and issued diplomas according to the following schedule:

- Transcripts received on campus between September 16 and January 15 will result in a December degree.
- Transcripts received on campus between January 16 and June 15 will result in a May degree.
- Transcripts received on campus between June 16 and September 15 will result in an August degree.

#### AP.8.3 Statute of Limitations on Degree Completion

#### **Return After an Absence from the College**

Any student may return to the college to satisfy degree requirements within a seven-year period after matriculation in a degree program. The student may need to enroll or re-enroll in additional coursework to complete degree requirements and must satisfy residency requirements set forth in policies #6201 and/or #6202. In particular, in the event that the requirements for a program change while a student is separated from the college, the student may be requirements, subject to the approval of the Academic Dean after consultation with the appropriate faculty.

#### **Transfer Courses from Another College**

A student may satisfy degree requirements at SUNY Morrisville by taking courses at another college and transferring those credits back to Morrisville within a seven (7) year period following matriculation at this college (subject to residency requirements). The courses to be transferred shall have prior approval of the appropriate academic dean. Further, any student not completing his/her prescribed degree program within seven years after matriculation at SUNY Morrisville may need to enroll or re-enroll in additional course work because of changes in the curriculum, subject to the approval of the Academic Dean after consultation with the appropriate faculty.

#### AP.8.4 Course Limits - Athletic & Music Credits

A student may earn physical education credit by participating in the intercollegiate athletic program at SUNY Morrisville. Students are scheduled into these course sections by the Registrar's Office from lists submitted by the director of athletics at the beginning of each term. All physical education courses will be graded S (satisfactory) or F (failing) and will not be calculated in the cumulative grade point average.

A maximum of four (4) hours of physical education credits can be applied towards degree requirements.

A student may also earn credit for participating in a music ensemble. The ensemble director shall provide a list of ensemble participants to the registrar at the beginning of each term. A student must be scheduled into a different ensemble course each term. A student cannot receive credit more than once for the same course.

#### **AP.8.5 Residency Requirements**

#### **Residency Requirement – Associate Degree**

All students in two-year programs shall complete a minimum of 30 credit hours in residence at Morrisville.

The following types of successfully earned credits shall contribute toward a student's residency requirement:

- · Any Morrisville credits earned from courses taught on- or off- campus
- · Any distance learning courses originating or received at Morrisville

The following types of credits will not contribute toward a student's residency requirement:

- · Credits transferred from another institution
- · Credit awarded for successful completion of a course examination

Specific program majors may require up to 15 of the 30 credits in selected Morrisville courses

#### **Residency Requirement – Bachelor Degree**

All students shall complete 30 credits of upper-division course work in residence at Morrisville.

The following types of successfully earned credits shall contribute toward a student's residency requirement:

- · Any Morrisville credits earned from courses taught on- or off- campus
- · Any distance learning courses originating or received at Morrisville

The following types of credits will not contribute toward a student's residency requirement:

- · Credits transferred from another institution
- · Credit awarded for successful completion of a course examination

#### **Residency Requirement – Master of Science Degree**

All students shall complete at least 21 credits of graduate course work in residence at Morrisville. No more than 9 credits of graduate coursework shall be transferred into any program.

The following types of successfully earned credits shall contribute toward a student's residency requirement:

- Any Morrisville credits earned from graduate courses taught on- or off-campus
- Any distance learning graduate courses originating or received at Morrisville

The following types of credits will not contribute toward a student's residency requirement:

- · Credits transferred from another institution
- · Credit awarded for successful completion of a course examination
- · Prior learning assessment/experience credit

#### AP.8.6 Dual Degree/Additional Degree

#### **Dual Degree**

A student may earn two bachelor degrees (BT, BS, BBA) or one bachelor degree and one associate degree (A.A.S., AS, AA, AOS), or two associate degrees simultaneously. The following restrictions apply:

- 1. For two associate degrees, at least 15 credits of the major in the first degree must not be contained in the program plan of the major in the second degree (this includes both major courses and required cognate courses).
- 2. For an associate degree and a bachelor degree or two bachelor degrees, at least 30 credits of the major in the primary degree must not be contained in the program plan of the major in the secondary degree (this includes both major courses and required cognate courses). Beyond the 15 or 30 major credits not in common, all other courses applied to the primary degree may be applied to the secondary degree. Simply stated, there must be, at minimum, a 15-credit (two associate degrees) or 30-credit difference between the majors of the associate degree and bachelor degree or two bachelor degrees.
- 3. The student must complete the college-wide requirements associated with each degree. The primary difference between degrees relates to the minimum number of liberal arts credits required (AAS degree, 20 credits. AS degree, 30 credits, AA degree, 45 credits, AOS (credits per program requirements), BT and BBA degree 30 credits, BS degree, 60 credits.) The number of liberal arts credits will be determined by both program requirements, if equal, or the greater of the two.
- 4. To apply for a secondary degree, students must meet the minimum grade requirements required by each degree.
- 5. Students should be fully aware of any financial aid implications and program/credentialing restrictions before selecting a second degree

#### **Additional Degree**

The awarding of an additional, consecutive degree is allowed provided that the significant requirements for both degrees have been satisfied in each program and that a significant amount of course work has been completed beyond that of the initial degree. Without being overly specific, a significant amount of additional course work should be 30 or more credit hours taken at Morrisville which, in most instances, requires an additional year of study.

- · This policy applies to the awarding of associate degrees only.
- This policy applies to students that wish to pursue an additional, consecutive degree. In instances in which a student wishes to pursue a dual degree/major concurrently, Policy #6103 applies.
- An additional degree may be of differing types (i.e. an A.A.S., A.S., A.A., etc.) or may be differing majors of the same degree type.
- To obtain an additional degree, the student must comply with Morrisville's statute of limitations on degree completion. That is, degree requirements may be satisfied by taking courses within a seven (7) year period after initial matriculation at Morrisville. The courses that are to be applied to the degree requirements of the additional degree shall have prior approval by the appropriate Academic Dean.
- A student not completing the requirements for an additional degree within the seven-year period may have to enroll in additional course work due to changes in the curriculum. This determination shall be made by the Academic Dean in consultation with appropriate faculty.

### **AP.9 Academic Honors**

Information on President's and Dean's list and Latin (Graduation) Honors

#### **AP.9.1 President's and Dean's List**

Students who earn a grade point average of 4.0 and complete a minimum of 12 semester hours of course work will be placed on the President's List. Part time students are eligible after each 12 credit hours accumulated.

Students who earn a minimum grade point average of 3.0 and complete a minimum of 12 semester hours of course work will be placed on the Dean's list. Part time students are eligible after each 12 credit hours accumulated.

- The 12 semester hours of course work must be graded A-F and not include imputed credit courses or courses graded P/NP or S/F.
- Grades of "I" (incomplete), "NR" (not recorded), or "F" (failing) in courses graded A-F, and A-F imputed and P/NP of S/F, will disqualify a student from the list.
- A grade of "A" in all courses graded A-F, and A-F imputed is necessary to qualify a student for the President's List.

An "I" or "NR" grade which is subsequently changed may qualify the student for President's/Dean's list status. At this time, a retroactive letter will be issued by the Dean's office upon receipt of a new transcript for the affected student from the Registrar's office.

#### **AP.9.2 Latin Honors**

SUNY Morrisville graduates will receive an honors designation on their diploma and transcript for recognition of superior academic achievement with the following cumulative GPA ranges.

Recognition of baccalaureate graduates is given using the following designations:

- Summa cum laude (3.80 to 4.00 GPA)
- Magna cum laude (3.65 to 3.79 GPA)
- Cum laude (3.50 to 3.64 GPA)

Recognition of associate graduates is given using the following designations:

- · Highest honors (3.80 to 4.00 GPA)
- High honors (3.65 to 3.79 GPA)
- Honors (3.50 to 3.64 GPA)

### **AP.10 Academic Minors**

A minor is a course sequence within an area of study that provides a degree of specialization within that area, which can be a specialty within a discipline or a specialty integrating several disciplines. Minors are available to Bachelor degree seeking students only.

Minors are be designed to be completed within the same timeframe allowed for the completion of the baccalaureate degree. After matriculating in a major, students wishing to obtain a minor shall use the Academic Minor Request Form.

New York State and federal regulations stipulate that undergraduate students may receive financial aid only for courses that are required for their degree program. Therefore, undergraduate students need to enroll in 12 credits or more of required coursework to maintain full-time status for New York State and federal student aid programs. Courses taken in completion of a minor that are not also required for the student's declared major are not considered "required" for the student's degree for purposes of financial aid. Coursework that solely satisfies a minor is not considered required for New York State and federal aid programs. The only exception is when a minor is included in an approved NYSED major.

Students must declare a minor prior to completing 105 degree credits required in their bachelor degree.

#### **Curriculum Guidelines**

- Minors consist of a minimum of 15 credits, at least 6 credits of which will be upper-division (300 or 400-level) courses.
- A minimum of 9 credits of a minor shall be completed with courses taken at SUNY Morrisville.

### **AP.11 General Education Requirements**

#### **SUNY General Education Requirement**

The SUNY General Education Requirement (SUNY-GER) enables students to acquire knowledge and skills that are useful and important for all educated persons, regardless of their jobs or professions. (SUNY Board of Trustees Resolution, January 2010).

Effective Fall 2023, SUNY has updated the General Education (GE) Framework system-wide for all Baccalaureate, Associate of Arts (AA) and Associate of Science (AS) degree programs. Associate of Applied Science (AAS) and Associate of Occupational Studies (AOS) degree programs must implement the new SUNY General Education requirements beginning in Fall 2024.

#### **SUNY General Education Knowledge and Skills Areas**

A minimum of 7 of 10 categories of knowledge and skills are required for all Baccalaureate, AA, and AS degree programs, effective Fall 2023, and for AAS degree programs, effective Fall 2024.

The following four knowledge and skills areas are specifically required for all undergraduate degree programs:

- Communication: Written (GCW) and Oral (GCO)
- Diversity: Equity, Inclusion and Social Justice (GDV)
- · Mathematics and Quantitative Reasoning (GM)
- · Natural Science and Scientific Reasoning (GNS)

In addition, a minimum of three of the following six knowledge and skills areas are required for all Baccalaureate, AA, and AS degree programs:

- Humanities (GH)
- Social Science (GSS)
- The Arts (GA)
- US History and Civic Engagement (GUS)
- World History and Global Awareness (GWH)
- World Languages (GFL)

SUNY General Education Core Competencies (both required for all undergraduate degree programs):

- Critical Thinking and Reasoning (CTR)
- Information Literacy (IL)

In addition to completing the SUNY General Education Requirements, some degrees require additional general education credits in the Liberal Arts and Sciences (LAS). Please refer to the academic program catalog pages for specific SUNY General Education Requirements for every SUNY Morrisville degree program. For a list of courses that satisfy the SUNY General Education Requirements and/or Liberal Arts and Sciences Requirements, please refer to the General Education (https:// catalog.morrisville.edu/general-education/) catalog page.

### **AP.12 Academic Integrity**

This section outlines student responsibilities regarding plagiarism and the examination process, as well as procedures in the event of violations of the Code of Academic Integrity.

#### **AP.12.1 Responsibilities**

The Code of Academic Integrity promotes the academic and professional success of the student. Maintenance of the academic integrity of the learning experience at SUNY Morrisville is the responsibility of all members of the college community. Integrity in the form of academic honesty is necessary for learning and is a condition for all classroom/ laboratory activities, learning experiences, and evaluations. All forms of academic dishonesty, including unauthorized collaboration, copying, cheating, fabrication, and plagiarism as well as the facilitation of any of these are violations of the Code of Academic Integrity and the Student Code of Conduct.

Academic dishonesty may result in penalties as severe as a failing grade in the class or even dismissal from the college.

#### AP.12.1.a Plagiarism

 Any submitted course assignment, whether orally presented or in written or digital formats, must be of original authorship and follow prescribed citation guidelines. It should also follow any additional integrity guidelines unique to the course as explained in assignment instructions or the course syllabus (e.g., use of papers written for other courses, alteration to standard citation guidelines, etc.). Representation in any form of another's work as a student's own shall constitute plagiarism and be a violation of this code. 2. Any charge of plagiarism must be substantiated by a direct correlation in wording, ideas, and/or organization between the original and plagiarized copy.

#### **AP.12.1.b Examination Process**

- All examinations must be taken according to prescribed procedures as determined by the instructor in charge of the course or learning experience. Failure to follow these procedures in a way suggesting the intent to cheat shall constitute a violation of this code.
- Any form of unauthorized written or electronic material used by a student or evident on his/her person or electronic device during or directly following an examination shall be deemed to be evidence of intent to cheat and constitute a violation of this code.

#### AP.12.1.c Other Instances of Dishonesty

- Unless specifically allowed by the instructor in charge of the course or learning experience, any unauthorized correspondence between/ among students during any examination or during the preparation of submitted work, which can be substantiated by physical proof or eyewitness verification shall constitute a violation of this code.
- In cases where infractions of the code appear to have occurred, but where the specific violator(s) cannot be determined, the instructor may require all involved student(s) to be retested, or to resubmit a comparable assignment with proof of its originality.

The listing in this code of ways to cheat or to otherwise engage in academic dishonesty are not meant to exclude forms of dishonesty that are not listed or which may become possible in the future. It is the intention of this code to encourage students to engage in ethical and professional behavior that will reflect positively on them and the College.

## AP.12.2 Procedures in the Event of Violations of the Code of Academic Integrity

#### AP.12.2.a Reporting Violations

- 1. Violations of the code shall be determined by the instructor in charge of the course or learning experience in which the alleged violation reportedly occurred and shall be reported at his/her discretion.
- Copies of the evidence, or of other supporting materials, as well as the names of student(s) involved in a violation of the code, shall be forwarded to the student's academic dean. When possible, the instructor will first discuss the violation of the code with the student(s) prior to this notification.
- 3. Upon notification of a violation, the dean of the student's School will discuss the case with the instructor.
- 4. If the dean agrees that a violation has occurred, the School office will officially notify the student that a violation of the Code of Academic Integrity has occurred and that a sanction, as determined below, is being imposed. The student will also be notified of their specific rights to appeal as laid out below. This notification shall be sent to the student's local address and via electronic mail to the student's campus e-mail account.
- 5. The instructor will also receive a copy of the letter officially notifying the student of the violation.
- 6. Faculty Appeal Procedure: Should the dean disagree with a faculty member that a violation of the code has occurred, the faculty member may appeal in writing to the provost within ten business days of being notified that the violation will not be pursued. The provost will make the final determination as to whether the case will be officially pursued. The faculty member should be aware that should the student appeal the violation, the dean has final say on whether

the violation occurred in the case of the first and second official violations of the code.

#### AP.12.2.b The First Violation of the Code

- The penalty for the first violation of the code shall be the total loss of credit (a '0') for the assignment, project, or examination or similar penalties for any other type of learning experience(s). This penalty may result in a student failing the course or other learning experience(s).
- 2. Student Appeal Procedure: A student wishing to challenge the sanction shall be entitled to make a written appeal to their dean within ten business days from the date of notification of the decision. The dean will review the appeal in consultation with the instructor in charge of the course or learning experience in which the violation occurred. The dean will respond in writing to the student's challenge of the sanction within ten business days. The dean has the final right of determination in this matter.

#### AP.12.2.c The Second Violation of the Code

- The penalty for a second violation of the code shall be the earning of a grade of 'F' in the appropriate course or similar penalties for other learning experiences. The second violation of the code need not happen in the same course or learning experience. Students will not be allowed to drop the course to avoid this penalty.
- 2. Student Appeal Procedure: A student wishing to challenge the sanction shall be entitled to make a written appeal to their dean within ten business days from the date of notification of the decision. The dean will review the appeal in consultation with the instructor in charge of the course or learning experience in which the violation occurred. The dean will respond in writing to the student's challenge of the sanction within ten business days. The dean has the final right of determination in this matter.

#### AP.12.2.d Subsequent Violations of the Code

- The penalty for subsequent violations of the code shall be the earning of a grade of 'F' in the appropriate course or similar penalties for other learning experiences. Reported violations of the Code of Academic Integrity beyond the second become a serious breach of the Student Code of Conduct.
- 2. Upon receiving a report of any violations of the code beyond the second, the student's academic dean shall forward the case including all supporting information and the names of the student(s) involved to the Dean of Students for review by the College Judicial Board in accordance with published College Judicial procedures. For review of these violations, the Dean of Students will assemble a Board consisting of faculty only to hear the case.
- 3. Student Appeal procedure: Student appeal of subsequent violations will follow Judicial Board appeal guidelines.

### **AP.13 Academic Grievance System**

The student academic grievance system provides responsible institutional alternatives for the student who has a legitimate complaint to make against a member of the faculty. The grievance system is intended primarily to safeguard the rights of students, but also to protect the faculty from complaints that are unsupported or insubstantial. The grievance system is not intended either to change existing academic or college policy or to persecute, penalize or in any way diminish the academic freedom of individual faculty members.

#### AP.13.1 Scope

- 1. For the purposes of this proposal, a grievance shall be a complaint of the following:
  - A violation, misinterpretation or inequitable application of an academic rule, regulation, or policy of the college, school, or curriculum. AND/OR
  - b. Unfair or inequitable treatment by reason of any act or condition which is contrary to established policy or practice governing or affecting a student of this college. AND/OR
  - c. Prejudiced, capricious, or manifestly unjust academic evaluation.
- 2. To facilitate this procedure the following general guidelines are provided:
  - A grievance complaint must be initially presented within 21 calendar days of the alleged grievance excluding any intersession and/or vacation.
  - b. A grievance complaint must be initiated by the individual affected.
  - c. Any student may present a grievance complaint, subject to these guidelines.
  - d. If any grievance complaint originates at the department level or higher, an informal settlement should be attempted at that level with subsequent appeals to be made in accordance with the procedures outlined below.

#### **AP.13.2 Grievance Structure**

- 1. **Step 1 The Department Level** (It is recognized that many grievances are merely faculty-student misunderstandings and can be settled at this level. Therefore, in the interest of informal settlement, this step has not been significantly altered from the present system.)
  - a. In the case of grievance a student has with a faculty member, the student should attempt an informal settlement with the faculty member. There may be instances when the student feels that s/ he needs to involve his advisor or department chairperson in a specific case.
  - b. If no mutually satisfactory informal settlement can be reached with the faculty member, then the student may file a written statement of his grievance with the chairperson of the department in which the grievance occurred. The chairperson shall hold an informal meeting with the student and the faculty member, and make a decision within one week after the meeting.
  - c. If either party is dissatisfied with the decision made by the chairperson, it is the responsibility of the chairperson to inform both parties of the next possible recourse, namely, to appeal the decision to the Dean of the school in which the curriculum is located. Intent to appeal should be filed, in writing, in the office of the School Dean within 10 days after receipt of the department chairperson's decision.
  - d. If the grievance is initially with a department chairperson, then the student should attempt an informal settlement with that individual. If no mutually satisfactory decision can be reached, then the grievance should be filed with the School Dean as outlined above.

#### 2. Step 2 - The School Level

a. Should either party be dissatisfied with a decision at the department level, the grievance may be brought, in writing, to the office of the School Dean in which grievance occurred, within

10 days after receipt of the department chairperson's decision. The chairperson should make available all information relating to the case, his/her decision regarding the case and reasons for the decision, and forward statements, arguments, etc., from both parties involved in the case.

- b. The School Dean should convene a special hearing for the case with all involved parties present, within 10 days of the written presentation of the grievance subject to the availability of the parties involved. There may be cases when it is mutually agreeable to both parties involved to have a less formalized settlement than a hearing such as this. If this is the case, the grievance should be handled in some other mutually acceptable manner. It shall be the responsibility of the School Dean to make these alternatives known to all parties involved in the case.
- c. Either party involved in a grievance case may have someone (such as a student's advisor or a faculty member's colleague) present to provide them with assistance. Choice of assistance of this type would be left to the individual parties involved, but s/he or she must be a member of the SUNY Morrisville Community.
- d. After hearing all facts and opinions relevant to the case, the School Dean shall make a decision regarding the specific grievance. S/he shall notify, in writing, all parties involved within one week.
- e. A copy of the decision and all pertinent materials shall be kept in the student's file in his/her School Dean's office at least one year after the student has graduated or left school.
- f. Should either party be dissatisfied with the decision, it is the responsibility of the School Dean to inform all involved parties of the next step, which is to appeal the decision to the Academic Grievance Tribunal.

#### 3. Step 3 – The Academic Grievance Tribunal

- a. Should either party be dissatisfied with the decision at the school level, the grievance shall next come before the Academic Grievance Tribunal.
- b. Notice of intent to appeal should be filed in the office of the Vice President for Academic Affairs, within one calendar week after receipt of the decision of the School Dean.
- c. Composition
  - i. Faculty There shall be three faculty members chosen by the faculty member involved in the dispute from a list of 20 faculty members supplied by the Vice President for Academic Affairs of the College.
  - ii. Students There shall be three student members chosen by the student involved in the dispute from a list of 20 students supplied by the Provost and Vice President for Academic Affairs of the College.
  - iii. Administrator The Vice President for Academic Affairs shall be the administrative representative on the Tribunal. The administrative representative shall also serve as chairperson of the Tribunal. The chairperson will have a tie-making or breaking vote.
- d. Procedures
  - i. In all cases arising from an appeal, the appellant shall submit written arguments within ten days of the filing of his notice to appeal.
  - ii. A copy of said arguments shall be filed with the Vice President for Academic Affairs and a copy sent to the respondent.

- iii. The respondent then may file written arguments within ten days of receipt of the appellant's arguments, one copy to be submitted to the Vice President for Academic Affairs, and one copy to the appellant.
- iv. Upon being notified by the Vice President for Academic Affairs of a pending appeal, the School Dean shall forward all records of his findings and recommendations, and the reasons for the decisions, to the Vice President for Academic Affairs.
- v. The Vice President for Academic Affairs shall invite both the appellant and the respondent to choose the faculty and student membership for the Academic Grievance Tribunal. Both the appellant and the respondent shall have the opportunity to challenge any member of the Tribunal and to have that individual removed from the Tribunal if cause can be established. The Vice President for Academic Affairs or the President of the College shall determine whether or not cause has been established in each case.
- vi. Once the appellant and the respondent agree upon a seven member Tribunal, the Vice President for Academic Affairs shall schedule the hearing within two weeks.
- vii. At said hearing, both the appellant and the respondent shall be given the opportunity to make any oral arguments. Either party may again have someone present to provide them with assistance, as described above in Section II, B-3. Provision shall be made for other regular hearing procedures, e.g., calling and cross-examining of witnesses, etc., and other provisions as found necessary by this Tribunal in its operations.
- viii. In cases involving charges of discrimination on the basis of race, color, national origin, religion, age, disability or marital status, the Campus Affirmative Action Officer shall sit with the Tribunal in an advisory capacity during the review and deliberations.
- ix. The Tribunal shall then render its decision which shall be final. In the event of a tie the grievance shall be submitted to the President of the College whose decision shall be final. Copies of the decision shall be sent to the appellant, the respondent, and the Vice President for Academic Affairs within one week of the decision. The Vice President for Academic Affairs will be responsible for this decision being carried out.
- x. Copies of the decision and all pertinent materials shall be kept in the student's file located in his/her School Dean's office for at least one year after the student has graduated or left school.

### AP.14 Class Attendance & Participation Policy

- Students are expected to attend and participate in all scheduled classes and laboratories. However, special circumstances such as illness, religious holidays, travel difficulties, family emergencies, military deployment and active participation in college-sponsored events, such as sports, may make certain absences unavoidable. In such instances, students should notify instructors of these special circumstances in advance of missing class.
- 2. Each instructor will distribute an attendance/participation policy statement, defining excessive absences and expected participation,

the first week of classes each semester, and include these policies on the syllabus. These will be approved by the appropriate Dean to assure no conflict between individual attendance policies and college policy; copies will be on file in the instructor's school office. Students are responsible for understanding the attendance and participation policy (including procedures for making up missed work) of each of their instructors.

- 3. When, in the opinion of the instructor, absences have placed a student in potential academic jeopardy, the instructor will raise a flag in Starfish and notify the student's Dean, who will address the concerns with the student, which may include an academic warning. An instructor may initiate discussion to determine the advisability of the student's dropping or continuing the course in which excessive absences have occurred.
- 4. A faculty member can suspend a student from class or laboratory for disruptive behavior, that is, for actions which interfere with the orderly conduct of the session or which threaten bodily harm to others. All such cases must be referred within 24-hours to the student's Dean, with a full report. If the student cannot be reinstated in the class or laboratory within one week of the day of suspension, the case must be referred to the Provost for resolution. If a student is suspended, the student is still responsible for all course assignments, readings, and work if and when they may be reinstated.
- 5. Extended, unavoidable absences or complete lack of participation will usually result in student withdrawal. However, in unusual situations where the student indicates a desire and an ability to complete course work even though away from campus, he/she may petition his/her Dean for permission to continue academic work (in absentia). The Dean will then consult with the student's instructors and, on the basis of these consultations, advise the student to withdraw from the college, to drop courses, or to finish courses under the supervision of consenting instructors.
- 6. Although regular class attendance will not guarantee passing grades, irregular attendance and a lack of engaged participation will usually have an adverse effect upon grades. Because final student evaluation is based upon measurable academic achievement, instructors will not lower final grades solely on the basis of absences. However, instructors may include attendance and participation points as part of the grading scale.
- 7. SUNY Morrisville students must attend class to maintain their awarded federal aid. In a distance education context, students must participate in the class or be engaged in academically related activities (such as assignment submission, discussion posts and so forth). Federal financial aid eligibility requires SUNY Morrisville to identify and submit the record of the students who have not attended class and reduce their federal financial aid award accordingly.

### **AP.15 Student Standing**

Student "academic standing" shall be based on the following credit hour accumulation levels:

- · First year. 0-30 credit hours
- Second year. 31-60 credit hours
- · Third year: 61-90 credit hours
- · Fourth year: 91 above credit hours

Student "financial aid standing" shall be based on the following credit hour accumulation levels:

- First year. 0-29 credit hours
- · Second year. 30-59 credit hours
- Third year: 60-89 credit hours
- · Fourth year: 90- above credit hours

### **AP.16 Academic Standing**

#### Academic Performance and Academic Progress

The College makes a distinction between a student's academic performance and their progress toward a degree and will notify the student if there are concerns in either area.

#### Academic Performance

Student grade point averages (GPAs) will be evaluated at the end of each semester and decisions regarding the student's academic standing will be made according to the Academic Standing table. The criteria are used to determine eligibility to continue at the College. A student may be in good standing, may receive an academic warning, may be placed on academic probation prior to dismissal, or may be dismissed from the College depending on their GPA.

#### **Academic Progress**

It is important that students make adequate academic progress toward the completion of their degree. Inadequate progress notifications may be triggered by failing to maintain at least 12 credits (for full-time students), dropping a class that is required by the major, failing a class that is required by the major, or not achieving a required minimum grade in a class that is required by the major. In the event that a student does not continue to make academic progress for any of these reasons, they will be notified by their Academic School Office. This notification does not carry any direct consequence from the college, but lack of progress may affect a student's financial aid or scholarship awards. Additionally, some programs may carry stricter penalties for students who are not progressing in their major and students will be made aware of these.

#### **Academic Standing**

Academic standing will be evaluated at the end of each semester. A student may be in good standing, may be issued an academic warning, may be placed on academic probation prior to dismissal, or may be dismissed from the college, depending on their cumulative GPA.

Academic standing is determined based on the GPA criteria outlined on the AP.16 Academic Standing webpage (https://www.morrisville.edu/academics/ap16-academic-standing/).

#### AP.16.1 Good Academic Standing

A student maintains good academic standing with a cumulative GPA of at least 2.0. Any student with a cumulative or semester grade point average of less than 2.0 may be issued an academic warning; placed on academic probation; or dismissed from the college.

#### AP.16.2 Academic Warning

Academic Warning is a designated academic status assigned to a student who is not in good academic standing as a result of not meeting GPA requirements. Students with a cumulative GPA between 1.75 and 1.99 will be issued an Academic Warning notice from the College. The Academic Warning status may also jeopardize a student's eligibility for Federal and State Financial aid and/or scholarships. Students will be notified separately by the Financial Aid Office of any change in financial aid eligibility.

#### **AP.16.3 Academic Probation**

Academic probation is a designated academic status that requires a contractual agreement in order for students to continue their education at SUNY Morrisville. Students must review and sign an agreement outlining their personal plan-of-action to work towards returning to good academic standing. Failure to successfully complete the terms of the agreement may result in academic dismissal. Failure to complete and submit their personal plan-of-action agreement by the indicated deadline may also result in academic dismissal. The Academic Probation status may also jeopardize a student's eligibility for Federal and State Financial aid and/ or scholarships. Students will be notified separately by the Financial Aid Office of any change in financial aid eligibility.

#### **AP.16.4 Academic Dismissal**

Academic Dismissal is dismissal from the college due to the student's inability to maintain good academic standing or meet the terms of an Academic Probation contractual agreement. Students have the right to appeal an academic dismissal to request reinstatement; however, reinstatement is not guaranteed.

#### **AP.16.5 Dismissal Appeals**

Students have the right to appeal an academic dismissal to request reinstatement. To begin the appeal process, students should complete the Academic Dismissal Appeal Form by the deadline outlined in their dismissal letter. This form and all supporting documentation must be received by the deadline. Appeals will be evaluated by the Academic Review Committee comprised of representatives from offices including Campuswide Advising, Financial Aid, the Registrar, the Academic Deans, EOP, Student Affairs, and other offices as needed. In the appeals process, special consideration will be given to students who have maintained good academic standing for the majority of their academic career.

### **AP.17 Academic Fresh Start**

Fresh Start is an appeals procedure that allows undergraduate students returning to SUNY Morrisville after a prolonged absence to regain good academic standing and accomplish their educational goals. With Fresh Start, students may choose to exclude up to 15 credits for an Associate's degree and up to 30 credits for a Bachelor's degree. Excluded credits can apply to courses with a grade of D+ or below (i.e., D+, D, or F) so the student can attain a 2.0 overall grade point average (GPA).

#### Eligibility

- Students must not have taken any coursework as a matriculated student at SUNY Morrisville for a minimum of 4 full (fall and spring) semesters prior to readmission.
- Prior to readmission, students will not have attempted more than two semesters of coursework at SUNY Morrisville if enrolled in an Associate's degree program or more than four semesters of coursework if enrolled in a Bachelor's degree program.
- Students must meet all criteria for readmission, be accepted for readmission, and have completed Fresh Start appeal paperwork prior to beginning the new semester.
- Readmitted students who have appealed under the Fresh Start policy must complete a full-time probationary semester of at least 12 credit hours. In this probationary semester, students are not permitted to

drop any courses and must receive a grade of C or better in every course.

· Once elected, Fresh Start may not be rescinded.

Students may apply for Fresh Start only once during their SUNY Morrisville career.

#### Procedure

Upon completion of the probationary semester, if all eligibility requirements for Fresh Start (above) have been met then the following procedure shall be followed:

- The student will meet with their academic advisor and complete the FS Course Exclude paperwork, indicating those courses they wish to have excluded from the transcript.
- The academic dean will review and approve the FS Course Exclude paperwork and forward on to the registrar's office for processing.
- Approved courses will be coded as Excluded on the students' academic transcript with the grades and credits being excluded from the cumulative GPA.
- All original credits and grades will remain on the permanent SUNY Morrisville transcript to reflect an accurate academic history.

Fresh Start is a policy of SUNY Morrisville. As such, students should be aware it may not be recognized by outside institutions or for financial aid purposes. Fresh Start does not override state and federal financial aid regulations nor satisfactory academic progress standards. Excluding grades will impact financial aid eligibility. Repeating courses previously passed may not count toward full-time enrollment for financial aid purposes. Students should contact the Financial Aid Office for information on their aid eligibility if considering applying for Fresh Start.

# AP.18 Undergraduate Instructional Assistants Policy

An undergraduate Instructional Assistant (IA) is a student enrolled in a credit-bearing course with specific student learning outcomes to assist faculty by providing instructional support. Credit is awarded according to the Assignment of Credit Hours policy, which is found at https://www.morrisville.edu/contact/offices/registrar/assignmentof-credit-hours (https://www.morrisville.edu/contact/offices/registrar/ assignment-of-credit-hours/)

Any student assuming the role of an Instructional Assistant must have a completed IA contract signed by the student, the supervising faculty and the appropriate school dean.

#### Instructional Assistants must meet the following criteria:

- · Junior or senior status in a baccalaureate program
- Minimum overall 3.0 GPA
- Minimum grade of B in the course with which they will assist, or higher-level placement in the discipline in which they will assist
- Written and verbal proficiency
- Interpersonal skills
- Self-directedness
- · Ability to set reasonable goals and priorities
- · Ability to cope with stress
- · Ability to articulate a strong motivation to assume an IA position
- May only assist with one course per semester (assisting with multiple sections is acceptable)

#### Instructional Assistant Responsibilities:

Undergraduate Instructional Assistants are considered an extension of the supervising faculty and as such may perform the following duties:

- · Leading class discussion or break-out groups
- · Making presentations
- Setting up classroom demonstrations
- · Leading tutorials, recitations, or labs
- · Assisting faculty with proctoring exams
- · Assisting faculty with class attendance

Undergraduate Instructional Assistants will not grade, evaluate or perform summative assessments of other undergraduates' coursework.

#### **Training and Continued Mentorship:**

- All Instructional Assistants will receive training in ethical issues such as FERPA, confidentiality, plagiarism, cheating, and navigating the dual roles of peer and IA prior to interacting with the class.
- Each IA will sign a written contract with expectations and roles clearly outlined, including formal introductory training and regular meetings with the faculty supervisor.
- IAs will receive regular feedback about performance during the semester.

#### Supervision:

• All Instructional Assistant class/laboratory duties must be conducted under direct supervision of the faculty mentor.

#### Assessment:

 Instructional assistants' performance should be clearly linked with the specific student outcomes for the IA course as outlined in the course syllabus and contract.

## **GENERAL EDUCATION**

### **SUNY General Education Requirement**

The SUNY General Education Requirement (SUNY-GER) enables students to acquire knowledge and skills that are useful and important for all educated persons, regardless of their jobs or professions. (SUNY Board of Trustees Resolution, January 2010).

Effective Fall 2023, SUNY has updated the General Education (GE) Framework system-wide for all Baccalaureate, Associate of Arts (AA) and Associate of Science (AS) degree programs. Associate of Applied Science (AAS) and Associate of Occupational Studies (AOS) degree programs must implement the new SUNY General Education requirements beginning in Fall 2024.

#### **SUNY General Education Knowledge and Skills Areas**

A minimum of 7 of 10 categories of knowledge and skills are required for all Baccalaureate, AA, and AS degree programs, effective Fall 2023, and for AAS degree programs, effective Fall 2024.

The following four knowledge and skills areas are specifically required for all undergraduate degree programs:

- Communication: Written (GCW) and Oral (GCO)
- Diversity: Equity, Inclusion and Social Justice (GDV)
- Mathematics and Quantitative Reasoning (GM)
- Natural Science and Scientific Reasoning (GNS)

In addition, a minimum of three of the following six knowledge and skills areas are required for all Baccalaureate, AA, and AS degree programs:

- Humanities (GH)
- Social Science (GSS)
- The Arts (GA)
- US History and Civic Engagement (GUS)
- World History and Global Awareness (GWH)
- World Languages (GFL)

SUNY General Education Core Competencies (both required for all undergraduate degree programs):

- Critical Thinking and Reasoning (CTR)
- Information Literacy (IL)

In addition to completing the SUNY General Education Requirements, some degrees require additional general education credits in the Liberal Arts and Sciences (LAS). Please refer to the academic program pages for specific SUNY General Education Requirements for every SUNY Morrisville degree program.

The following courses satisfy the SUNY General Education Requirements and/or Liberal Arts and Sciences Requirements.

### Arts - GA

Code	Title	Credits
ARCH 141	Architectural Design I	4
ARCH 142	Architectural Design II	4
ARCH 151	Arch Pre History to 1800	3
ARCH 182	Architectural Graphic Comm.	2
ARCH 243	Architectural Design III	4

ARCH 244	Architectural Design IV	4
ART 110	Introduction to Visual Arts	3
ART 120	Introduction to Drawing	2
ART 121	Introduction to Painting	2
ART 131	Introduction to Photography	3
CITA 113	Intro to Game Design & Dev	3
COMP 230	Creative Writing - Short Story	3
COMP 231	Creative Writing - Poetry	3
COMP 233	Creative Writing - Nonfiction	3
HORT 403	Planting Design	4
HUMN 210	The Film Experience	3
MUSI 101	Introduction To Music & Art	3
MUSI 102	History Of Jazz	3
MUSI 150	Ensemble	1
MUSI 155	Ensemble	1
MUSI 160	Ensemble	1
MUSI 165	Ensemble	1
THEA 124	Introduction to Theatre	3
THEA 125	Introduction to Acting & Directing	3
THEA 150	Theatre Production Laboratory	3

### **Communication Oral - GCO**

Code	Title	Credits
COMM 105	Research & Communication	3
COMM 111	Introduction to Speech	3
COMP 110	Technical Communications	3

### **Communication Written - GCW**

Code	Title	Credits
COMM 105	Research & Communication	3
COMP 101	Composition and Research	3
COMP 102	Writing About Literature	3
COMP 110	Technical Communications	3
COMP 220	Writing in the Disciplines	3
COMP 221	Advanced Composition Research	3
COMP 310	Advance Tech Communication	3

# Diversity, Equity, Inclusion & Social Justice - GDV

Code	Title	Credits
AGSC 320	Contemporary Issues in Agricul	3
ENSC 261	Environmental Justice	3
HUMN 241	Diversity & Hum: Special Topic	3
HUMN 341	Diversity & Hum: Special Topic	3
LITR 241	Diversity in Literature - Spec	3
LITR 272	Mythology & Social Justice	3
LITR 341	Diversity in Literature - Spec	3
LITR 372	Mythology & Social Justice	3
PHIL 320	Contemporary Issues in Agricul	3
SOCI 201	Social Problems	3

SOCI 261	Environmental Justice	3
SOCI 360	Social Mvt & Community Change	3

### Humanities - GH

Code	Title	Credits
AGSC 320	Contemporary Issues in Agricul	3
BIOL 109	Biology & Literature	3
COMM 121	Theories Interpersonal Comm	3
COMP 102	Writing About Literature	3
HUMN 230	Rural Studies	3
HUMN 241	Diversity & Hum: Special Topic	3
HUMN 261	Games, World Build, Story	3
HUMN 341	Diversity & Hum: Special Topic	3
LITR 203	American Literature to 1900	3
LITR 204	American Lit 1900 to Present	3
LITR 205	English Literature to 1800	3
LITR 206	English Lit 1800 to Present	3
LITR 207	Western World Literature	3
LITR 208	Eastern World Literature	3
LITR 211	Black American Writers	3
LITR 221	Literature of Gender	3
LITR 231	Modern Literature	3
LITR 232	Major American Novels	3
LITR 233	Literature and the Environment	3
LITR 234	Aspects of Contemporary Lit	3
LITR 241	Diversity in Literature - Spec	3
LITR 243	Biology & Literature	3
LITR 270	Mythology	3
LITR 271	Adventures in Mythology	3
LITR 272	Mythology & Social Justice	3
LITR 341	Diversity in Literature - Spec	3
LITR 342	Science Fiction	3
LITR 370	Mythology	3
LITR 371	Adventures in Mythology	3
LITR 372	Mythology & Social Justice	3
MUSI 102	History Of Jazz	3
PHIL 201	Introduction To Philosophy	3
PHIL 211	Modern Ethics	3
PHIL 311	Professional Ethics	3
PHIL 320	Contemporary Issues in Agricul	3
STS 401	Adv Topics in STS	3

# Mathematics (and Quantitative Reasoning) - GM

Code	Title	Credits
AGSC 137	Agricultural Statistics	3
MATH 102	Intermediate Algebra w Trig	3
MATH 103	College Algebra w/ Trig	3
MATH 123	Elementary Statistics	3
MATH 127	Mathematical Reasoning	3
MATH 141	Statistics	3
MATH 145	Discrete Mathematics	3

MATH 147	Selected Topics In Precalculus	3
MATH 149	Elementary Linear Algebra	3
MATH 151	General Calculus A	3
MATH 152	General Calculus B	3
MATH 153	Business Calculus	3
MATH 161	Calculus I	4
MATH 162	Calculus II	4
MATH 261	Calculus III	4
MATH 262	Differential Equations	4

# Natural Sciences (and Scientific Reasoning) - GNS

Code	Title	Credits
AGEN 161	Basic Hydraulics	3
AGRO 110	Soil Science	3
AGRO 215	Soil Fertility & Fertilizers	3
AGSC 132	Introduction to Precision Farming	2
ASTR 101	Solar Astronomy	3
ASTR 110	Stellar Astronomy	3
BIOL 101	Introduction to Biology	4
BIOL 102	Botany-Form Function Seed Plt	3
BIOL 103	Botany - Plant Diversity	3
BIOL 105	Human Biology	4
BIOL 107	Topics in Contemporary Biology	3
BIOL 109	Biology & Literature	3
BIOL 120	General Biology I	4
BIOL 121	General Biology II	4
BIOL 135	Myology I	3
BIOL 136	Myology II	3
BIOL 137	Neurology	4
BIOL 150	Human Anatomy + Physiology I	4
BIOL 151	Human Anatomy + Physiology II	4
BIOL 230	Human Genetics	3
BIOL 260	Principles of Zoology	4
BIOL 285	General Microbiology	4
BIOL 300	Biol Normal & Neoplastic Cells	3
BIOL 301	Pathophysiology	3
BIOL 302	Epidemiology	3
BIOL 405	Basic Immunology	3
CHEM 101	Basic Chemistry	4
CHEM 110	Contemporary Chemistry	4
CHEM 121	General College Chemistry I	4
CHEM 122	General College Chemistry II	4
CHEM 141	Chemical Principles I	4
CHEM 142	Chemical Principles II	4
CHEM 220	Intro to Organic Chemistry	4
CHEM 241	Organic Chemistry I	4
CHEM 242	Organic Chemistry II	4
CHEM 361	Biochemistry	3
DANS 110	Breeding Dairy Cattle	3
DANS 120	Anatomy & Physiology-Dairy Cow	3
ENGR 201	Analytic Mechanics I	3

ENGR 202	Analytic Mechanics II	3	POLI 111
ENGR 210	Introdctn To Electrical Systms	3	PSYC 101
ENGR 212	Mechanics Of Materials	3	PSYC 161
ENSC 101	Agricultural Science	3	PSYC 211
ENSC 102	Botany-Form Function Seed Plt	3	PSYC 221
ENSC 103	Botany - Plant Diversity	3	PSYC 241
ENSC 125	Environmental Chemistry	4	PSYC 242
ESCI 110	Equine Anatomy & Physiology	3	PSYC 243
ESCI 305	Equine Reproduction/Mgt	3	PSYC 251
HORT 150	Fruit & Vegetable Production	3	PSYC 255
HORT 201	Plant Propagation	3	PSYC 284
HORT 241	Plant Protection	3	PSYC 291
LITR 243	Biology & Literature	3	PSYC 304
MECH 120	Engineering Materials	3	PSYC 381
MECH 211	Analytical Mechanics (Statics)	3	PSYC 384
MECH 213	Strength of Materials	4	PSYC 386
NATR 101	General Ecology	3	SOCI 101
NATR 115	Forest Ecology	3	SOCI 201
NATR 140	Geology	3	SOCI 220
NATR 145	Intro Environmental Technology	3	SOCI 221
NATR 152	Fish Reproduction	2	SOCI 250
NATR 153	Marine Biology	3	SOCI 261
NATR 160	Principles of Arboriculture	2	SOCI 270
NATR 210	Dendrology	3	SOCI 360
NATR 221	Invasive Species Management	3	SOCI 370
NATR 232	Wildlife Ecology & Management	3	SOCI 390
NATR 250	Aquatic Ecology	3	STS 101
NATR 252	Fish Ecology and Management	3	STS 301
NATR 254	Fish Health Management	3	STS 316
NATR 260	Principles of Zoology	4	
PHYS 107	Introductory Physics I	4	US HIST
PHYS 108	Introductory Physics II	4	Code
PHYS 127	General Physics I	4	HIST 101
PHYS 128	General Physics II	4	HIST 102
PHYS 154	Univ Physics I (Mechanics)	4	HIST 103
PHYS 155	Univ Physics II(Elec & Magnet)	4	HIST 220
PHYS 158	Univ Physics II(Elec & Magnet)	4	HIST 225
PHYS 168	Univ Physics II(Elec & Magnet)	4	HIST 320
PHYS 254	Univ PhysicsIII(Sound, Thermo)	4	
PHYS 255	Physics IV (Modern & Optics)	4	world H
PSCI 101	Physical Science	3	Code
RENG 102	Renewable Energy Resources	3	ANTH 101

### **Social Science - GSS**

Code	Title	Credits
AGBS 225	Environmental Economics	3
ECON 100	Introduction to Macroeconomics	3
ECON 140	Introduction to Microeconomics	3
ECON 300	Money, Banking Financial Mkts	3
ECON 370	International Economics	3
ENSC 261	Environmental Justice	3
POLI 101	American National Government	3

POLI 111	State & Local Government	3
PSYC 101	Introduction to Psychology	3
PSYC 161	Social Science & Pseudoscience	1
PSYC 211	Lifespan Development	3
PSYC 221	Biological Psychology	3
PSYC 241	Child Development	3
PSYC 242	Adolescent Development	3
PSYC 243	Adult Development	3
PSYC 251	Abnormal Psychology	3
PSYC 255	Psychology Personal Adjustment	3
PSYC 284	Psychology of Gender	3
PSYC 291	Human Diversity Social Context	3
PSYC 304	Industrial/Org Psychology	3
PSYC 381	Personality	3
PSYC 384	Group Behavior	3
PSYC 386	Social Psychology	3
SOCI 101	Intro to Sociology	3
SOCI 201	Social Problems	3
SOCI 220	Marriage and Family	3
SOCI 221	Death and Dying	3
SOCI 250	Social Gerontology	3
SOCI 261	Environmental Justice	3
SOCI 270	Drugs, Society & Behavior	3
SOCI 360	Social Mvt & Community Change	3
SOCI 370	Drugs, Society & Behavior	3
SOCI 390	Urban Sociology	3
STS 101	Values of Science & Technology	3
STS 301	Humans vs. Nature	3
STS 316	Investigating Cyberculture	3

### **US History & Civic Enagement - GUS**

Code	Title	Credits
HIST 101	United States History to 1800	3
HIST 102	U.S. History 1800 to 1900	3
HIST 103	U.S. History from 1900-Present	3
HIST 220	African American History	3
HIST 225	Women in the United States	3
HIST 320	History of New York State	3

### World History & Global Awareness - GWH

Code	Title	Credits
ANTH 101	Introduction to Anthropology	3
GEOG 101	Intro World Regional Geography	3
HIST 151	World History to 1600	3
HIST 152	World History from 1500	3
HIST 161	European History to 1648	3
HIST 162	European History from 1500	3
HIST 171	Environmental History	3
HIST 172	Latin American Caribbean Histo	3
HIST 181	History of Technology to 1800	3
HIST 182	History Technology From 1750	3
HIST 351	The World Since 1914	3

HIST 371	The World Wars	3
HIST 372	The Cold War	3
HIST 375	Russian History	3
HUMN 220	Introduction to Islam	3
HUMN 231	Native American Studies	3
LITR 208	Eastern World Literature	3
POLI 151	Intro Comparative Government	3

### World Languages - GFL

Code	Title	Credits
AMSL 101	American Sign Language I	3
AMSL102	American Sign Language II	3
CHIN 101	Beginning Mandarin Chinese I	3
CHIN 102	Beginning Mandarin Chinese II	3
LANG 1XA	Foreign Language Elective	15
LANG 1XB	Foreign Language Elective	3
LANG 1XC	Foreign Language Elective	3
LANG 1XD	Foreign Language Elective	3
LANG 2XA	Foreign Language Elective	3
LANG 2XB	Foreign Language Elective	3
LANG 3XA	Foreign Language Elective	3
LANG 3XB	Foreign Language Elective	3
LANG 4XA	Foreign Language Elective	3
LANG 4XB	Foreign Language Elective	3
SPAN 101	Beginning College Spanish 1	3
SPAN 102	Beginning College Spanish 2	3
SPAN 125	Spanish for Heritage Speakers	3
SPAN 201	Intermediate College Spanish 1	3
SPAN 202	Intermediate College Spanish 2	3

### **Critical Thinking & Reasoning - CTR**

Code	Title	Credits
COMM 101	Critical Reading	3
COMM 105	<b>Research &amp; Communication</b>	3
COMP 102	Writing About Literature	3
HUMN 341	Diversity & Hum: Special Topic	3
LITR 241	Diversity in Literature - Spec	3
LITR 341	Diversity in Literature - Spec	3

### Information Literacy - IL

Code	Title	Credits
COMM 105	<b>Research &amp; Communication</b>	3
HUMN 341	Diversity & Hum: Special Topic	3
LITR 341	Diversity in Literature - Spec	3

### **Liberal Arts and Sciences - LAS**

Code	Title	Credits
AGBS 225	Environmental Economics	3
AGEN 120	Water Supply & Sanitation	2
AGEN 161	Basic Hydraulics	3
AGRO 110	Soil Science	3
AGRO 215	Soil Fertility & Fertilizers	3

AGSC 132	Introduction to Precision Farming	2
AGSC 320	Contemporary Issues in Agricul	3
AMSL 101	American Sign Language I	3
AMSL 102	American Sign Language II	3
ANTH 101	Introduction to Anthropology	3
ARCH 102	Introduction to Architecture	2
ARCH 141	Architectural Design I	4
ARCH 142	Architectural Design II	4
ARCH 151	Arch Pre History to 1800	3
ARCH 182	Architectural Graphic Comm.	2
ARCH 243	Architectural Design III	4
ARCH 244	Architectural Design IV	4
ARCH 252	Architecture: 1800 to Present	3
ART 110	Introduction to Visual Arts	3
ART 120	Introduction to Drawing	2
ART 121	Introduction to Painting	2
ART 131	Introduction to Photography	3
ASTR 101	Solar Astronomy	3
ASTR 110	Stellar Astronomy	3
BIOL 101	Introduction to Biology	4
BIOL 102	Botany-Form Function Seed Plt	3
BIOL 103	Botany - Plant Diversity	3
BIOL 105	Human Biology	4
BIOL 107	Topics in Contemporary Biology	3
BIOL 109	Biology & Literature	3
BIOL 120	General Biology I	4
BIOL 121	General Biology II	4
BIOL 135	Myology I	3
BIOL 136	Myology II	3
BIOL 137	Neurology	4
BIOL 150	Human Anatomy + Physiology I	4
BIOL 151	Human Anatomy + Physiology II	4
BIOL 230	Human Genetics	3
BIOL 260	Principles of Zoology	4
BIOL 285	General Microbiology	4
BIOL 300	Biol Normal & Neoplastic Cells	3
BIOL 301	Pathophysiology	3
BIOL 302	Epidemiology	3
BIOL 405	Basic Immunology	3
CHEM 101	Basic Chemistry	4
CHEM 110	Contemporary Chemistry	4
CHEM 121	General College Chemistry I	4
CHEM 122	General College Chemistry II	4
CHEM 141	Chemical Principles I	4
CHEM 142	Chemical Principles II	4
CHEM 220	Intro to Organic Chemistry	4
CHEM 241	Organic Chemistry I	4
CHEM 242	Organic Chemistry II	4
CHEM 361	Biochemistry	3
CHIN 101	Beginning Mandarin Chinese I	3
CHIN 102	Beginning Mandarin Chinese II	3
CITA 113	Intro to Game Design & Dev	3
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CJUS 101	Intro Criminal Justice Systems	3	HIST 221	History of the Vietnam War	3
CJUS 235	Juvenile Delinquency	3	HIST 225	Women in the United States	3
COMM 101	Critical Reading	3	HIST 320	History of New York State	3
COMM 105	Research & Communication	3	HIST 351	The World Since 1914	3
COMM 111	Introduction to Speech	3	HIST 371	The World Wars	3
COMM 121	Theories Interpersonal Comm	3	HIST 372	The Cold War	3
COMM 131	Small Group Discussion	3	HIST 375	Russian History	3
COMM 300	Visual Communication	3	HIST 380	History of Science Medicine	3
COMP 100	College Composition	3	HORT 150	Fruit & Vegetable Production	3
COMP 101	Composition and Research	3	HORT 201	Plant Propagation	3
COMP 102	Writing About Literature	3	HORT 241	Plant Protection	3
COMP 110	Technical Communications	3	HORT 403	Planting Design	4
COMP 220	Writing in the Disciplines	3	HUMN 210	The Film Experience	3
COMP 221	Advanced Composition Research	3	HUMN 220	Introduction to Islam	3
COMP 230	Creative Writing - Short Story	3	HUMN 230	Rural Studies	3
COMP 231	Creative Writing - Poetry	3	HUMN 231	Native American Studies	3
COMP 232	Creative Writing Nonfiction	1	HUMN 261	Games, World Build, Story	3
COMP 233	Creative Writing - Nonfiction	3	JOUR 101	Intro to Mass Communication	3
COMP 240	Editing 1	1	JOUR 111	News Writing & Reporting	3
COMP 241	Editing 2	1	JOUR 112	News Writing II	3
COMP 242	Editing 3	1	JOUR 214	Specialized Writing	3
COMP 310	Advance Tech Communication	3	JOUR 220	Mass Media and Society	3
DANS 110	Breeding Dairy Cattle	3	JOUR 272	Public Relations Publicity Mgt	3
DANS 120	Anatomy & Physiology-Dairy Cow	3	JOUR 401	Legal Ethical Issues Mass Comm	3
ECON 100	Introduction to Macroeconomics	3	LANG 1XA	Foreign Language Elective	15
ECON 140	Introduction to Microeconomics	3	LANG 1XB	Foreign Language Elective	3
ECON 300	Money, Banking Financial Mkts	3	LANG 2XA	Foreign Language Elective	3
ECON 370	International Economics	3	LANG 2XB	Foreign Language Elective	3
ENGR 201	Analytic Mechanics I	3	LANG 3XA	Foreign Language Elective	3
ENGR 202	Analytic Mechanics II	3	LANG 3XB	Foreign Language Elective	3
ENGR 210	Introdctn To Electrical Systms	3	LANG 4XA	Foreign Language Elective	3
ENGR 212	Mechanics Of Materials	3	LANG 4XB	Foreign Language Elective	3
ENSC 101	Agricultural Science	3	LITR 203	American Literature to 1900	3
ENSC 102	Botany-Form Function Seed Plt	3	LITR 204	American Lit 1900 to Present	3
ENSC 103	Botany - Plant Diversity	3	LITR 205	English Literature to 1800	3
ENSC 125	Environmental Chemistry	4	LITR 206	English Lit 1800 to Present	3
ENSC 261	Environmental Justice	3	LITR 207	Western World Literature	3
ESCI 110	Equine Anatomy & Physiology	3	LITR 208	Eastern World Literature	3
ESCI 305	Equine Reproduction/Mgt	3	LITR 211	Black American Writers	3
GEOG 101	Intro World Regional Geography	3	LITR 221	Literature of Gender	3
HIST 101	United States History to 1800	3	LITR 231	Modern Literature	3
HIST 102	U.S. History 1800 to 1900	3	LITR 232	Major American Novels	3
HIST 103	U.S. History from 1900-Present	3	LITR 233	Literature and the Environment	3
HIST 151	World History to 1600	3	LITR 234	Aspects of Contemporary Lit	3
HIST 152	World History from 1500	3	LITR 241	Diversity in Literature - Spec	3
HIST 161	European History to 1648	3	LITR 243	Biology & Literature	3
HIST 162	European History from 1500	3	LITR 270	Mythology	3
HIST 171	Environmental History	3	LITR 271	Adventures in Mythology	3
HIST 172	Latin American Caribbean Histo	3	LITR 272	Mythology & Social Justice	3
HIST 181	History of Technology to 1800	3	LITR 341	Diversity in Literature - Spec	3
HIST 182	History Technology From 1750	3	LITR 342	Science Fiction	3
HIST 220	African American History	3	LITR 370	Mythology	3
LITR 371	Adventures in Mythology	3	PHYS 158	Univ Physics II(Elec & Magnet)	4
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LITR 372	Mythology & Social Justice	3	PHYS 168	Univ Physics II(Elec & Magnet)	4
MAGN 101	Elementary Algebra	3	PHYS 254	Univ PhysicsIII(Sound, Thermo)	4
MAGN 107	Mathematical Literacy	3	PHYS 255	Physics IV (Modern & Optics)	4
MATH 102	Intermediate Algebra w Trig	3	PLAS 121	Introduction to Plastics	4
MATH 103	College Algebra w/ Trig	3	POLI 101	American National Government	3
MATH 123	Elementary Statistics	3	POLI 111	State & Local Government	3
MATH 127	Mathematical Reasoning	3	POLI 113	American Judiciary System	3
MATH 141	Statistics	3	POLI 151	Intro Comparative Government	3
MATH 145	Discrete Mathematics	3	PSCI 101	Physical Science	3
MATH 147	Selected Topics In Precalculus	3	PSYC 101	Introduction to Psychology	3
MATH 149	Elementary Linear Algebra	3	PSYC 103	Intro to Applied Psychology	1
MATH 151	General Calculus A	3	PSYC 161	Social Science & Pseudoscience	1
MATH 152	General Calculus B	3	PSYC 211	Lifespan Development	3
MATH 153	Business Calculus	3	PSYC 221	Biological Psychology	3
MATH 161	Calculus I	4	PSYC 241	Child Development	3
MATH 162	Calculus II	4	PSYC 242	Adolescent Development	3
MATH 261	Calculus III	4	PSYC 243	Adult Development	3
MATH 262	Differential Equations	4	PSYC 251	Abnormal Psychology	3
MECH 120	Engineering Materials	3	PSYC 255	Psychology Personal Adjustment	3
MECH 211	Analytical Mechanics (Statics)	3	PSYC 284	Psychology of Gender	3
MECH 213	Strength of Materials	4	PSYC 291	Human Diversity Social Context	3
MUSI 101	Introduction To Music & Art	3	PSYC 304	Industrial/Org Psychology	3
MUSI 102	History Of Jazz	3	PSYC 325	Motivation and Behavior	3
MUSI 150	Ensemble	1	PSYC 361	Research Methods Applied Psy I	4
MUSI 155	Ensemble	1	PSYC 362	Research Methods App Psyc II	4
MUSI 160	Ensemble	1	PSYC 381	Personality	3
MUSI 165	Ensemble	1	PSYC 384	Group Behavior	3
NATR 101	General Ecology	3	PSYC 386	Social Psychology	3
NATR 115	Forest Ecology	3	PSYC 461	Tests and Measures	3
NATR 140	Geology	3	RENG 102	Renewable Energy Resources	3
NATR 145	Intro Environmental Technology	3	SOCI 101	Intro to Sociology	3
NATR 152	Fish Reproduction	2	SOCI 201	Social Problems	3
NATR 153	Marine Biology	3	SOCI 220	Marriage and Family	3
NATR 158	Fish Nutrition	2	SOCI 221	Death and Dying	3
NATR 160	Principles of Arboriculture	2	SOCI 250	Social Gerontology	3
NATR 210	Dendrology	3	SOCI 270	Drugs, Society & Behavior	3
NATR 232	Wildlife Ecology & Management	3	SOCI 360	Social Mvt & Community Change	3
NATR 250	Aquatic Ecology	3	SOCI 370	Drugs, Society & Behavior	3
NATR 252	Fish Ecology and Management	3	SOCI 390	Urban Sociology	3
NATR 254	Fish Health Management	3	SPAN 101	Beginning College Spanish 1	3
NATR 260	Principles of Zoology	4	SPAN 102	Beginning College Spanish 2	3
PHIL 201	Introduction To Philosophy	3	SPAN 125	Spanish for Heritage Speakers	3
PHIL 211	Modern Ethics	3	SPAN 201	Intermediate College Spanish 1	3
PHIL 311	Professional Ethics	3	SPAN 202	Intermediate College Spanish 2	3
PHIL 320	Contemporary Issues in Agricul	3	STS 101	Values of Science & Technology	3
PHYS 107	Introductory Physics I	4	STS 301	Humans vs. Nature	3
PHYS 108	Introductory Physics II	4	STS 316	Investigating Cyberculture	3
PHYS 127	General Physics I	4	STS 401	Adv Topics in STS	3
PHYS 128	General Physics II	4	THEA 124	Introduction to Theatre	3
PHYS 154	Univ Physics I (Mechanics)	4	THEA 125	Introduction to Acting & Directing	3
PHYS 155	Univ Physics II(Elec & Magnet)	4	THEA 150	Theatre Production Laboratory	3

# PROGRAMS

#### A

- · Agricultural Business Development, B.B.A. (p. 40)
- Agricultural Business, A.A.S. (p. 38)
- Agricultural Engineering Technology, A.A.S. (p. 41)
- Agricultural Human Resources Management Minor (p. 43)
- Agricultural Mechanics Certificate (p. 45)
- Agricultural Mechanics, A.O.S. (p. 43)
- Agricultural Science, A.A.S. (p. 45)
- Agricultural Science, B.TECH. (p. 47)
- Animal Science Dairy, A.A.S. (p. 52)
- Applied Psychology, B.S. (p. 53)
- Aquaculture & Aquatic Science, A.A.S. (p. 55)
- Aquatic Science & Aquaculture Minor (p. 57)
- Architectural Studies & Design, A.S. (p. 57)
- Auto Body Technology, A.A.S. (p. 59)
- Automotive Management, B.B.A. (p. 60)
- Automotive Technology (Ford ASSET Option), A.A.S. (p. 62)
- Automotive Technology, A.A.S. (p. 63)
- Automotive Technology, B.TECH. (p. 64)

#### B

- Business Administration, A.A.S. (p. 66)
- Business Administration, A.S. (p. 67)
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- Business Minor (p. 70)

#### С

- Cannabis Industry Minor (p. 71)
- Comprehensive Medical Coding Microcredential (p. 71)
- Computer Information Systems, A.A.S. (p. 71)
- Computer Information Systems, A.S. (p. 73)
- Criminal Justice Minor (p. 74)
- Criminal Justice Police Certificate (p. 77)
- Criminal Justice, A.A.S. (p. 74)
- Criminal Justice, B.TECH. (p. 75)
- Culinary Arts Management, A.A.S. (p. 78)
- Customer Relationship Marketing Microcredential (p. 79)
- Cybersecurity Minor (p. 80)

#### D

- Dairy Management, B.TECH. (p. 80)
- Diesel Equipment Technology, A.A.S. (p. 82)
- Diesel Mechanics Certificate (p. 83)
- Diesel Technology, A.O.S. (p. 83)
- Direct Support Professional I Microcredential (p. 84)
- Direct Support Professional II Microcredential (p. 84)
- Direct Support Professional III Microcredential (p. 85)

#### Ε

- Environmental & Natural Resources Management, B.TECH. (p. 85)
- Environmental Conservation Science, A.S. (p. 89)
- Equine Science & Management, A.A.S. (p. 90)
- Equine Science, B.TECH. (p. 92)
- Exercise Science, A.S. (p. 97)
- Exercise Science, B.S. (p. 99)

#### F

• Food & Agribusiness, M.S. (p. 100)

#### G

- Game Programming Minor (p. 101)
- Game Programming, B.TECH. (p. 101)

#### Η

- Health Related Studies, A.S. (p. 103)
- Healthcare Office Coordinator, A.A.S. (p. 104)
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- Horticulture Business Management, B.TECH. (p. 106)
- Horticulture, A.A.S. (p. 108)
- Hospitality Management, B.B.A. (p. 110)
- Human Services Certificate (p. 112)
- Human Services Leadership, B.P.S. (p. 112)
- Human Services, A.A.S. (p. 114)

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- Individual Studies, A.A.S. (p. 115)
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- Information Technology, B.TECH. (p. 117)
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#### J

- · Journalism & Communication for Online Media, B.S. (p. 121)
- Journalism Studies, A.A. (p. 123)

#### L

· Liberal Arts & Sciences: Humanities & Social Science, A.A. (p. 124)

#### Μ

- Marketing Minor (p. 125)
- Massage Therapy, A.A.S. (p. 126)
- Mechanical Engineering Technology, A.A.S. (p. 127)

#### Ν

- Natural Resources Conservation, A.A.S. (p. 129)
- Network Administration, B.TECH. (p. 130)
- Nursing, A.A.S. (p. 132)
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#### Ρ

• Psychology Minor (p. 136)

#### R

- Renewable Energy Technology, A.A.S. (p. 136)
- Renewable Energy, B.TECH. (p. 138)
- Residential Construction, A.O.S. (p. 140)

#### S

- Social Media Influencing & Development Microcredential (p. 140)
- Sociology Minor (p. 141)
- Specialty Crops & Cannabis Production Certificate (p. 141)
- Sustainable Resource Management, B.S. (p. 142)

### T

• Technology Management, B.TECH. (p. 144)

#### W

• Wood Products Technology, A.A.S. (p. 146)

# Agricultural Business, A.A.S.

#### Major Code: 0511

The curriculum is intended for anyone interested in obtaining an agriculturally oriented business education. The skills and knowledge obtained can be applied in numerous areas of the nation's largest industry, all the way from managing modern farm operations to retail sales of agricultural commodities.

The Agricultural Business major allows the student to tailor his or her curriculum beyond a basic core of required courses. The Marketing option consists of a strong core of agriculturally oriented and marketing courses. The Technology option provides a basic core of agribusiness courses as well as the opportunity for the student to choose a number of courses in an agricultural technical area. A strength of this option is that the student not only will acquire a degree of knowledge in a technical area, but will also acquire good business skills to manage technology. The Transfer option is intended for students that desire to transfer into a bachelor degree program at a later date. It provides for a more generalized curriculum. Career opportunities exist within farm management, farm credit, farm services, banking, agricultural retail store management, farm insurance, agricultural sales, and marketing. One can also transfer into our bachelor degree program in Agricultural Business Development.

# **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Understand consumers' behavior and the determination of demand for agricultural commodities and food products;
- Gain an understanding of the United States and the world food marketing system from the point of initial agricultural production until the finished product is in the hands of the consumer;
- Utilize the tools of financial analysis, management, and planning to solve problems in agriculture and in their own personal lives. These tools include budgeting, financial feasibility analysis, financial statements, and methods of risk analysis and management.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised, MATH 102 for Transfer Option
Natural Sciences (and Scientific Reasoning) (required)	as advised, CHEM 121 for Transfer Option
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

nformation Literacy (required)	as advised
Critical Thinking and Reasoning required)	as advised

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion in the Marketing and Technology Options. A minimum of 61 credits is required for degree completion in the Transfer Option.

#### Marketing Option

Code	Title	Credits
Major Requireme	nts	
AGBS 100	Agricultural Economics	3
or AGBS 225	Environmental Economics	
AGBS 110	Intro to Food and Agribusiness $^{1}$	3
AGBS 200	Marketing Agricultural Prodcts	3
AGBS 240	Farm Management and Finance	4
AGBS 250	Decision Making for Ag Manager	3
or AGBS 350	Ag Business Development	
BSAD 209	Professional Sales	3
ACCT - Accountin	ig as Advised	3
JOUR 272	Public Relations Publicity Mgt	3
or BSAD 300	Management Communications	
Select one of the	following Options:	2-3
Option 1:		
CITA as Advise	ed	
Option 2:		
OFFT 110	Introduction to MS Excel	

Total Credits 60	-61
SUNY General Education Courses as Advised	8
SUNY General Education Natural Sciences (and Scientific Reasoning) as Advised	3
SUNY General Education Mathematics (and Quantitative Reasoning) as Advised	3
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised	3
SUNY General Education Communication Written and Oral as Advised	3
Required SUNY General Education Coursework	
General Electives as Advised	13
or OFFT 109 Introduction to MS PowerPoint	
or OFFT 106 Personal Computer Keyboarding	
OFFT 100 Introduction to MS Word	

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Students transferring into Agricultural Business who have completed AGBS 240 Farm Management and Finance are not required to enroll in AGBS 110 Intro to Food and Agribusiness.

#### **Technology Option**

Code	Title Cre	dits
Major Requiremen	nts	
AGBS 100	Agricultural Economics	3
or AGBS 225	Environmental Economics	
AGBS 110	Intro to Food and Agribusiness <sup>1</sup>	3
AGBS 200	Marketing Agricultural Prodcts	3
AGBS 240	Farm Management and Finance	4
AGBS 250	Decision Making for Ag Manager	3
or AGBS 350	Ag Business Development	
ACCT - Accounting	g as Advised	3
Select one of the f	following Options:	2-3
Option 1:		
CITA as Advise	d	
Option 2:		
OFFT 110	Introduction to MS Excel	
OFFT 100	Introduction to MS Word	
or OFFT 106	Personal Computer Keyboarding	
or OFFT 109	Introduction to MS PowerPoint	
General Electives	as Advised	19
Required SUNY G	eneral Education Coursework	
SUNY General Edu	ucation Communication Written and Oral as Advised	3
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
SUNY General Edu as Advised	ucation Mathematics (and Quantitative Reasoning)	3
SUNY General Edu as Advised	ucation Natural Sciences (and Scientific Reasoning)	3
SUNY General Edu	ucation Courses as Advised	8
Total Credits	60	-61

1

Students transferring into Agricultural Business who have completed AGBS 240 Farm Management and Finance are not required to enroll in AGBS 110 Intro to Food and Agribusiness.

#### **Transfer Option**

This option meets the needs of students interested in agricultural education, cooperative extension, business or general agriculture. Proper selection of elective courses allows this option to address a wide variety of student interest areas.

Code	Title	Credits
Major Requirement	nts	
AGBS 100	Agricultural Economics	3
AGBS 200	Marketing Agricultural Prodcts	3
AGBS 240	Farm Management and Finance	4
AGBS 250	Decision Making for Ag Manager	3
or AGBS 350	Ag Business Development	
ACCT - Accountin	g as Advised	3
Select one of the	following Options:	2-3
Option 1:		
CITA as Advise	d	
Option2:		
OFFT 110	Introduction to MS Excel	
OFFT 100	Introduction to MS Word	
or OFFT 106	Personal Computer Keyboarding	
or OFFT 109	Introduction to MS PowerPoint	
<b>General Electives</b>	as Advised	21-22
Required SUNY G	eneral Education Coursework	
SUNY General Edu	ucation Communication Written and Oral as Advi	sed 3
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
MATH 102	Intermediate Algebra w Trig	3
CHEM 121	General College Chemistry I	4
SUNY General Education Courses as Advised 7		
Total Credits		59-61

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
AGBS 100	Agricultural Economics	3
AGBS 110	Intro to Food and Agribusiness	3
SUNY General Edu	ucation Communication Written and Oral as Advised	3
MATH - Mathema	tics as Advised	3
General Electives	as Advised	3
	Credits	15
Spring		
AGBS 200	Marketing Agricultural Prodcts	3
SUNY General Edu	ucation Diversity, Equity, Inclusion & Social Justice as Advised	3
ACCT - Accountin	g as Advised	3
OFFT 100	Introduction to MS Word	1
OFFT 110	Introduction to MS Excel	1
General Electives	as Advised	3
	Credits	14

#### Year 2

	Total Credite	61
	Credits	14
SUNY General Educa	ation as Advised	5
Electives from DANS	S/AGBS/AGRO/BSAD as Advised	6
or AGBS 350	or Ag Business Development	3
Spring		
	Credits	18
Electives from DANS	S/AGBS/AGRO/BSAD as Advised	8
General Electives as	Advised	3
SUNY General Educa	ation Natural Sciences as Advised	3
AGBS 240	Farm Management and Finance	4
Fall		

# Agricultural Business Development, B.B.A.

#### Major Code: 1914

Agribusiness is the coordination of all activities that contribute to the production, processing, marketing, distribution, financing and development of agricultural commodities and resources. This includes food, fiber, wood products, natural resources, horticulture, and other plant and animal products and services. Agribusiness is a high-tech industry that uses satellite systems, computer databases and spreadsheets, biotechnology, and many other innovations to increase efficiency and profitability.

Students enrolled in the program will develop the management skills (both technical and soft) to make effective decisions relating to agricultural labor, finance and markets. The coursework includes a strong agriculture and business-based curriculum that emphasizes management application to large- and small-scale agribusiness as well as non-profit organizations. These business/organizations may include but are not limited to food production, distribution, value added, production agriculture, the United States Department of Agriculture, and non-governmental organizations.

According to the USDA 60,000 high-skilled agricultural job openings are expected annually in the U.S., yet only 35,000 graduates are available to fill the jobs. Expected strong employment opportunities exist for: technical sales representatives, food brokers, accountants, financial managers, market analysts, fruit and vegetable marketing representatives, sales managers, small animal health care distribution and international business specialists.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- · Create and successfully operate their own agricultural enterprise
- Seek financing and maintain positive relationships with creditors and financial institutions
- Identify market opportunities and successfully utilize the opportunities to improve profitability
- Form, create and maintain effective relationships with the nonagriculture community
- Develop, manage and maintain effective interpersonal skills in the corporate and family business setting
- Question, investigate, analyze, evaluate, and communicate in agribusiness

- Interact with peers toward the accomplishment of effectively collaborating with agribusiness peers
- Adapt to a constantly changing agribusiness environment, and identify realistic goals and inventions for short- and long-term business planning
- Assess the range of one's abilities, accept responsibility for setting realistic goals, and implement a plan for personal and professional well-being

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BBA degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	AGSC 137 or MATH 123 or MATH 141
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### Core Competencies:

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion. This degree program is approved to be completed 50% online. Please consult with your academic advisor on specific courses.

Code	Title	Credits
Major Requireme	nts	
AGBS 100	Agricultural Economics	3
or AGBS 225	Environmental Economics	
AGBS 110	Intro to Food and Agribusiness $^1$	3
AGBS 200	Marketing Agricultural Prodcts	3
AGBS 240	Farm Management and Finance	4
AGBS 305	Ag Financial Decision Making	3
AGBS 350	Ag Business Development	3
AGBS 400	Distribution/Mkt Ag Products	4
AGBS 405	Farm & Rural Mngt Capstone	3

AGBS 450	Ag Policy & Development	3
AGBS 480	Retailing Agriculture Products	3
AGBS 440	Ag Business Intern Orientation	1
AGBS 470	Internship in Ag Business Dev	15
ACCT - Accountin	g as Advised	3
Select one of the	following Options:	2-3
Option 1:		
CITA 101	Principles Computer Apps	
Option 2:		
AGSC 132	Introduction to Precision Farming	
Option 3:		
OFFT 110	Introduction to MS Excel	
OFFT 100	Introduction to MS Word	
or OFFT 106	Personal Computer Keyboarding	
or OFFT 109	Introduction to MS PowerPoint	
300-400 Upper Le	vel Elective Credits as Advised <sup>2</sup>	10
Upper or Lower Le	evel Elective Credits as Advised <sup>2</sup>	26
Required SUNY G	eneral Education Coursework	
Select one of the	following:	3
AGSC 137	Agricultural Statistics	
MATH 123	Elementary Statistics	
MATH 141	Statistics	
SUNY General Ed	ucation Communication Written and Oral as Advise	d 3
SUNY General Ed Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
SUNY General Ed	ucation World Languages as Advised	3
SUNY General Ed as Advised	ucation Natural Sciences (and Scientific Reasoning	) 3-4
Additional SUNY	General Education Coursework as Advised	7-18
Total Credits	121	-124

#### 1

Students who have completed AGBS 240 Farm Management and Finance are not required to enroll in AGBS 110 Intro to Food and Agribusiness.

#### 2

Additional Electives selected from any course with the following subject codes: AGBS/AGEN/AGNR/AGRO/AGSC/ANSC/BIOL/BREW/BSAD/ CANA/CHEM/CITA/COMM310/DANS/DTEC/ECON/EDU/ENSC/ERID/ ESCI/ESTB/FSAD/HORT/NATR/NURS/NUTR/RENG/RREN/RRMT/SPPR

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
AGBS 100	Agricultural Economics	3
AGBS 110	Intro to Food and Agribusiness	3
SUNY General Edu	cation Mathematics (and Quantitative Reasoning) as Advised	3
SUNY General Edu	cation Communication Written and Oral as Advised	3
Additional Elective	s as Advised	3
	Credits	15
Spring		
AGBS 200	Marketing Agricultural Prodcts	3
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised		3
OFFT 110	Introduction to MS Excel	1
OFFT 100	Introduction to MS Word	1
Additional Electives as Advised		

SUNY General Educ	cation World Languages or Natural Science as Advised	3-4
	Credits	14-15
Year 2		
Fall		
AGBS 240	Farm Management and Finance	4
ACCT - Accounting	as Advised	3
Additional Electives	s as Advised	3
SUNY General Educ	cation World Languages or Natural Science as Advised	3-4
	Credits	13-14
Spring		
AGBS 350	Ag Business Development	3
Additional Electives	s as Advised	9
SUNY General Educ	cation as Advised	3
	Credits	15
Year 3		
Fall		
AGBS 400	Distribution/Mkt Ag Products	4
AGBS 305	Ag Financial Decision Making	3
Additional Electives	s as Advised	3
300-400 Upper Leve	el Elective as Advised	3
SUNY General Educ	cation as Advised	3
	Credits	16
Spring		
AGBS 450	Ag Policy & Development	3
AGBS 480	Retailing Agriculture Products	3
Additional Electives	s as Advised	2
300-400 Upper Leve	el Electives as Advised	6
SUNY General Educ	cation or Liberal Arts and Sciences as Advised	3
	Credits	17
Year 4		
Fall		
AGBS 405	Farm & Rural Mngt Capstone	3
AGBS 440	Ag Business Intern Orientation	1
Additional Electives	s as Advised	3
300-400 Upper Level Elective as Advised		1-3
SUNY General Education or Electives as Advised		6
	Credits	14-16
Spring		
AGBS 470	Internship in Ag Business Dev	15
	Credits	15
	Total Credits	119-123

# Agricultural Engineering Technology, A.A.S.

#### Major Code: 0512

Mechanization and automation in agriculture have created demand for technicians in agricultural engineering and mechanics by the farm equipment industry and by operators of large commercial farms. If a student is interested in mechanical applications and in agriculture, this curriculum can provide many challenging opportunities. The farm equipment industry today serves not only the commercial farmer but also is one of the major suppliers of such equipment as lawn, garden, and small recreational equipment, as well as construction equipment such as backhoes and small bulldozers for industrial uses.

### Accreditation

The program is accredited by the Equipment and Engine Training Council.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Develop a comprehensive understanding of the mechanical function of the compression-ignition engines and modern agricultural equipment
- Develop a comprehensive understanding of electrical systems and electronic controls used for diesel-powered equipment and modern agricultural equipment
- Develop a comprehensive understanding of hydraulic systems, components and control systems used for transmitting hydraulic power in diesel-powered equipment and modern agricultural equipment
- Develop the ability to accurately and efficiently diagnose and repair failures in mechanical, electrical and hydraulic systems in diesel-powered equipment and modern agriculture equipment.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 102
Natural Sciences (and Scientific Reasoning) (required)	AGEN 161 and AGSC 132
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 64 credits is required for degree completion.

Code	Title	Credits
Major Requirement	nts	
OFFT 110	Introduction to MS Excel	1
AGEN 100	Equipment Care & Maintenance	3
AGEN 105	Principles of Farm Machinery	2

Total Credits		64-72
Additional SUNY	General Education as Advised	4-8
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
MATH 102	Intermediate Algebra w Trig	3
SUNY General Edu	ucation Communication Written and Oral as Ad	vised 3-6
Required SUNY G	eneral Education Coursework	
DTEC 150	Diesel Systems	3
AGBS 240	Farm Management and Finance	4
ACCT 100	Accounting Info & Mgt Decision	
AGBS 100	Agricultural Economics	
Select one of the	following:	3
or AGEN 300	Intern Agricultural Engineerng	
AGEN 270	Tractor Overhaul and Repair	4-5
AGEN 131	Fundamentals of Hydraulics	3
AGEN 261	Advanced Hydraulics	4
AGEN 220	Main,Rep, Perf Tune Artic Cat	4
AGEN 210	Advanced Small Power Equipment	3
AGSC 132	Introduction to Precision Farming	2
AUTO 102	Metals	3
AGEN 161	Basic Hydraulics	3
DTEC 225	Diesel Electronics	4
DTEC 125	Diesel Electrical Systems	4
AGEN 115	Ag Engr Industry Overview	1

### Sample Course Sequence

Course	litie	Credits
Year 1		
Fall		
AGEN 100	Equipment Care & Maintenance	3
AGEN 105	Principles of Farm Machinery	2
AGEN 115	Ag Engr Industry Overview	1
AGEN 131	Fundamentals of Hydraulics	3
AGSC 132	Introduction to Precision Farming	2
DTEC 125	Diesel Electrical Systems	4
MATH 102	Intermediate Algebra w Trig	3
	Credits	18
Spring		
AGEN 161	Basic Hydraulics	3
AGEN 210	Advanced Small Power Equipment	3
DTEC 225	Diesel Electronics	4
AUTO 102	Metals	3
SUNY General Education a	s Advised	3
	Credits	16
Year 2		
Fall		
AGEN 261	Advanced Hydraulics	4
DTEC 150	Diesel Systems	3
Select one of the following	:	3-4
AGBS 100	Agricultural Economics	
ACCT 100	Accounting Info & Mgt Decision	
AGBS 240	Farm Management and Finance	
SUNY General Education C	ommunication Written and Oral as Advised	3
OFFT 110	Introduction to MS Excel	1
	Credits	14-15

Spring		
AGEN 270	Tractor Overhaul and Repair	4-5
AGEN 220	Main,Rep, Perf Tune Artic Cat	4
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised		
Additional SUNY General Education as Advised		3
Credits		14-15
Total Credits		62-64

# **Agricultural Human Resources Management Minor**

This minor provides students with an understanding of the many aspects of human behavior in the workplace of production agriculture. A wide range of topics including labor laws, human resource management, hiring, developing, training and retaining employees, workplace psychology, policy development, and leadership are covered within this minor. Specific emphasis is placed on H2A (agricultural work visas), seasonal, and migrant employees. Housing, OSHA, labor, and Workers Compensation Audits will also be covered. This minor requires 15 credits, with at least 9 credit hours in the upper-division.

### **Program Learning Outcomes**

Upon successful completion of this minor students will be able to:

- · Conduct job analysis and develop job position/job descriptions within production agriculture settings.
- · Understand human behavior in workplace settings, the variables which impact employees and their productive efficiency, and develop strategies to improve productive human relations in such settings.
- Correctly hire, train, retain, motivate, and dismiss employees within production agriculture (H2A, migrant, and seasonal employees).
- · Manage employee relations, compensation, and performance management within multicultural settings.
- · Understand human resource laws for American born and international employees (H2A, migrant, seasonal employees).
- · Understand the federal, state, and local policy process.
- · Implement federal labor laws, housing, and OSHA laws/regulations within the workplace
- · Become familiar (or more familiar) with basic structure and vocabulary of the Spanish language.
- · Recognize and integrate various cultural practices within the workplace, particularly the Hispanic culture.

### **Curriculum Requirements**

A minimum of 15 credits is required for completion of the minor. Students must be enrolled in a Bachelor's degree program in order to declare a minor

Code	Title	Credits
Required Coursev	vork	
PSYC 304	Industrial/Org Psychology	3
or BSAD 310	Human Resource Management	
AGBS 410	Ag Human Resource Management	3
AGBS 450	Ag Policy & Development	3
SPAN	Spanish or Foreign Language as Advised	3
Select one of the	following AGBS/BSAD courses as Advised:	3
BSAD 116	<b>Business Organization &amp; Mgmt</b>	

Total Credits		15
AGBS 110	Intro to Food and Agribusiness	
AGBS 100	Agricultural Economics	

**Total Credits** 

# Agricultural Mechanics, A.O.S.

#### Major Code: 0527

The A.O.S. program is a two-year program consisting almost entirely of courses in mechanics and agriculture. There is no requirement for courses in liberal arts and general studies. The curriculum is best suited to students who intend to find immediate employment in their field or return to the home farm. The student may choose options (15 credits) in agricultural business, dairy equipment technology, small power equipment, auto mechanics, animal science, agronomy, or horticulture. Students who intend to continue their education would be better prepared by following the A.A.S. degree program in agricultural engineering, which includes the liberal arts and sciences required to transfer to a bachelor degree program.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Develop a comprehensive understanding of the mechanical function of the compression-ignition engines and modern agricultural equipment
- · Develop a comprehensive understanding of electrical systems and electronic controls used for diesel- powered equipment and modern agricultural equipment
- Develop a comprehensive understanding of hydraulic systems, components and control systems used for transmitting hydraulic power in diesel-powered equipment and modern agricultural equipment
- Develop the ability to accurately and efficiently diagnose and repair failures in mechanical, electrical and hydraulic systems in dieselpowered equipment and modern agriculture equipment.

# Curriculum Requirements

A minimum of 62 credits is required for degree completion.

Code	Title	Credits
AGEN 100	Equipment Care & Maintenance	3
AGEN 105	Principles of Farm Machinery	2
DTEC 125	Diesel Electrical Systems	4
DTEC 225	Diesel Electronics	4
AUTO 102	Metals	3
AGEN 115	Ag Engr Industry Overview	1
AGEN 210	Advanced Small Power Equipment	3
AGEN 220	Main,Rep, Perf Tune Artic Cat	4
AGEN 161	Basic Hydraulics	3
AGEN 261	Advanced Hydraulics	4
AGEN 270	Tractor Overhaul and Repair	4-5
or AGEN 300	Intern Agricultural Engineerng	
AUTO 260	Auto Air Cond & Refrg Recovery	1
AGSC 132	Introduction to Precision Farming	2
OFFT 110	Introduction to MS Excel	1
RENG 102	Renewable Energy Resources	3
AGEN 131	Fundamentals of Hydraulics	3

DTEC 150	Diesel Systems	3
or AUTO 103	Internal Combustion Engines I	
Additional Genera	l Electives as Advised	3
Field Elective Opt	ions or Electives as Advised	10
Total Credits		61-62

#### **Options for General Electives**

Three credits required from the following:

Code	Title	Credits
AGEN 135	Construction Surveying	3
or NATR 142	Plane Surveying I	
RESC 130	Light Framing	3
AGEN 120	Water Supply & Sanitation	2
DTEC 350	Advanced Diesel Fuel Systems	3
ACCT Accounting	Elective as advised	3
AUTO 109	Chassis Analysis I	4
DTEC 105	Diesel Powertrains I	4
DTEC 325	Electrical Power Generation	3
DTEC 290	Diesel Equip Tech Internship 1	1
DTEC 295	Diesel Eqip Tech Internship 3	1

#### **Option Field of Study Electives**

If pursuing an option students must choose a minimum of 10 credits within one of the following option categories. If no option is chosen students must take 10 credits from any of the classes listed below:

#### **Agricultural Business Option**

Code	Title	Credits
ACCT Accounting	g Elective as advised	3
AGBS 100	Agricultural Economics	3
AGBS 240	Farm Management and Finance	4
AGBS 200	Marketing Agricultural Prodcts	3

#### Agricultural Science (Agronomy) Option

Code	Title	Credits
AGRO 110	Soil Science	3
AGRO 210	Field Crops	3
AGRO 215	Soil Fertility & Fertilizers	3
AGRO 110	Soil Science	3
AGRO 310	Pasture Mgt and Forages Prod	3

#### **Animal Science Option**

Code	Title	Credits
ANSC 100	Animal Science and Industry	3
DANS 100	Dairy Nutrition	3
DANS 160	Introduction to Dairy Science	3
DANS 210	Dairy Health	3
DANS 220	Dairy Herd Management	3
DANS 110	Breeding Dairy Cattle	3
DANS 225	Dairy Production & Management	3

#### **Automotive Mechanics Option**

Code	Title	Credits
AUTO 104	Basic Auto Electrical Systems	3
AUTO 109	Chassis Analysis I	4

AUTO 202	Autobody Fundamentals	3
AUTO 103	Internal Combustion Engines I	3
AUTO 171	Automotive Drivetrains	3
Dairy Equipme	nt Technology	
Code	Title	Credits
DANS 160	Introduction to Dairy Science	3
BSAD 209	Professional Sales	3
DANS 225	Dairy Production & Management	3
ELEC 290	Digtl Circuits & Microprocessrs	3
Horticulture		
Code	Title	Credits
HORT 101	Plant Materials	3
HORT 103	Landscape Planning & Design I	3
HORT 105	Landscape Planning & Design II	3
HORT 109	Landscape & Turf Management	3
HORT 206	Sustainable Landscapes	3
HORT 210	Horticultural Practices II	2
Small Dower F	quinment	
Code	Title	Credits
	Basic Auto Electrical Systems	2
AUTO 104		3
AUTU 260	Auto Air Cond & Refrg Recovery	-
AGEN 110	Small Power Equipment	2
ACCT Accountin	ng Elective as advised	3

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
AGEN 100	Equipment Care & Maintenance	3
AGEN 105	Principles of Farm Machinery	2
AGEN 131	Fundamentals of Hydraulics	3
AGEN 115	Ag Engr Industry Overview	1
AGSC 132	Introduction to Precision Farming	2
DTEC 125	Diesel Electrical Systems	4
RENG 102	Renewable Energy Resources	3
	Credits	18
Spring		
AGEN 161	Basic Hydraulics	3
AGEN 210	Advanced Small Power Equipment	3
DTEC 225	Diesel Electronics	4
AUTO 102	Metals	3
MAGN 101	Elementary Algebra	3
Major Elective as Advise	ed	3
	Credits	19
Year 2		
Fall		
AGEN 261	Advanced Hydraulics	4
DTEC 150	Diesel Systems	3
or AUTO 103	or Internal Combustion Engines I	
OFFT 110	Introduction to MS Excel	1
Electives in Option Field	as Advised	4
	Credits	12
Spring		
AGEN 270	Tractor Overhaul and Repair	4-5
or AGEN 300	or Intern Agricultural Engineerng	
AGEN 220	Main,Rep, Perf Tune Artic Cat	4

Total Credits	63-64
Credits	14-15
Electives in Option Field as Advised	6

**Total Credits** 

# **Agricultural Mechanics Certificate**

#### Major Code: 3166

Provides students a one-year college-level experience of specialized training in Agricultural Mechanics. The agricultural mechanics certificate program provides fundamental skills for technician service positions in agricultural equipment market. Students training in components, systems and service knowledge of tractors and other agricultural machines. Included are subject areas such as hydraulics, electricity, electronics, diesel engines, agricultural machinery, transmissions, small power equipment and other related topics.

Upon successful completion of this certificate program, students will be able to:

- · Describe the mechanical function of the compression-ignition engines and modern agricultural equipment.
- · Compare the electrical systems and electronic controls used in agricultural equipment.
- · Recognize agricultural hydraulic systems, components and control systems used for transmitting hydraulic power.
- · Demonstrate the ability to accurately and efficiently diagnose and repair failures in agricultural mechanical, electrical and hydraulic systems.

A minimum of 27 credits is required for certificate completion.

Code	Title	Credits
<b>Required Cours</b>	ework	
AGEN 100	Equipment Care & Maintenance	3
AGEN 105	Principles of Farm Machinery	2
AGEN 131	Fundamentals of Hydraulics	3
AGEN 161	Basic Hydraulics	3
AGEN 210	Advanced Small Power Equipment	3
AGEN 220	Main,Rep, Perf Tune Artic Cat	4
DTEC 125	Diesel Electrical Systems	4
DTEC 225	Diesel Electronics	4
AUTO 260	Auto Air Cond & Refrg Recovery	1
Optional Coursework		
DTEC 290	Diesel Equip Tech Internship 1	1
Total Credits		28

# Agricultural Science, A.A.S.

#### Major Code: 0514

Agricultural Science is a program which provides fundamental training in the basic sciences as applied to agriculture. All students graduating from our Agricultural Science program have been exposed to a wide breadth of courses, while at the same time allowing enough flexibility to delve deeper into any individual topic. This program offers broad-based training in agriculture, preparing students for employment in the agricultural service sector and for technical on-farm work.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- · Illustrate a broad-based understanding of the scientific principles important in modern agricultural production
- · Demonstrate understanding of key practices and technologies used in the area of their chosen agricultural field
- · Utilize tools necessary for data collection and analysis relevant to modern agricultural production
- · Interpret data necessary for effective management of crop and animal production
- · Describe basic social, political, and economic driving forces impacting the agricultural field of their chosen focus regionally, nationally, and globally

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	AGSC 137 or MATH 123
Natural Sciences (and Scientific Reasoing) (requried)	AGRO 110, AGSC 132
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits		
Major Requirer	Major Requirements			
AGBS 100	Agricultural Economics	3		
AGRO 110	Soil Science <sup>1</sup>	3		
AGRO 210	Field Crops	3		
AGSC 115	Agricultural Science & Context	1		
AGSC 132	Introduction to Precision Farming	2		

AGSC 137	Agricultural Statistics	3	
or MATH 123	Elementary Statistics		
AGSC 250	Application in Ag Science	3	
ANSC 101	Intro to Animal Science	3	
<b>Required SUNY G</b>	eneral Education Coursework		
SUNY General Ed	ucation Natural Sciences (and Scientific Reasoning)	3	
as Advised			
SUNY General Ed	ucation Mathematics (and Quantitative Reasoning)	3	
as Advised			
SUNY General Ed	ucation Communication Written and Oral as Advised	3	
SUNY General Ed	ucation Diversity, Equity, Inclusion & Social Justice	3	
as Advised		6	
SUNY General Ed	ucation Social Science, History, World Languages as	6	
Students must co	mplete 27 credits from the following lists:		
Fundamental Scie			
Select 6 credits of	f the following:	6	
CHEM 110	Contemporary Chemistry <sup>1</sup>	0	
CHEM 121	Concern College Chemistry		
CHEM 121	Caparal College Chemistry II		
CHEM 122	Beteny Form Function Good Dit <sup>1</sup>		
BIOL 102			
BIOL 120			
BIOL 121	General Biology II		
PHYS 127	General Physics I		
DANS 100	Dairy Nutrition		
DANS 110	Breeding Dairy Cattle '		
DANS 120	Anatomy & Physiology-Dairy Cow '		
Agronomy			
Select 6 credits of	f the following:	6	
BIOL 102	Botany-Form Function Seed Plt		
AGRO 115	Principles of Compost Mgmt		
AGRO 215	Soil Fertility & Fertilizers		
ENSC 106	Pesticide Use and Handling		
ENSC 107	Integrated Pest Management		
HORT 150	Fruit & Vegetable Production		
HORT 201	Plant Propagation <sup>1</sup>		
Technology			
Select 3 credits of	f the following:	3	
NATR 103	Natural Resources Equipment Op		
AGEN 105	Principles of Farm Machinery		
AGEN 115	Ag Engr Industry Overview		
AGEN as Advis	ed		
Specialty Focus			
Select 12 credits from any course of the following prefixes: 12			
AGBS, AGEN, AGNR, AGRO, AGSC, ANSC, AUTO, BIOL, CANA, CHEM, DANS, DTEC, EDU, ENRM, ENSC, ESCI, HORT, NATR, PSYC, PHYS, RENG, SPPR			
Total Credits		66	

#### 1

This course also counts towards SUNY General Education requirements.

### Sample Course Sequence

Students in the two-year Agricultural Science degree will work with their advisors to build a course sequence that corresponds with their future academic needs, while meeting requirements of the degree, but these are three potential course sequences for students with:

- 1. an agronomy focus
- 2. an animal science focus
- 3. a diverse focus for students interested in agricultural education

#### **Agronomy Focus**

Course	Title	Credits
Year 1		
Fall		
AGRO 115	Principles of Compost Mgmt	3
AGSC 115	Agricultural Science & Context	1
ANSC 101	Intro to Animal Science	3
AGBS 100	Agricultural Economics	3
AGNR 200	Job Prep Skills & Resources	1
CHEM 121	General College Chemistry I	4
	Credits	15
Spring		
AGRO 110	Soil Science	3
BIOL 102	Botany-Form Function Seed Plt	3
COMM 105	Research & Communication	3
ENSC 106	Pesticide Use and Handling	2
HIST 182	History Technology From 1750	3
HORT 150	Fruit & Vegetable Production	3
	Credits	17
Year 2		
Fall		
AGRO 210	Field Crops	3
AGSC 132	Introduction to Precision Farming	2
AGEN 105	Principles of Farm Machinery	2
AGEN 115	Ag Engr Industry Overview	1
ENSC 107	Integrated Pest Management	1
SPAN 101	Beginning College Spanish 1	3
	Credits	12
Spring		
AGSC 137	Agricultural Statistics	3
AGRO 215	Soil Fertility & Fertilizers	3
AGSC 250	Application in Ag Science	3
HORT 241	Plant Protection	3
SUNY General Education D	iversity, Equity, Inclusion & Social Justice as Advised	3
	Credits	15
	Total Credits	59

#### **Animal Science Focus**

1

Course	Title	Credits
/ear 1		
Fall		
AGBS 100	Agricultural Economics	3
AGSC 115	Agricultural Science & Context	1
ANSC 101	Intro to Animal Science	3
DANS 150	Dairy Farm Practicum I	2
DANS 100	Dairy Nutrition	3
AGNR 200	Job Prep Skills & Resources	1
AGRO 115	Principles of Compost Mgmt	3
	Credits	16

Fall		
Vear 2		
	Credits	14
SUNY SUNY Gener AdvisedEducation	al Education Communication Written and Oral as Communication as Advised	3
AUTO 102	Metals	3
DANS 110	Breeding Dairy Cattle	3
AGRO 110	Soil Science	3
ANSC 150	Live Animal Evaluation	2
Spring		

	Total Credits	60
	Credits	16
SUNY General Education	as Advised	3
AGSC 137	Agricultural Statistics	3
DANS 115	Dairy Cattle Artificial Insem	1
AGSC 120	Domestic Animal Behavior	3
AGRO 215	Soil Fertility & Fertilizers	3
AGSC 250	Application in Ag Science	3
Spring		
	Credits	14
SUNY General Education	as Advised	3
SUNY General Education	Diversity, Equity, Inclusion & Social Justice as Advised	3
AGSC 132	Introduction to Precision Farming	2
ANSC 110	Livestock Production Mgmt/Tech	3
AGRO 210	Field Crops	3

#### **Diverse Focus**

Course	Title	Credits
Year 1		
Fall		
AGRO 115	Principles of Compost Mgmt	3
AGSC 115	Agricultural Science & Context	1
ANSC 101	Intro to Animal Science	3
AGBS 100	Agricultural Economics	3
AGNR 200	Job Prep Skills & Resources	1
SUNY General Education (	Communication Written and Oral as Advised	3
EDU 101	Introduction to Teaching	3
	Credits	17
Spring		
AGRO 110	Soil Science	3
BIOL 102	Botany-Form Function Seed Plt	3
HORT 150	Fruit & Vegetable Production	3
SUNY General Education	Diversity, Equity, Inclusion & Social Justice as Advised	3
DANS 110	Breeding Dairy Cattle	3
	Credits	15
Year 2		
Fall		
AGRO 210	Field Crops	3
AGSC 132	Introduction to Precision Farming	2
PSYC 101	Introduction to Psychology	3
or SUNY General Educ History, World Languag	ation as Advised (ex. Humanities, Social Science, Art, ges)	
DANS 160	Introduction to Dairy Science	3
ENSC 107	Integrated Pest Management	1
SUNY General Education as Advised		
	Credits	15
Spring		
AGSC 137	Agricultural Statistics	3
AGSC 250	Application in Ag Science	3
EDU 201	Foundations of Education	3
AUTO 102	Metals	3
EDU 202	Guided Fieldwork in Education	1

ENSC 106	Pesticide Use and Handling	2
	Credits	15
	Total Credits	62

# Agricultural Science, B.TECH.

#### Major Code: 2732

The Agricultural Science B.Tech. program is designed to expose students to a wide breadth of courses within agriculture, and consists of four tracks: Agronomy, Agricultural Outreach and Education, Dairy Management, and Livestock Management. The flexibility in this program allows students to tailor their degree program to best fit their individual needs, with all graduates completing a set of core courses common across the four tracks.

Graduates of the Agricultural Science B.Tech. program will be trained to succeed across a wide array of agricultural specialties, from employment in the agricultural service sector to on-farm management of dairy and other livestock species, or in the public sector as agricultural educators. Students who choose the Agricultural Outreach and Education track will be well-poised upon the completion of their coursework at SUNY Morrisville to enter graduate school pursuing an Education Master's degree. Students interested in Teacher Certification will have the option to complete their Content Core credits at SUNY Morrisville, and then complete their Education credits at SUNY Oswego. They can also seek employment with a bachelor's degree at private k-12 institutions, not-forprofit organizations, or as a cooperative extension educator.

Regardless of the track, students within the Agricultural Science B.Tech. program will receive an education that is rooted in applied learning. The state-of-the-art facilities at the SUNY Morrisville campus provide the opportunity for students to apply the theory learned in lecture in a realworld setting.

- · The Dairy Complex operates in a "for profit" manner, which is unique to many other programs in that students are able to actually illicit changes and see the impact it has on farm operations and profitability.
- · The soils laboratory allows students to learn the techniques involved in agronomic and environmental soil testing, with the hundreds of acres of farmland serving as a real-world laboratory for our pastures and field crops courses.
- The expanding livestock options housed at the Dairy Complex provide students with the opportunity to learn how to manage and work with many livestock species, as much of the care provided for these animals is carried out by students in our agricultural programs.
- The vast agricultural opportunities available at SUNY Morrisville make it a premier option for individuals interested in pursuing an Agricultural Outreach and Education degree, providing diverse agricultural course offerings for them to choose from, preparing them to be the future agricultural educators in New York.

Students will also benefit from the new state-of-the-art Renewable Energy facility on campus, the newly renovated Dairy Processing and Specialty Crops facility, Horticultural greenhouses and an Aquaculture center, where innovative food production practices can be explored.

The Agricultural Science B.Tech. program requires completion of a minimum of 120 credit hours to be eligible for graduation.

### **Program Learning Outcomes**

The objective of the Agricultural Science B.Tech. program is to use hands-on experiential learning practices to prepare graduates to be leaders in their chosen agricultural field. The degree consists of four tracks: Agronomy, Agricultural Outreach and Education, Dairy Management, and Livestock Management. Each of these options are designed to provide students with a real-world experience, utilizing the wide array of agricultural facilities on campus.

Upon completion of the Agricultural Science B.Tech. program, a successful graduate will:

- Utilize the developed expertise in concepts, theories, and emerging methodologies to succeed in tackling real-world issues specific to agriculture in the chosen degree track.
- Recognize problems specific to agriculture in the chosen degree track and formulate solutions to such problems.
- Demonstrate problem-solving and critical thinking skills to solve problems in the practice of agriculture.
- Apply practical knowledge and skills specific to agriculture in the chosen degree track.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised based on chosen track
Diversity: Equity, Inclusion, and Social Justice (required)	as advised based on chosen track
Mathematics (and Quantitative Reasoning) (required)	as advised based on chosen track
Natural Sciences (and Scientific Reasoning) (required)	as advised based on chosen track
Humanities	as advised based on chosen track
Social Sciences	as advised based on chosen track
The Arts	as advised based on chosen track
US History and Civic Engagement	as advised based on chosen track
World History and Global Awareness	as advised based on chosen track
World Languages	as advised based on chosen track

#### Core Competencies:

Information Literacy (required) as advised based on chosen track Critical Thinking and Reasoning as advised based on chosen track (required)

A minimum of 120 credits is required for degree completion.

Code	Title	Credits
Dairy Management Track		
DANS 100	Dairy Nutrition	3

DANS 110	Breeding Dairy Cattle	3
DANS 120	Anatomy & Physiology-Dairy Cow	3
DANS 140	Dairy Cattle Judging	1
DANS 150	Dairy Farm Practicum I	2
DANS 151	Dairy Farm Practicum II	2
DANS 160	Introduction to Dairy Science	3
DANS 220	Dairy Herd Management	3
DANS 225	Dairy Production & Management	3
DANS 240	Dairy Farm Data Management	1
DANS 305	Dairy Calf & Heifer Management	3
DANS 340	Advanced Dairy Reproduction	3
DANS 450	Advanced Dairy Herd Mgt	4
AGBS 100	Agricultural Economics	3
or AGBS 225	Environmental Economics	
AGBS 200	Marketing Agricultural Prodcts	3
AGBS 240	Farm Management and Finance	4
AGBS 305	Ag Financial Decision Making	3
AGNR 200	Job Prep Skills & Resources	1
AGRO 110	Soil Science	3
AGRO 210	Field Crops	3
AGRO 310	Pasture Mgt and Forages Prod	3
Select two credits	s from the following:	2
AGSC 132	Introduction to Precision Farming	
OFFT 100	Introduction to MS Word	
OFFT 106	Personal Computer Keyboarding	
or OFFT 109	Introduction to MS PowerPoint	
or OFFT 110	) Introduction to MS Excel	
AGSC 137	Agricultural Statistics	3
AGSC 350	Animal Genetics	3
AGSC 460	Agricultural Science Capstone	3
AGSC 480	Internship Agricultural Scienc	12-15
ENRM 450	Environmental & Natural Resource Manageme Internship Orientation	ent 1
COMP 310	Advance Tech Communication	3
Accounting as Ad	lvised	3
SUNY General Ed Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
SUNY General Ed	ucation World Languages as Advised	3
SUNY General Ed	ucation Communication Written and Oral as Ad	vised 3-6
SUNY General Ed Science, US Histo Global Awareness	ucation Courses in the Arts, Humanities, Social ory and Civic Engagement, or World History and s as Advised	6
Electives in DANS	S, AGSC, ANSC, AGNR as Advised	6
General Electives	as Advised	6
300-400 Level Ele AGNR, SPPR as A	ctives in DANS, AGRO, AGSC, AGBS, BSAD, ANS dvised	SC, 4-7
Total Credits		118-127
Code	Title	Credits
Livestock Track		
ANSC 101	Intro to Animal Science	3
ANSC 110	Livestock Production Mgmt/Tech	3
ANSC 150	Live Animal Evaluation	2

DANS 110	Breeding Dairy Cattle	3	
DANS 160	Introduction to Dairy Science	3	
or ANSC 200	Sheep Industry/Prodcution Syst		
DANS 100	Dairy Nutrition	3	
or ESCI 210	Equine Nutrition		
DANS 120	Anatomy & Physiology-Dairy Cow	3	
or ESCI 110	Equine Anatomy & Physiology		
AGBS 100	Agricultural Economics	3	
or AGBS 225	Environmental Economics		
AGBS 200	Marketing Agricultural Prodcts	3	
AGBS 240	Farm Management and Finance	4	
AGBS 305	Ag Financial Decision Making	3	
AGRO 110	Soil Science	3	
AGRO 210	Field Crops	3	
AGRO 310	Pasture Mgt and Forages Prod	3	
AGSC 120	Domestic Animal Behavior	3	
AGSC 137	Agricultural Statistics	3	
Select 2 credits fr	om the following:	2	
AGSC 132	Introduction to Precision Farming		
OFFT 100	Introduction to MS Word		
OFFT 106	Personal Computer Keyboarding		
or OFFT 109	Introduction to MS PowerPoint		
or OFFT 110	Introduction to MS Excel		
AGSC 460	Agricultural Science Capstone	3	
or AGBS 405	Farm & Rural Mngt Capstone		
AGSC 480	Internship Agricultural Scienc (If 12 credits are selected, a 3-credit upper-level elective in DANS, AGRO, AGSC, AGBS, BSAD, ANSC, AGNR or SPPR must be taken)	12-15	
AGNR 200	Job Prep Skills & Resources	1	
ENRM 450	Environmental & Natural Resource Management	1	
	Internship Orientation		
COMP 310	Advance Tech Communication	3	
Accounting as Ad	vised	3	
SUNY General Edu	ucation World Languages as Advised	3	
SUNY General Edu	ucation Communication Written and Oral as Advise	d 3-6	
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3	
Electives in DANS SPPR as Advised	, AGSC, ANSC, AGBS, AGRO, AGEN, DTEC, AUTO, or	6	
<b>General Electives</b>	as Advised	6	
SUNY General Edu Science, US Histo Global Awareness	ucation Courses in the Arts, Humanities, Social ry and Civic Engagement, or World History and a as Advised	6	
300-400 Level Ele AGNR or SPPR as	ctives in DANS, AGRO, AGSC, AGBS, BSAD, ANSC, Advised	17-21	
Total Credits 117-127			
Code	Title Cr	edits	
Agronomy Track			
AGNR 200	Job Prep Skills & Resources	1	
AGRO 110	Soil Science	3	
AGRO 210	Field Crops	3	
AGBO 215	Soil Fertility & Fertilizers	3	

AGRO 305	Adv Soil & Water Conservation	3	
AGRO 310	Pasture Mgt and Forages Prod	3	
AGRO 320	Urban Agriculture and Food Production	3	
AGSC 115	Agricultural Science & Context	1	
AGSC 132	Introduction to Precision Farming	2	
AGSC 137	Agricultural Statistics	3	
or MATH 123	Elementary Statistics		
AGSC 250	Application in Ag Science	3	
AGSC 460	Agricultural Science Capstone	3	
AGSC 480	Internship Agricultural Scienc (If 12 credits are selected, a 3-credit upper-level elective in DANS, AGRO, AGSC, AGBS, BSAD, ANSC, AGNR or SPPR must be taken)	12-15	
ANSC 101	Intro to Animal Science	3	
AGBS 100	Agricultural Economics	3	
or AGBS 225	Environmental Economics		
BIOL 102	Botany-Form Function Seed Plt	3	
CHEM 101	Basic Chemistry	4	
or CHEM 110	Contemporary Chemistry		
or CHEM 121	General College Chemistry I		
or ENSC 125	Environmental Chemistry		
COMP 310	Advance Tech Communication	3	
ENRM 450	Environmental & Natural Resource Management Internship Orientation	1	
ENSC 106	Pesticide Use and Handling	2	
ENSC 107	Integrated Pest Management	1	
HORT 150	Fruit & Vegetable Production	3	
SUNY General Education Communication Written and Oral as Advised 3-6			
SUNY General Ed Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3	
SUNY General Ed	ucation World Languages as Advised	3	
Elective Credits in CANA, DANS, DTE	AGBS, AGEN, AGNR, AGSC, AGRO, ANSC, AUTO, EC, HORT, ENRM, ENSC, ENVT, NATR, RENG or SPPF	12 R	
<b>General Electives</b>		7	
SUNY General Ed	ucation Arts, Humanities, Social Sciences, US	6	
History & Civic En	gagement or World History & Global Awareness		
300-400 Level Ele DANS, HORT, ENF	ctives in AGEN, AGNR, AGSC, AGRO, ANSC, CANA, RM, ENSC, ENVT, NATR, RENG or SPPR	14-17	
Total Credits	114	4-123	
Code	Title	redits	
Agricultural Outre	each and Education Track		
AGRO 110	Soil Science	3	
AGRO 210	Field Crops	3	
AGRO 305	Adv Soil & Water Conservation	3	
AGRO 310	Pasture Mgt and Forages Prod	3	
AGRO 320	Urban Agriculture and Food Production	3	
AGSC 115	Agricultural Science & Context	1	
AGSC 132	Agricultural colence a context		
	Introduction to Precision Farming	2	
AGSC 137	Introduction to Precision Farming Agricultural Statistics	2 3	
AGSC 137 or MATH 123	Introduction to Precision Farming Agricultural Statistics Elementary Statistics	2 3	

AGSC 480	Internship Agricultural Scienc (If 12 credits are selected, a 3-credit upper-level elective in DANS, AGRO, AGSC, AGBS, BSAD, ANSC, AGNR or SPPR must be taken)	12-15
ANSC 101	Intro to Animal Science	3
AGBS 100	Agricultural Economics	3
AGBS 240	Farm Management and Finance	4
BIOL 102	Botany-Form Function Seed Plt	3
CHEM 101	Basic Chemistry	4
or CHEM 110	Contemporary Chemistry	
or CHEM 121	General College Chemistry I	
or ENSC 125	Environmental Chemistry	
COMP 310	Advance Tech Communication	3
ENSC 106	Pesticide Use and Handling	2
ENSC 107	Integrated Pest Management	1
AGNR 200	Job Prep Skills & Resources	1
EDU 101	Introduction to Teaching	3
or JOUR 101	Intro to Mass Communication	
EDU 201	Foundations of Education	3
EDU 202	Guided Fieldwork in Education	1-3
or JOUR 272	Public Relations Publicity Mgt	
ENRM 450	Environmental & Natural Resource Management Internship Orientation	1
SUNY General Edu	ucation World Languages as Advised	3
SUNY General Edu	ucation Communication Written and Oral as Advis	ed 3-6
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	
Electives as advis AUTO, CANA, DAN SPPR	ed in AGEN, AGNR, AGSC, AGRO, ANSC, AGBS, IS, DTEC, HORT, ENRM, ENSC, ENVT, NATR, RENG	14-15 or
<b>General Electives</b>		3
SUNY General Edu & Civic Engageme Advised	ucation Art, Humanities, Social Sciences, US Histo ant, or World History and Global Awareness as	ry 6
300-400 Level Ele BSAD, CANA, DAN as Advised	ctives in AGBS, AGEN, AGNR, AGSC, AGRO, ANSC, S, HORT, ENRM, ENSC, ENVT, NATR, RENG or SPP	14-17 R
Total Credits	11	1-123

# Suggested Course Sequence

### Dairy Management Track

Course	Title	Credits
Year 1		
Fall		
DANS 100	Dairy Nutrition	3
DANS 150	Dairy Farm Practicum I	2
DANS 160	Introduction to Dairy Science	3
AGBS 100	Agricultural Economics	3
AGNR 200	Job Prep Skills & Resources	1
AGRO 110	Soil Science	3
	Credits	15
Spring		
DANS 110	Breeding Dairy Cattle	3
DANS 120	Anatomy & Physiology-Dairy Cow	3
DANS 140	Dairy Cattle Judging	1
DANS 151	Dairy Farm Practicum II	2

DANS 240	Dairy Farm Data Management	1
AGBS 200	Marketing Agricultural Prodcts	3
SUNY General Education	Communication Written and Oral as Advised	3
	Credits	16
Year 2		
Fall		
DANS 210	Dairy Health	3
DANS 220	Dairy Herd Management	3
AGRO 210	Field Crops	3
AGBS 240	Farm Management and Finance	4
SUNY General Education	as Advised - Humanities, Art, Social Sciences, World	3
Language, US History & (	Civic Engagement, or World History and Global Awareness	
	Credits	16
Spring		
DANS 225	Dairy Production & Management	3
AGSC 137	Agricultural Statistics	3
ACCT 101	Principles of Accounting I	3
SUNY General Education Language, US History & (	as Advised - Humanities, Art, Social Sciences, World Civic Engagement, or World History and Global Awareness	3
SUNY General Education	Diversity, Equity, Inclusion and Social Justice as Advised	3
	Credits	15
Year 3		
Fall		
DANS 340	Advanced Dairy Reproduction	3
AGBS 305	Ag Financial Decision Making	3
AGRO 310	Pasture Mgt and Forages Prod	3
AGSC 320	Contemporary Issues in Agricul	3
AGBS 250	Decision Making for Ag Manager	3
AGSC 132	Introduction to Precision Farming	2
	Credits	17
Spring		
DANS 305	Dairy Calf & Heifer Management	3
COMP 310	Advance Tech Communication	3
SPAN 101	Beginning College Spanish 1	3
ENRM 450	Environmental & Natural Resource Management	1
AUTO 100	Internship Orientation	0
AUTO 102	Metals	3
	Credits	13
Year 4		
Fall		
DANS 450	Advanced Dairy Herd Migt	4
AGSC 350	Animai Genetics	3
AGSC 460	Agricultural Science Capstone	3
ANSO 101	Intro to Animal Spience	3
ANSCIUI		3
Chrine	Greatts	16
Spring	Internation Agricultural Cales	10.15
AGSU 480		12-15
	Greats	12-15
	Total Credits	120-123

#### Livestock Track

Course	Title	Credits
Year 1		
Fall		
ANSC 101	Intro to Animal Science	3
DANS 150	Dairy Farm Practicum I	2
DANS 100	Dairy Nutrition	3
AGBS 100	Agricultural Economics	3
AGNR 200	Job Prep Skills & Resources	1
ACCT 101	Principles of Accounting I	3
	Credits	15

	Total Credits	121-124
	Credits	12-15
AGSC 480	Internship Agricultural Scienc	12-15
Spring		
	Credits	15
AGRO 320	Urban Agriculture and Food Production	3
SPAN 101	Beginning College Spanish 1	3
BSAD 300	Management Communications	3
AGSC 460	Agricultural Science Capstone	3
AGSC 350	Animal Genetics	3
Fall		
Year 4		
-	Credits	16
AUTO 102	Metals	3
AGBS 350	Ag Business Development	3
AGSC 320	Contemporary Issues in Agricul	3
COMP 310	Advance Tech Communication	3
	Internship Orientation	I
ENDM 450	Environmental & Natural Pessures Management	3
Spring	Dairy Calf & Haifer Management	-
Caring	Credits	15
AGBS 250	Decision Making for Ag Manager	3
DANS 340	Advanced Dairy Reproduction	3
AGRO 310	Pasture Mgt and Forages Prod	3
AGBS 305	Ag Financial Decision Making	3
DANS 210	Dairy Health	3
Fall		
Year 3	orcate	10
- Instory & onlic Lingdy	Credits	16
SUNY General Educat	tion Art, Humanities, Social Sciences, World Language, US	3
AGSC 137	Agricultural Statistics	3
AGRO 215	Soil Fertility & Fertilizers	3
DANS 115	Dairy Cattle Artificial Insem	1
DANS 120	Anatomy & Physiology-Dairy Cow	3
ANSC 200	Sheep Industry/Prodcution Syst	3
Spring		
	Credits	15
SUNY General Educat	tion Diversity, Equity, Inclusion and Social Justice as Advised	3
AGSC 132	Introduction to Precision Farming	2
AGBS 240	Farm Management and Finance	4
AGRO 210	Field Crops	3
ANSC 110	Livestock Production Mgmt/Tech	3
Fall		
Year 2	oreand	
	Credite	17
AGSC 120	Domestic Animal Benavior	3
AGBS 200	Marketing Agricultural Prodcts	3
DANS 110	Breeding Dairy Cattle	3
AGRO 110	Soil Science	3
ANSC 150	Live Animal Evaluation	2
Spring		

### Agronomy Track

Course	Title	Credits
Year 1		
Fall		
AGRO 115	Principles of Compost Mgmt	3
AGSC 115	Agricultural Science & Context	1
ANSC 101	Intro to Animal Science	3

	Total Credits	119-122
	Credits	12-15
AGSC 480	Internship Agricultural Scienc	12-15
Spring		
	Credits	14
AGNR 399	Research and Mgmt in Agr	4
RENG 311	Biofuels	3
General Electives as Advis	ed	3
ENRM 450	Environmental & Natural Resource Management	1
AGSC 460	Agricultural Science Capstone	3
rear 4 Fall		
Voor 4	Credits	19
History & Civic Engagemer	nt or World History & Global Awareness as Advised	
SUNY General Education A	Art, Humanities, Social Sciences, World Language, US	3
ENRM 345	Surface & Groundwater Mgt.	3
AGNR 400	Instructional Assistance Exp	4
AGSC 320	Contemporary Issues in Agricul	3
AGRO 320	Urban Agriculture and Food Production	3
AGRO 305	Adv Soil & Water Conservation	3
Spring		10
	Credits	15
RENG 310	Biomass Energy Resources	3
CANA 350	Hemp Production & Processing	3
SUNY General Education A History & Civic Engagement	vrt, Humanities, Social Sciences, World Language, US nt or World History & Global Awareness as Advised	3
COMP 310	Advance Tech Communication	3
AGRO 310	Pasture Mgt and Forages Prod	3
Fall		
Year 3		
	Credits	15
SUNY General Education D	Diversity, Equity, Inclusion and Social Justice as Advised	3
HORT 241	Plant Protection	3
AGSC 250	Application in Ag Science	3
AGRO 215	Soil Fertility & Fertilizers	3
AGSC 137	Agricultural Statistics	3
Spring		
	Credits	15
SPAN 101	Beginning College Spanish 1	3
ENSC 107	Integrated Pest Management	1
DANS 160	Introduction to Dairy Science	1
AGEN 105		2
AGSU 132	Introduction to Precision Farming	2
AGRO 210	Field Crops	3
Fall		
Year 2		
	Credits	14
SUNY General Education C	Communication Written and Oral as Advised	3
HORT 150	Fruit & Vegetable Production	3
ENSC 106	Pesticide Use and Handling	2
BIOL 102	Botany-Form Function Seed Plt	3
AGRO 110	Soil Science	3
Spring		13
2	Credits	15
ENSC 125	Environmental Chemistry	1
AGES TUU	Agricultural Economics	3
AGBS 100	Agricultural Economics	2

#### **Outreach and Education Track**

Course	Title	Credits
Year 1		
Fall		
AGRO 115	Principles of Compost Mgmt	3
AGSC 115	Agricultural Science & Context	1
ANSC 101	Intro to Animal Science	3
AGNR 200	Job Prep Skills & Resources	1
ENSC 125	Environmental Chemistry	4
FDU 101	Introduction to Teaching	3
200101	Credits	15
Spring	oreans	15
AGRO 110	Soil Science	3
BIOL 102	Botany-Form Function Seed Plt	3
HOBT 150	Fruit & Vegetable Production	3
SUNY General Education D	Diversity Equity Inclusion and Social Justice as Advised	0
DANS 110	Breeding Dairy Cattle	3
5/40/110	Credite	12
Vear 2	Creatis	12
	Field Orang	2
AGRU 210		3
AGSC 132	Introduction to Precision Farming	2
AGBS 240	Farm Management and Finance	4
PSYC 101	Introduction to Psychology	3
DANS 160	Introduction to Dairy Science	3
ENSC 107	Integrated Pest Management	1
	Credits	16
Spring		
ENSC 106	Pesticide Use and Handling	2
SUNY General Education A History & Civic Engagement	rt, Humanities, Social Sciences, World Language, US nt or World History & Global Awareness as Advised	3
EDU 201	Foundations of Education	3
SUNY General Education V	Vorld Languages as Advised	3
AGBS 250	Decision Making for Ag Manager	3
EDU 202	Guided Fieldwork in Education	1
	Credits	15
Vear 3		
Fall		
AGBO 310	Pasture Mot and Forages Prod	3
COMP 310	Advance Tech Communication	3
PENG 210	Riomass Energy Resources	3
CHEM 110	Contemporary Chamietry	3
	Adelessent Development	4
PSYC 242	Adolescent Development	3
	Credits	16
Spring		
AGRO 305	Adv Soil & Water Conservation	3
AGRO 320	Urban Agriculture and Food Production	3
AGSC 320	Contemporary Issues in Agricul	3
BSAD 300	Management Communications	3
AGSC 137	Agricultural Statistics	3
AGBS 225	Environmental Economics	3
	Credits	18
Year 4		
Fall		
AGSC 460	Agricultural Science Capstone	3
ENRM 450	Environmental & Natural Resource Management	1
	Internship Orientation	
CANA 350	Hemp Production & Processing	3
RENG 311	Biofuels	3
HORT 200	Greenhouse Management	3
	Credits	13

	Total Credits	117-120
	Credits	12-15
AGSC 480	Internship Agricultural Scienc	12-15
Spring		

# Animal Science - Dairy, A.A.S.

#### Major Code: 0562

C.....

The dairy industry is the largest of all agricultural enterprises in New York, and ranks in the top 5 nationally in milk production. Today's New York dairy industry is exciting and challenging. The industry needs qualified young people trained in the management of modern dairy farms, as well as the areas of nutrition, reproduction, herd health and farm supplies, to mention a few.

The Animal Science - Dairy curriculum is a progressive practical program concentrating on dairy cattle management, emphasizing both managerial and hands-on experiences. This curriculum is based on dairy courses that provide a science and business background. A strong emphasis is placed on application of these principles with our 200-cow free-stall dairy herd of registered Holsteins. Student-management programs are enhanced with a dairy complex which features a milking parlor and classrooms hooked up to dairy cattle management software.

Upon completion, students may enter the bachelor of technology program in Dairy Management, or another bachelor degree program that fits their specific interests. In addition to the academic program, students have the opportunity to participate in related activities such as Dairy Club, Collegiate FFA, Dairy Judging Team, Autumn Review Sale, National Agriculture Day, Showmanship Contest, and The Northeast Dairy Challenge. Students who plan to transfer to a four-year program should elect appropriate science courses such as biology and/or chemistry, and mathematics.

Career opportunities exist in dairy production management, dairy nutrition, artificial insemination, reproductive management, agri-business employment and many others.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- utilize and demonstrate effective time and human resource management
- · develop problem-solving and critical thinking skills
- utilize practical knowledge and skill sets pertinent to the dairy and agriculture industries

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised

Mathematics (Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	DANS 110, DANS 120 and AGRO 110
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

#### Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits	
Major Requirements			
DANS 100	Dairy Nutrition	3	
DANS 110	Breeding Dairy Cattle	3	
DANS 120	Anatomy & Physiology-Dairy Cow	3	
DANS 140	Dairy Cattle Judging	1	
DANS 150	Dairy Farm Practicum I	2	
DANS 151	Dairy Farm Practicum II	2	
DANS 160	Introduction to Dairy Science	3	
DANS 210	Dairy Health	3	
DANS 220	Dairy Herd Management	3	
DANS 225	Dairy Production & Management	3	
DANS 240	Dairy Farm Data Management	1	
AGBS 100	Agricultural Economics	3	
or AGBS 225	Environmental Economics		
AGBS 200	Marketing Agricultural Prodcts	3	
AGBS 240	Farm Management and Finance	4	
AGRO 110	Soil Science	3	
AGRO 210	Field Crops	3	
ACCT Accounting	as advised	3	
Select one of the	following Options:	2	
Option 1:			
AGSC 132	Introduction to Precision Farming		
Option 2:			
OFFT 110	Introduction to MS Excel		
OFFT 100	Introduction to MS Word		
or OFFT 106	Personal Computer Keyboarding		
or OFFT 109	Introduction to MS PowerPoint		
Required SUNY General Education Coursework			

SUNY General Education Communication Written and Oral as Advised 3-6SUNY General Education Diversity: Equity, Inclusion, and Social3Justice as Advised3

Total Credits 60	-63
Additional SUNY General Education as Advised	3
SUNY General Education Mathematics (and Quantitative Reasoning) as Advised	3

# **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
DANS 100	Dairy Nutrition	3
DANS 160	Introduction to Dairy Science	3
DANS 150	Dairy Farm Practicum I	2
AGBS 100	Agricultural Economics	3
AGRO 110	Soil Science	3
COMP 101	Composition and Research	3
	Credits	17
Spring		
DANS 110	Breeding Dairy Cattle	3
DANS 120	Anatomy & Physiology-Dairy Cow	3
DANS 140	Dairy Cattle Judging	1
DANS 151	Dairy Farm Practicum II	2
DANS 240	Dairy Farm Data Management	1
AGBS 200	Marketing Agricultural Prodcts	3
	Credits	13
Year 2		
Fall		
DANS 210	Dairy Health	3
DANS 220	Dairy Herd Management	3
AGBS 240	Farm Management and Finance	4
AGRO 210	Field Crops	3
MATH - Mathematics as A	dvised	3
	Credits	16
Spring		
DANS 225	Dairy Production & Management	3
AGSC 132	Introduction to Precision Farming	2
ACCT - Accounting as Advi	sed	3
GenEd (GUS, GA, GWH, GS	S, GDV)	3
COMP 102	Writing About Literature (as Advised)	3
or COMM 111	or Introduction to Speech	
	Credits	14
	Total Credits	60

# **Applied Psychology, B.S.**

#### Major Code: 1965

In the Bachelor of Science degree in Applied Psychology program, students will learn how current psychological theories apply to practical concerns such as management, customer service, human services, interpersonal relationships, social problems and general problem-solving. The program will also emphasize hands-on training in information gathering, basic statistics, research methods, effective communication. The program provides students with immediately applicable skills that will be useful across a broad range of situations.

An important aspect of the program is a full-time, semester-long internship in a business or human services related setting, as well as extensive preparation for the internship in a course emphasizing job search and professional skills. This required internship component distinguishes our applied psychology B.S. program from a traditional psychology program and provides students with the type of practical experience potential employers look for in entry-level employees.

Like all Bachelor of Psychology degrees, this is not a clinical degree, and does not train students to treat or administer treatment to clients in any way. The completion of this baccalaureate degree will not qualify the holder to apply for, be hired for, or perform the duties related to, employment which involves the provision of services prohibited by New York State Education Law Article 153, Psychology, Paragraphs 7601 and 7601a. This prohibits graduates from SUNY Morrisville who hold a B.S. in Applied Psychology from performing tasks which only licensed providers are authorized to do under state law, such as providing counseling which is only to be done by licensed psychologists.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Analyze real world situations in terms of relevant psychological theories and predict likely results from potential interventions.
- Show basic understanding of the methods social scientists use to understand the world, including correlations and experiments.
- Perform basic statistical procedures and interpret the results.
- Demonstrate professional writing ability, including skills in various formats such as memos, technical papers, and note taking.
- Demonstrate basic quantitative literacy, including use and critical analysis of statistical concepts as supporting arguments and meaningful choice of visual aids such as graphs, tables, charts, and figures.
- Demonstrate an understanding of different cultures and subcultures, and how cultural standards and norms influence behaviors.

Students will also enhance their skills for self-management and improvement, both through theory and practice. As part of the personal development goal, students will be prepared to apply their knowledge and skills towards employment upon graduation.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMP 101, COMP 310 and COMM 111
Diversity: Equity, Inclusion, and Social Justice (required)	HUMN 241, HUMN 341, LITR 241 or LITR 341
Mathematics (and Quantitative Reasoning) (required)	MATH 123 or MATH 141
Natural Sciences (and Scientific Reasoning)	as advised
Humanities	COMP 102
Social Sciences	PSYC 101 and SOCI 101
The Arts	as advised
US History and Civic Engagement	as advised

US History and Global Awareness	as advised
World Languages	as advised

#### **Core Competencies:**

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

#### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion.

Code	Title C	credits	
Major Requirements			
PSYC 101	Introduction to Psychology	3	
PSYC 363	Research Methods in Psychology	3	
PSYC 405	Applied Psyc Internship Orient	1	
PSYC 406	Applied Psychology Internship	12-15	
PSYC 410	Senior Seminar Applied Psych	3	
Select three of the	e following:	9	
PSYC 211	Lifespan Development		
PSYC 221	Biological Psychology		
PSYC 241	Child Development		
PSYC 242	Adolescent Development		
PSYC 251	Abnormal Psychology		
Select three of the	e following:	9	
PSYC 300	Sports & Exercise Psychology		
PSYC 304	Industrial/Org Psychology		
PSYC 325	Motivation and Behavior		
PSYC 381	Personality		
PSYC 384	Group Behavior		
PSYC 386	Social Psychology		
Select one of the	following Diversity courses:	3	
PSYC 291	Human Diversity Social Context (recommended)		
HUMN 241	Diversity & Hum: Special Topic		
HUMN 341	Diversity & Hum: Special Topic		
LITR 241	Diversity in Literature - Spec		
LITR 341	Diversity in Literature - Spec		
COMP 101	Composition and Research	3	
COMP 102	Writing About Literature	3	
COMP 310	Advance Tech Communication	3	
COMM 111	Introduction to Speech	3	
CITA 101	Principles Computer Apps	3	
MATH 123	Elementary Statistics (as Advised)	3	
or MATH 141	Statistics		
SOCI 101	Intro to Sociology	3	
WELL 101	Stress and Wellness	3	
Additional Elective	e Credits as Advised <sup>1</sup>	28-29	
SUNY General Edu	ucation Natural Science w/ Lab	4	
World Language a	s Advised	3	
SUNY General Edu	ucation courses in US History & Civic Engagement	t 6	
or World History 8	Global Awareness as Advised		
Required Options			
Select 12 credits in one of the following Options: 12			

Total Credits		120-124
Human Service	es Elective as Advised	
or SOCI 360	Social Mvt & Community Change	
PHIL 311	Professional Ethics	
HUMS 201	Counseling & Case Management	
HUMS 101	Introduction to Human Services	
Human Services (	Option:	
Business Elect	ive as Advised	
or BSAD 310	) Human Resource Management	
BSAD 215	Human Resource Management	
BSAD 411	Leadership in Organizations	
BSAD 116	<b>Business Organization &amp; Mgmt</b>	
Business Option:		

1 Students must earn a minimum of 45 upper level credits for degree completion.

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
COMP 101	Composition and Research	3
PSYC 101	Introduction to Psychology	3
MATH 123 or MATH 141	Elementary Statistics (as Advised) or Statistics	3
SUNY General Education c History & Global Awarenes	ourses in US History & Civic Engagement or World s as Advised	3
World Language as Advise	d	3
	Credits	15
Spring		
COMP 102	Writing About Literature	3
SOCI 101	Intro to Sociology	3
SUNY General Education c History & Global Awarenes	ourses in US History & Civic Engagement or World s as Advised	3
SUNY General Education N	latural Science w/lab as Advised	4
PSYC - 200 Level Psycholo	gy as Advised	3
	Credits	16
Year 2		
Fall		
PSYC - 200 Level Psycholo	gy as Advised	3
COMM 111	Introduction to Speech	3
PSYC 363	Research Methods in Psychology	3
CITA 101	Principles Computer Apps	3
WELL 101	Stress and Wellness	3

Spring

	Credits	15
300 Level Elective	e Credits as Advised	3
PSYC - 200 Level	Psychology as Advised	3
PSYC 291	Human Diversity Social Context	3
Course in Concen	tration as Advised	3
PSYC - 300 Level	Psychology as Advised	3
oping		

Credits

Year 3

Credits	16
300 Level Elective Credits as Advised	3
Elective Credits as Advised	7
Course in Concentration as Advised	3
PSYC - 300 Level Psychology as Advised	3
Fall	

Spring		
PSYC - 300 Level Psychol	logy as Advised	3
Course in Concentration	as Advised	3
Elective Credits as Advise	ed	6
300 Level Elective Credits	s as Advised	3
	Credits	15
Year 4		
Fall		
PSYC 410	Senior Seminar Applied Psych	3
PSYC 405	Applied Psyc Internship Orient	1
COMP 310	Advance Tech Communication	3
Course in Concentration	as Advised	3
300 Level Elective Credits	s as Advised	6
	Credits	16
Spring		
PSYC 406	Applied Psychology Internship	12-15
	Credits	12-15
	Total Credits	120-123

### Aquaculture & Aquatic Science, A.A.S.

#### Major Code: 1020

15

This major provides fundamental training in aquaculture, fisheries biology, limnology, marine biology and aquatic biology. Students receive a broadbased education by exploring diverse subject matter in aquaculture and aquatic sciences. Practical, hands-on experience is emphasized, using an operational aquaculture complex and a wide assortment of laboratory and field equipment.

The Aquaculture and Aquatic Science curriculum prepares students for fish culture and management technology, aquatic ecology, limnology, and marine biology, working as federal, state and private hatchery technicians, aquatic biologists, fisheries technicians and environmental science technicians.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Describe the state of the aquaculture and aquatic science profession and potential career opportunities.
- Utilize the developed expertise in concepts, theories, and emerging methodologies to succeed in tackling real-world issues in aquaculture and aquatic science.
- Conduct himself/herself in a manner consistent with an embodied sense of environmental stewardship.
- Assess, analyze, synthesize, and evaluate information objectively and deal professionally and ethically with clients, the public, and agency personnel.
- Utilize oral and computer communication skills necessary to interact in the profession.
- Demonstrate advanced knowledge and competency in taxonomy and natural history of aquatic flora and fauna of the northeast.
- Demonstrate hands-on experience in aquatic sampling inventory and measurement techniques.
- Become an independent, self-motivated professional with the ability to recognize problems in their field of aquaculture and aquatic science and apply critical thinking and problem-solving skills.

- Utilize existing technology, products, and services to maximize work efficiency and success.
- Practice a collaborative spirit in team-efforts and project coordination.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	NATR 101, NATR 152, NATR 158, NATR 250, NATR 252, and NATR 254
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning (required)	as advised

#### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits	
Major Requirements			
NATR 101	General Ecology	3	
NATR 144	Seminar/Environmental Resc I	1	
NATR 150	Aquaculture	3	
NATR 152	Fish Reproduction	2	
NATR 158	Fish Nutrition	2	
NATR 250	Aquatic Ecology	3	
NATR 252	Fish Ecology and Management	3	
NATR 254	Fish Health Management	3	
NATR 156	Aquaculture Practicum I	1	
NATR 256	Aquaculture Practicum II	1	
NATR 280	Herpetology	3	
Dractioum (Bassa	rah Electiva		

Select two of the following: 2 **NATR 257** Aquaculture Practicum III **NATR 258** Aquaculture Practicum IV **NATR 288** Research in Aquatic Science I **NATR 289 Research Aquatic Science II** Select one of the following: 2-3 AGEN 110 Small Power Equipment **NATR 103** Natural Resources Equipment Op **AGEN 151** Applied Hydraulics Hydropower **AGEN 120** Water Supply & Sanitation 3 or ENRM 345 Surface & Groundwater Mgt. **NATR 113** Intro toGlobal Positioning Sys 1 BSAD - Business Elective as Advised 3 Select one of the following: Δ **BIOL 120** General Biology I **BIOL 285 General Microbiology** or NATR 153 Marine Biology CHEM 101 **Basic Chemistry CHEM 121** General College Chemistry I **NATR 110** Natural Resources Measurements (as Advised) **Technical Electives as Advised** 6-7 Technical Electives from subject areas: AGBS, AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, ENSC, ENRM, HORT, NATR, RENG, HIST, CITA, SOCI or SPAN as Advised **Required SUNY General Education & Liberal Arts and Sciences** Coursework SUNY General Education Communication Written and Oral as Advised 3-6 3 SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised Suny General Education Mathematics (and Quantitative Reasoning) 3 as Advised **Total Credits** 55-60

#### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
NATR 101	General Ecology	3
NATR 113	Intro toGlobal Positioning Sys	1
NATR 144	Seminar/Environmental Resc I	1
NATR 150	Aquaculture	3
NATR 156	Aquaculture Practicum I	1
SUNY General Education (	Communication Written and Oral as Advised	3
SUNY General Education	Mathematics (and Quantitative Reasoning) as Advised	3
	Credits	15
Spring		
NATR 158	Fish Nutrition	2
NATR 252	Fish Ecology and Management	3
NATR 256	Aquaculture Practicum II	1
NATR 280	Herpetology	3
or NATR 153	or Marine Biology	
Technical Elective as Advi ENSC, ENRM, HORT, NATE	sed in AGBS, AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, 8, RENG, HIST, CITA, SOCI, or SPAN	3
SUNY General Education E	Basic Communication as Advised	3
	Credits	15

Practicum/Research Elective

#### Year 2

BSAD - Business Electiv Technical Elective as Ad ENSC, ENRM, HORT, NA' SUNY General Education	Ivised in AGBS, AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, TR, RENG, HIST, CITA, SOCI, or SPAN a Diversity, Equity, Inclusion and Social Justice as Advised Credits	3 15-16
BSAD - Business Electiv Technical Elective as Ad ENSC, ENRM, HORT, NA SUNY General Education	lvised in AGBS, AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, TR, RENG, HIST, CITA, SOCI, or SPAN 1 Diversity, Equity, Inclusion and Social Justice as Advised	3
BSAD - Business Electiv Technical Elective as Ad ENSC, ENRM, HORT, NA	lvised in AGBS, AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, TR, RENG, HIST, CITA, SOCI, or SPAN	
BSAD - Business Electiv		3
0.10111200	e as Advised	3
NATR 258 or NATB 289	Aquaculture Practicum IV (Elective as Advised) or Research Aquatic Science II	1
NATR 254	Fish Health Management	3
AGEN 120 or ENRM 345	Water Supply & Sanitation or Surface & Groundwater Mgt.	2-3
Spring	Credits	15-16
Technical Elective as Ad ENRM, HORT, NATR, REI	vised AGBS, AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, ENSC, NG, HIST, CITA, SOCI, or SPAN	3
or NATR 288	or Research in Aquatic Science I	
NATR 250	Aquatic Ecology	3
NATR 152	Fish Reproduction	2
CHEM 121	General College Chemistry I	
CHEM 101	Basic Chemistry	
BIOL 285 or NATR 153	General Microbiology or Marine Biology	
BIOL 120	General Biology I	
Select one of the followi	ng:	4
NATR 103	Natural Resources Equipment Op	
AGEN 151	Applied Hydraulics Hydropower	
	Small Power Equipment	
AGEN 110		2 3

# **Aquatic Science & Aquaculture Minor**

The aquatic science and aquaculture minor is for students in a Bachelors degree program who also want to gain an understanding of aquaculture, marine biology, fisheries biology, limnology and aquatic biology. This minor is intended to equip students with the fundamental scientific principles needed to develop solutions for the pressures placed on our aquatic resources and the production of a sustainable food source through aquaculture. You will explore diverse subjects through practical, hands-on experience in a state-of-the-art aquaculture complex and a wide assortment of laboratory and field settings.

### Program Learning Outcomes

Upon successful completion of this minor students will be able to:

- · Describe the state of the aquaculture and aquatic science profession and potential career opportunities.
- · Utilize the developed expertise in concepts, theories, and emerging methodologies to succeed in tackling real-world issues in aquaculture and aquatic science.
- · Conduct himself/herself in a manner consistent with an embodied sense of environmental stewardship.
- · Utilize oral and computer communication skills necessary to interact in the profession.
- · Demonstrate advanced knowledge and competency in taxonomy and natural history of aquatic flora and fauna of the northeast.
- · Demonstrate hands-on experience in aquatic sampling inventory and measurement techniques.

· Become an independent, self-motivated professional with the ability to recognize problems in their field of aquaculture and aquatic science and apply critical thinking and problem-solving skills.

### **Curriculum Requirements**

A minimum of 15 credits is required for completion of the minor. Students must be enrolled in a Bachelor's degree program in order to declare a minor.

Code	Title	Credits
<b>Required Coursew</b>	vork	
NATR 150	Aquaculture	3
or NATR 153	Marine Biology	
Select one of the	following:	1
NATR 156	Aquaculture Practicum I	
or NATR 257	Aquaculture Practicum III	
NATR 288	Research in Aquatic Science I	
NATR 152	Fish Reproduction	2
NATR 252	Fish Ecology and Management	3
or NATR 254	Fish Health Management	
Select two of the	following:	6
ENRM 303	Fundamentals Geospatial System	
ENRM 305	Environment Law Policy Justice	
ENRM 312	Field Sampling Design & Techniques	
ENRM 345	Surface & Groundwater Mgt.	
ENRM 350	Tropical Ecology	
ENRM 351	Tropical Ecology II	
Total Credits		15

Total Credits

### Architectural Studies & Design, A.S.

#### Major Code: 1755

This program has been deactivated and students will no longer be admitted to the major. Currently enrolled students will complete the degree in accordance with the approved teach-out plan.

This hands-on, design-based program supports learning and community through a studio centric experience, the use of applied technology, and a strong liberal arts and humanities component. The curriculum engages students in topics, ranging from fundamental to sophisticated, with the intention of developing an aptitude for creative, functional, and programmatic architectural problem solving abilities. Throughout this experience, students are challenged to learn to make decisions in a culturally and environmentally responsive manner. This includes social and historic influences, to sustainable futures. Students develop the creative thinking and technical skills needed to explore, research and solve diverse problems that influence architectural discourse. They also develop the communication and presentation skills needed to showcase their architectural solutions. This integrative program is concerned with designing, creating, improving, and shaping the built environment, and ultimately, celebrating the human condition.

The architectural design studios and critique spaces are located in the Sheila C. Johnson Design Center. The studios in this Leadership in Energy and Environmental Design (LEED) Certified building are open to the students 24 hours a day, seven days a week. In close proximity to the studios are the photography areas, light table, and copying/scanning/ plotting machines. The building also houses a computer-aided design studio where a 3d printer is also found, a model shop with a laser cutter,

band saws, sanding stations, scroll saws, a table saw, and much more. Software used in the architectural profession is easily accessible to students through the college network and in the computer-aided design studio.

This design-based program is intended to prepare students to transfer and succeed in a professional or pre-professional baccalaureate program in architecture. Graduates have transferred into the top architecture programs in New York State and the United States. Some graduates have chosen to continue their education in allied fields such as architectural engineering, architectural engineering technology, civil engineering, construction management, graphic design, interior design, and landscape architecture. Other graduates have chosen to move directly into the architectural and design professions.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Translate abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.
- Employ at a theoretical level, elements, forms, spatial relationships, examples, organization, circulation, sequence, proportion and ordering principles to make clear three dimensional architectural ideas and concepts.
- Apply an architectural design logic that accounts for composition, order, analysis, precedent, experimentation, presentation, competition, independence, and teamwork.
- Generate an analytical approach to the design process, and concept development, while considering implications for possible responses, problems, and architectural outcomes.
- Employ the basic principles utilized in architecture, construction and building technologies, in the use of construction material products, components, and assemblies, based on their traditional and innovative characteristics and performance, including their environmental impact and reuse.
- Synthesize the principles of conceptualization, process, history, exploration, analysis, precedence, place, integration, sustainability, materials, construction compliance, creativity, and imagination in response to architecture and architectural design in the natural and built environments.
- Use appropriate representational media such as traditional architectural graphic, modeling and digital technology skills and techniques to delineate, express and convey architectural ideas and concepts.
- Create technically clear architectural drawings and renderings that demonstrate knowledge of the conventional principles of architectural drafting and drawing to illustrate and identify the assembly of materials, systems, and components.

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
ARCH 102	Introduction to Architecture	2
ARCH 141	Architectural Design I	4
ARCH 142	Architectural Design II	4
ARCH 182	Architectural Graphic Comm.	2
ARCH 243	Architectural Design III	4

ARCH 244	Architectural Design IV	4
ARCH 151	Arch Pre History to 1800	3
ARCH 252	Architecture: 1800 to Present	3
ARCH 271	Architectural Technology I	3
ARCH 272	Architectural Technology II	3
CAD 181	Intro To Computer-Aided Drftng	1
ARCH 283	Arch CAD Drafting & Design	2
MECH 211	Analytical Mechanics (Statics)	3
PHYS 107	Introductory Physics I (or higher)	4
MECH 213	Strength of Materials	4
COMP 101	Composition and Research	3
COMP 102	Writing About Literature	3
MATH 151	General Calculus A (or higher)	3
Select two differe Arts:	nt courses and prefixes of the following Liberal	6
Social Science		
American Hist	ory	
Western Civiliz	ation	
Other World Ci	vilization	

61

- Foreign Language
  Total Credits
- otal Credits

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
ARCH 102	Introduction to Architecture	2
ARCH 182	Architectural Graphic Comm.	2
ARCH 141	Architectural Design I	4
COMP 101	Composition and Research	3
Liberal Arts and Science as	s Advised	3
MATH - Mathematics as A	dvised <sup>1</sup>	3
	Credits	17
Spring		
ARCH 142	Architectural Design II	4
ARCH 151	Arch Pre History to 1800	3
CAD 181	Intro To Computer-Aided Drftng	1
COMP 102	Writing About Literature	3
PHYS 107	Introductory Physics I	4
MATH - Mathematics as Advised <sup>1</sup>		3
	Credits	18
Year 2		
Fall		
ARCH 243	Architectural Design III	4
ARCH 271	Architectural Technology I	3
ARCH 283	Arch CAD Drafting & Design	2
MECH 211	Analytical Mechanics (Statics)	3
Liberal Arts and Sciences a	as Advised	3
	Credits	15
Spring		
ARCH 244	Architectural Design IV	4
ARCH 272	Architectural Technology II	3
ARCH 252	Architecture: 1800 to Present	3
MECH 213	Strength of Materials	4

MATH - Mathematics as Advised <sup>1</sup>	3
Credits	17
Total Credits	67

#### 1

A minimum of MATH 151 General Calculus A is required. Students placed in MATH 102 Intermediate Algebra w Trig will require additional semesters. This outline is based on MATH 103 College Algebra w/ Trig being taken the first semester followed by MATH 147 Selected Topics In Precalculus then MATH 151 General Calculus A (3 semesters).

# Auto Body Technology, A.A.S.

#### Major Code: 2054

The A.A.S. in Auto Body Technology will prepare graduates for entry into the field of automotive collision repair as specialized technicians in areas such as: tear-down and reassembly, structural realignment, metalwork, and refinishing. The series of courses required for the degree will cover topics necessary to pass the ASE/I-CAR examinations in the areas of collision repair and refinishing. The Associate Degree program will include a ten week summer work experience in collision repair.

A new, state-of-the-art, Auto Body Technology building houses a lab and classroom dedicated to auto body repair, refinishing, and estimating. Morrisville's original 50,000 square foot automotive facility provides an excellent opportunity for students to develop additional skills in other areas of automotive service and repair. In addition to the core collision repair courses, students receive practical laboratory experience in diagnosis and repair of electrical/electronics, air conditioning, brakes, steering, suspension, alignment, and welding.

BOCES/Technical Secondary Education will be evaluated and credit may be awarded upon successful completion of first year with a minimum of 2.0 in an automotive curriculum.

#### Accreditation

I-CAR non-structural and refinish platinum certifications are available to AAS Auto Body Technology graduates who pass the certification exam.

#### **Graduation Requirements**

All AAS programs require a minimum of 60 credit hours including 20 credit hours from Liberal Arts and Science courses. To fulfill these requirements along with the required courses for this program, 60 credits are required for this program. Students must maintain a GPA of 2.0 or greater in all Automotive classes. An overall GPA of 2.0 or higher is required for graduation.

#### **Program Requirement**

Students are required to have a tool set and roll around tool box.

### **Program Learning Outcomes**

Upon Successful completion of this program, students will be able to:

- · Demonstrate proper metal joining and straightening methods
- Inspect, remove, install, align panels, doors and trim to meet shop standards
- · Apply safety and environmental guideline standards
- · Explain written procedures as outlined in estimates
- · Apply a refinish to an acceptable color match

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	PSYC 101
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### Core Competencies:

nformation Literacy (required)	as advised
Ciritical Thinking and Reasoning	as advised
required)	

#### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
Major Requiremer	nts	
AUTO 102	Metals	3
AUTO 104	Basic Auto Electrical Systems	3
AUTO 109	Chassis Analysis I	4
AUTO 110	Summer Work Experience	3
AUTO 155	Intermediate Auto Electricity	3
AUTO 202	Autobody Fundamentals	3
AUTO 209	Chassis Analysis II	4
AUTO 259	Non-Structural Repair Refinish	5
AUTO 260	Auto Air Cond & Refrg Recovery	1
or AUTO 261	Auto Air Condition & Heat	
AUTO 269	Refinishing & Structure Mg	5
AUTO 279	Autobody Structural Repair	6
Required SUNY G	eneral Education Coursework	
SUNY General Edu	cation Communication Written and Oral as Advi	sed 3-6
PSYC 101	Introduction to Psychology	3
SUNY General Edu	cation Mathematics as Advised	3
SUNY General Edu	cation Natural Sciences as Advised	3
SUNY General Edu Justice as Advise	ication Diversity: Equity, Inclusion, and Social d	3

Additional SUNY General Education as Advised

#### **Total Credits**

Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
AUTO 102	Metals	3
AUTO 104	Basic Auto Electrical Systems	3
AUTO 109	Chassis Analysis I (fall only)	4
AUTO 202	Autobody Fundamentals (fall only)	3
MATH - SUNY General Edu Advised	cation Mathematics (and Quantitative Reasoning as	3
	Credits	16
Spring		
AUTO 155	Intermediate Auto Electricity	3
AUTO 209	Chassis Analysis II (spring only)	4
AUTO 259	Non-Structural Repair Refinish (spring only)	5
SUNY General Education C	ommunication Written and Oral as Advised	3
	Credits	15
Year 2		
Fall		
AUTO 110	Summer Work Experience	3
AUTO 269	Refinishing & Structure Mg (fall only)	5
PSYC 101	Introduction to Psychology	3
SUNY General Education Natural Sciences as Advised		3
	Credits	14
Spring		
AUTO 260	Auto Air Cond & Refrg Recovery	1
AUTO 279	Autobody Structural Repair (spring only)	6
SUNY General Education B	asic Communication: Written and Oral or Liberal Arts &	3
Science Course as Advised		
Liberal Arts and Sciences (	Credits as Advised	2-5
SUNY General Education D	iversity: Equity, Inclusion, and Social Justice as Advised	3
	Credits	15-18
	Total Credits	60-63

# Automotive Management, B.B.A.

#### Major Code: 1656

The Bachelor of Business Administration Degree in Automotive Management will prepare students for entry level into the industry at the supervisory or management level with technical knowledge of automotive construction and operation. Courses combine an emphasis in automotive and business management in the first two years. In the junior and senior years, students will continue with business management with a heavy concentration of automotive management. These courses will consist of: automotive shop management, automotive fleet management and automotive parts management and merchandising. The spring semester will culminate with an internship in an automotive or transportationrelated business.

Students in this degree program will be able to take advantage of SUNY Morrisville's Automotive Technology Building. The building is set up like a dealership, it provides students with a technologically sophisticated environment with nine state-of-the-art laboratories. There is a showroom where students can hone their sales and management skills, three classrooms and a chassis dynamometer room. The bays in each laboratory are connected to the college's computer network in order to utilize the computerized manual and management system. This gives students quick access to automotive-related information.

The Automotive Management program prepares students for supervisory or management-level positions in the automotive industry.

### **Graduation Requirements**

5

60-63

All BT and BBA programs require a minimum of 120 credit hours including 30 credit hours from SUNY general education courses with courses in seven of the ten SUNY general education categories. SUNY requires that all Bachelor degree programs must have at least 45 credit hours of upperdivision courses with 24 credit hours of upper-division courses in the major. To fulfill these requirements along with the required courses for this program, 121 credits are required for this program. Students must maintain a GPA of 2.0 or greater in all Automotive classes. An overall GPA of 2.0 or higher is required for graduation.

### **Program Requirement**

Students are required to have a tool set and roll around tool box.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Communicate effectively both in writing and in presentations in areas of the Automotive Industry
- · Evaluate strategies for solving automotive business-related problems
- · Assess and evaluate the impact of developing technologies
- Identify technology and workforce strategies to enhance overall productivity and effectiveness in automotive business operations
- Demonstrate computer competency for accessing data and documenting automotive repair records

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BBA degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (requried)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	ECON 100 or ECON 140, PSYC 101 and PSYC 304
The Arts	as advised
US History and Civic Engagement	as advised

World History and Global	as advised
Awareness	
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 121 credits is required for degree completion.

Code	Title 0	Credits		
Major Requireme	Major Requirements			
AUTO 102	Metals	3		
AUTO 103	Internal Combustion Engines I	3		
AUTO 104	Basic Auto Electrical Systems	3		
AUTO 109	Chassis Analysis I	4		
AUTO 138	Automobile Industry Awareness	1		
AUTO 202	Autobody Fundamentals	3		
AUTO 204	Automotive Electronic Systems	3		
AUTO 205	Electronic Fuel Systems	3		
AUTO 209	Chassis Analysis II	4		
AUTO 359	Collision Business & Mgt	3		
AUTO 360	Auto Shop Mgt & Supervision	3		
AUTO 380	Auto Parts Management	3		
AUTO 400	Automotive Fleet Management	3		
AUTO 420	Auto Industry Internship Orien	1		
AUTO 421	Automotive Industry Internship	12		
ACCT 101	Principles of Accounting I	3		
ACCT 102	Principles of Accounting II	3		
BSAD 108	Business Law 1	3		
BSAD 112	Marketing	3		
BSAD 116	Business Organization & Mgmt	3		
BSAD 221	Business Statistics	3		
BSAD 300	Management Communications	3		
BSAD 310	Human Resource Management	3		
BSAD 325	Marketing Management	3		
BSAD 350	Principles Corporate Finance	3		
BSAD 449	Management Policy and Issues	3		
CITA 101	Principles Computer Apps	3		
CITA 405	Project Management	3		
Required SUNY G	General Education Coursework			
ECON 100	Introduction to Macroeconomics	3		
or ECON 140	Introduction to Microeconomics			
SUNY General Ed	lucation Communication Written and Oral as Advis	ed 3-6		
SUNY General Ed as Advised	lucation Mathematics (and Quantitative Reasoning	g) 3		
SUNY General Ed as Advised	lucation Natural Sciences (and Scientific Reasonir	ng) 3		
PSYC 101	Introduction to Psychology	3		
PSYC 304	Industrial/Org Psychology	3		

Total Credits 121-	124
SUNY General Education Electives to Complete 30 Credits	3
Humanities, World History & Global Awareness, The Arts, or Global Languages as Advised	Ū
SUNY General Education courses in US History & Civic Engagement.	6
Justice as Advised	
SUNY General Education Diversity: Equity, Inclusion, and Social	3

# Sample Course Sequence

Course Vear 1	Title	Credits
Fall		
AUTO 102	Metals	3
or AUTO 103	or Internal Combustion Engines I	Ū
AUTO 104	Basic Auto Electrical Systems	3
AUTO 109	Chassis Analysis I (Fall Only)	4
AUTO 138	Automobile Industry Awareness	1
SUNY General Education M	lathematics (and Quantitative Reasoning) as Advised	3
	Credits	14
Spring		
AUTO 102	Metals	3
or AUTO 103	or Internal Combustion Engines I	
AUTO 209	Chassis Analysis II (Spring Only)	4
CITA 101	Principles Computer Apps	3
SUNY General Education C	ommunication Written and Oral as Advised	3
SUNY General Education N	atural Sciences (and Scientific Reasoning) as Advised	3
	Credits	16
Year 2		
Fall		
ACCT 101	Principles of Accounting I	3
AUTO 202	Autobody Fundamentals (Fall Only)	3
AUTO 204	Automotive Electronic Systems (Fall Only)	3
AUTO 205	Electronic Fuel Systems (Fall Only)	3
SUNY General Education D	iversity: Equity, Inclusion, and Social Justice as Advised	3
PSYC 101	Introduction to Psychology	3
	Credits	18
Spring		
ACCT 102	Principles of Accounting II	3
BSAD 108	Business Law 1	3
BSAD 116	Business Organization & Mgmt	3
ECON 100	Introduction to Macroeconomics	3
or ECON 140	or Introduction to Microeconomics	
SUNY General Education C	ommunication or Elective as Advised	3
SUNY General Education E	lective as Advised	3
	Credits	18
Year 3		
Fall		
AUTO 359	Collision Business & Mgt	3
AUTO 360	Auto Shop Mgt & Supervision	3
BSAD 112	Marketing	3
BSAD 221	Business Statistics	3
BSAD 300	Management Communications	3
	Credits	15
Spring		
BSAD 310	Human Resource Management	3
BSAD 325	Marketing Management	3
BSAD 449	Management Policy and Issues	3
PSYC 304	Industrial/Org Psychology	3
SUNY General Education E	lective as Advised	3
	Credits	15

Year 4		
Fall		
AUTO 380	Auto Parts Management	3
AUTO 400	Automotive Fleet Management	3
AUTO 420	Auto Industry Internship Orien	1
BSAD 350	Principles Corporate Finance	3
CITA 405	Project Management	3
	Credits	13
Spring		
AUTO 421	Automotive Industry Internship	12
	Credits	12
	Total Credits	121

# Automotive Technology (Ford ASSET Option), A.A.S.

#### Major Code: 0525

The Ford ASSET (Automotive Student Service Educational Training) program is a cooperative education partnership among SUNY Morrisville, Ford and Lincoln Dealers, and Ford Motor Company. The ASSET program allows technical and vocational students to gain on-the-job training at a sponsoring Ford or Lincoln dealership while earning an associate degree in Automotive Technology. Ford ASSET utilizes module-based teaching methods at an accelerated pace.

All vehicles, components, special tools, and service information are provided by Ford Motor Company. Instruction is delivered by Ford certified technical trainers in ASE Education Foundation certified labs and classrooms.

The 50,000 square-foot and 12,000 square-foot automotive facilities provide an excellent opportunity for students to develop their skills in all automotive repair and service areas. Students receive practical laboratory experience in brakes/steering/ suspension, drive-trains, electrical, engine mechanical, engine performance, air conditioning, and basic auto body collision repair in addition to liberal arts courses.

The Automotive Technology Program prepares students for an entry level position in the Automotive/Transportation field and provide the opportunity to complete ASE certifications. Areas for the career opportunities include diagnosis and repair of automobiles and small trucks, with a strong emphasis on computer control diagnostics along with the opportunity to develop as an automotive technician, service manager, parts manager, sales and body specialist, dealership manager, parts store manager and manufacturing facility manager.

The Automotive Technology Program prepares students to continue their education in a 4-year degree program. Students must maintain a GPA of 2.0 or greater in all Automotive and ASSET classes. Students must complete the A.A.S. degree with a minimum 2.0 grade point average to transfer into the Automotive B. Tech. program as a junior.

### **Program Requirement**

Students are required to have a tool set and roll around tool box.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

Demonstrate professionalism appropriate for the auto service industry

- Perform diagnosis, service and repair of automotive internal combustion engines
- Perform diagnosis, service, and repair of automotive electrical/
  electronic systems
- Perform diagnosis, service, and repair of automotive heating and air conditioning systems
- Describe and follow safety and environmental guideline standards for the auto service industry
- Perform diagnosis, service, and repair of automotive steering and suspension

#### Upon completion of the ASSET program, students will be:

- Entry-level technicians Ford certified in several specialty areas
- Prepared to enter a career with their participating Ford or Lincoln dealership

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	PSYC 101
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### **Core Competencies:**

nformation Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
required)	

#### **Curriculum Requirements**

A minimum of 63 credits is required for degree completion.

Code	Title	Credits	
Major Requirements			
ASET 111	Intro to Automotive Service	2	
ASET 112	Intro Auto Electrical Systems	3	
ASET 113	Intro to Braking Systems	3	
ASET 121	Engine Repair	3	

ASET 122	Electrical & Electronic System	4
ASET 125	ASSET Cooperative Training I	1
ASET 211	Climate Control	2
ASET 212	Steering/Suspension Systems	3
ASET 213	Manual Transmission/Drive Trn	3
ASET 215	ASSET Cooperative Training 2	4
ASET 221	Automatic Transmissions	4
ASET 222	Engine Performance	4
ASET 225	ASSET Cooperative Training 3	1
AUTO 155	Intermediate Auto Electricity	3
or ASET 160	Applied Electricity & Electron	
AUTO 102	Metals	3

#### **Required SUNY General Education Coursework**

SUNY General Education Communication Written and Oral as Advised 3-6

SUNY General Education Mathematics (and Quantitative Reasoning) 3 as Advised

SUNY General Education Natural Sciences (and Scientific Reasoning) 3-4		
as Advised		
SUNY General Ec Justice as Advis	lucation Diversity: Equity, Inclusion, and Social ed	3
PSYC 101	Introduction to Psychology	3
Additional SUNY	General Education as Advised	2-5

#### Total Credits

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
ASET 111	Intro to Automotive Service (Fall Only)	2
ASET 112	Intro Auto Electrical Systems (Fall Only)	3
ASET 113	Intro to Braking Systems (Fall Only)	3
AUTO 102	Metals	3
SUNY General Education C	Communication Written and Oral as Advised	3
SUNY General Education N	Nathematics (and Quantitative Reasoning) as Advised	3
	Credits	17
Spring		
ASET 121	Engine Repair (Spring Only)	3
ASET 122	Electrical & Electronic System (Spring Only)	4
ASET 125	ASSET Cooperative Training I (Spring Only)	1
AUTO 155	Intermediate Auto Electricity (Spring Only)	3
or ASET 160	or Applied Electricity & Electron	
SUNY General Education N	latural Sciences (and Scientific Reasoning) as Advised	3
	Credits	14
Year 2		
Fall		
ASET 211	Climate Control (Fall Only)	2
ASET 212	Steering/Suspension Systems (Fall Only)	3
ASET 213	Manual Transmission/Drive Trn (Fall Only)	3
ASET 215	ASSET Cooperative Training 2 (Fall Only)	4
PSYC 101	Introduction to Psychology	3
SUNY General Education	Diversity: Equity, Inclusion, and Social Justice as Advised	3
	Credits	18
Spring		
ASET 221	Automatic Transmissions (Spring Only)	4
	······································	
ASET 222	Engine Performance (Spring Only)	4

Liberal Arts and Sciences Electives as advised	
Credits	14
Total Credits	63

# Automotive Technology, A.A.S.

#### Major Code: 0525

The Automotive Technology curriculum is designed to prepare graduates for the entry into the automotive/transportation service and repair industry.

The 50,000 square-foot and 12,000 square-foot automotive facilities provide an excellent opportunity for students to develop their skills in all automotive repair and service areas. Students receive practical laboratory experience in brakes/steering/ suspension, drive-trains, electrical, engine mechanical, engine performance, air conditioning, and basic auto body collision repair in addition to liberal arts courses.

The Automotive Technology program prepares students for an entry level position in the Automotive/Transportation field and provide the opportunity to complete ASE certifications. The program also prepares students to continue their education in a 4-year degree program. Students must maintain a GPA of 2.0 or greater in all automotive classes. Students must complete the A.A.S. degree with a minimum 2.0 grade point average to transfer into the Automotive Technology, B.Tech. program as a junior.

### **Program Requirement**

60-67

Students are required to have a tool set and roll around toolbox.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Demonstrate professionalism appropriate for the auto service industry
- Perform diagnosis, service and repair of automotive internal combustion engines
- Perform diagnosis, service, and repair of automotive electrical/
  electronic systems
- Perform diagnosis, service, and repair of automotive heating and air conditioning systems
- Describe and follow safety and environmental guideline standards for the auto service industry
- Perform diagnosis, service, and repair of automotive steering and suspension

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised	
Diversity: Equity, Inclusion, and Social Justice (required)	as advised	

Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	PSYC 101
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

#### Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits	
Major Requirements			
AUTO 102	Metals	3	
AUTO 103	Internal Combustion Engines I	3	
AUTO 104	Basic Auto Electrical Systems	3	
AUTO 109	Chassis Analysis I	4	
AUTO 110	Summer Work Experience	3	
AUTO 138	Automobile Industry Awareness	1	
AUTO 155	Intermediate Auto Electricity	3	
AUTO 171	Automotive Drivetrains	3	
AUTO 202	Autobody Fundamentals	3	
AUTO 204	Automotive Electronic Systems	3	
AUTO 205	Electronic Fuel Systems	3	
AUTO 209	Chassis Analysis II	4	
AUTO 255	Driveability & Performance Prob	5	
or AUTO 259	Non-Structural Repair Refinish		
AUTO 261	Auto Air Condition & Heat	3	
SUNY General Edu	ucation Communication Written & Oral as advised	3-6	
Required SUNY G Coursework	eneral Education & Liberal Arts and Sciences		
PSYC 101	Introduction to Psychology	3	
SUNY General Edu	ucation Math as advised	3	
SUNY General Edu	ucation Natural Science as advised	3	
SUNY General Edu as advised	ucation Diversity, Equity, Inclusion & Social Justic	e 3	
Liberal Arts and S	ciences Electives <sup>1</sup>	2-5	
Total Credits		61-67	

#### 1

Minimum 20 Liberal Arts and Sciences Credits

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
AUTO 102	Metals	3
or AUTO 103	or Internal Combustion Engines I	
AUTO 104	Basic Auto Electrical Systems	3
AUTO 109	Chassis Analysis I (fall only)	4
AUTO 138	Automobile Industry Awareness	1
SUNY General Education	Math as advised	3
	Credits	14
Spring		
AUTO 102	Metals	3
or AUTO 103	or Internal Combustion Engines I	
AUTO 155	Intermediate Auto Electricity (spring only)	3
AUTO 209	Chassis Analysis II (spring only)	4
SUNY General Education	Communication as advised	3
SUNY General Education	Natural Science as advised	3
	Credits	16
Year 2		
Fall		
AUTO 110	Summer Work Experience	3
AUTO 202	Autobody Fundamentals (fall only)	3
AUTO 204	Automotive Electronic Systems (fall only)	3
AUTO 205	Electronic Fuel Systems (fall only)	3
SUNY General Education	Communication or Liberal Art and Science as advised	3
PSYC 101	Introduction to Psychology	3
	Credits	18
Spring		
AUTO 171	Automotive Drivetrains (spring only)	3
AUTO 255	Driveability & Performance Prob (spring only)	5
or AUTO 259	or Non-Structural Repair Refinish	
AUTO 261	Auto Air Condition & Heat	3
Liberal Arts and Sciences	as advised	2
SUNY General Education	Diversity: Equity, Inclusion, and Social Justice as Advised	3
as advised		
	Credits	16
	Total Credite	64

# Automotive Technology, B.TECH.

#### Major Code: 1611

The Bachelor of Technology Degree in Automotive Technology at SUNY Morrisville will prepare students for entry into the automotive industry at the technical or supervisory level where technical knowledge of all aspects of the automotive industry is necessary. This course of study goes beyond the technical automotive education provided by a traditional Associate in Applied Science Degree, adding a business management emphasis at the baccalaureate level.

Students will take courses in traditional automotive areas such as chassis analysis as well as the latest technologies in the automotive field. Students in the degree program will be able to take advantage of SUNY Morrisville's state of the art Automotive Technology Building. The facility provides a technologically sophisticated environment with nine state-of-the-art laboratories including chassis, electrical, emissions, engines, Ford ASSET (Automotive Student Service Educational Training), fuel diagnostics/drivability and performance, R and R (remove and replace), and transmissions. There is a showroom, three classrooms and a chassis dynamometer room where horsepower, torque, emissions and engine data measurements can be taken from a vehicle and transmitted electronically into a classroom. The bays in each laboratory have wireless and hard-wired access into the college's computer network and computerized manual systems gives students quick access to automotive related information. Much like a modern dealership, the building provides students with a professional working environment.

The Automotive Technology B.Tech. program prepares students for technical or supervisory level positions in the automotive industry.

### **Graduation Requirements**

All BT and BBA programs require a minimum of 120 credit hours including 30 credit hours from SUNY general education courses with courses in seven of the ten SUNY general education categories. SUNY requires that all Bachelor degree programs must have at least 45 credit hours of upperdivision courses with 24 credit hours of upper-division courses in the major. To fulfill these requirements along with the required courses for this program, 123 credits are required for this program. Students must maintain a GPA of 2.0 or greater in all Automotive classes. An overall GPA of 2.0 or higher is required for graduation.

Enrollment in either the Auto Technology AAS or SUNY Morrisville's Ford ASSET AAS Program are both pathways that may be used towards the completion of the BT degree.

### **Program Requirement**

Students are required to have a tool set and roll around tool box.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Communicate effectively both in writing and in presentations in areas of the Automotive Industry
- Evaluate strategies for solving automotive business related problems
- Perform diagnosis, service and repair of base automotive systems
- Diagnose and repair advanced technology applications
- Demonstrate computer competency for accessing data and documenting automotive repair records
- Identify an automotive related research problem, develop research questions, collect and analyze data and draw conclusions

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	PSYC 101, PSYC 304

The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Care Competencies:	

Core Competencies:

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 123 credits is required for degree completion.

Code	Title	Credits	
Major Requirements			
AUTO 102	Metals	3	
AUTO 103	Internal Combustion Engines I	3	
AUTO 104	Basic Auto Electrical Systems	3	
AUTO 109	Chassis Analysis I	4	
AUTO 110	Summer Work Experience	3	
AUTO 138	Automobile Industry Awareness	1	
AUTO 155	Intermediate Auto Electricity	3	
AUTO 171	Automotive Drivetrains	3	
AUTO 202	Autobody Fundamentals	3	
AUTO 204	Automotive Electronic Systems	3	
AUTO 205	Electronic Fuel Systems	3	
AUTO 209	Chassis Analysis II	4	
AUTO 255	Driveability & Performance Prob	5	
or AUTO 259	Non-Structural Repair Refinish		
AUTO 261	Auto Air Condition & Heat	3	
AUTO 309	Advanced Automotive Chassis	4	
AUTO 355	Advanced Automotive Diagnostic	3	
AUTO 359	Collision Business & Mgt	3	
AUTO 360	Auto Shop Mgt & Supervision	3	
AUTO 371	Adv Powertrain Management	3	
AUTO 380	Auto Parts Management	3	
AUTO 400	Automotive Fleet Management	3	
AUTO 420	Auto Industry Internship Orien	1	
AUTO 421	Automotive Industry Internship	12	
BSAD 112	Marketing	3	
BSAD 116	Business Organization & Mgmt	3	
BSAD 300	Management Communications	3	
BSAD 400	Production & Operation Mgt	3	
BSAD 310	Human Resource Management	2-3	
or RENG 306	Alternative Fuel Vehicles		
Required SUNY G	eneral Education Coursework		
SUNY General Edu	ucation Communication Written & Oral as advised	3-6	
SUNY General Edu	ucation Math as advised	3	
SUNY General Edu	ucation Natural Science as advised	3	
SUNY General Edu as advised	ucation Diversity, Equity, Inclusion & Social Justic	e 3	
PSYC 101	Introduction to Psychology	3	

Total Credits		120-127
SUNY General Edu	cation electives as advised	3-6
World Language	es	
World History &	Global Awareness	
US History & Ci	vic Engagement	
Humanities		
The Arts		
Select elective	credits in two of the following categorie	s:
Additional SUNY G	General Education Electives	6
PSYC 304	Industrial/Org Psychology	3

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
AUTO 102	Metals	3
or AUTO 103	or Internal Combustion Engines I	
AUTO 104	Basic Auto Electrical Systems	3
AUTO 109	Chassis Analysis I (fall only)	4
AUTO 138	Automobile Industry Awareness	1
SUNY General Education M	1ath as advised	3
	Credits	14
Spring		
AUTO 102	Metals	3
or AUTO 103	or Internal Combustion Engines I	
AUTO 155	Intermediate Auto Electricity (spring only)	3
AUTO 209	Chassis Analysis II (spring only)	4
SUNY General Education N	atural Science as advised	3
SUNY General Education C	ommunication as advised	3
	Credits	16
Year 2		
Fall		
	Summer Work Experience	3
AUTO 202	Autobody Fundamentals (fall only)	3
AUTO 204	Automotive Electronic Systems (fall only)	3
AUTO 205	Electronic Fuel Systems (fall only)	3
	Introduction to Psychology	3
SUNY General Education Diversity, Equity, Inclusion & Social Justice as advised 3		
. ·	Credits	18
Spring		
AUTO 171	Automotive Drivetrains (spring only)	3
or AUTO 255	or Non-Structural Repair Refinish	5
AUTO 261	Auto Air Condition & Heat	3
SUNY General Education c	ourses as advised	6
	Credits	17
Year 3		
Fall		
AUTO 309	Advanced Automotive Chassis (fall only)	4
AUTO 359	Collision Business & Mgt	3
AUTO 355	Advanced Automotive Diagnostic	3
BSAD 112	Marketing	3
BSAD 116	Business Organization & Mgmt	3
	Credits	16
Spring		
AUTO 360	Auto Shop Mgt & Supervision	3
RENG 306 or BSAD 310	Alternative Fuel Vehicles (spring only) or Human Resource Management	2-3
BSAD 300	Management Communications	3
PSYC 304	Industrial/Org Psychology	3
		5

	Credits	11-12
Year 4		
Fall		
AUTO 371	Adv Powertrain Management (fall only)	3
AUTO 380	Auto Parts Management	3
AUTO 400	Automotive Fleet Management	3
AUTO 420	Auto Industry Internship Orien	1
BSAD 400	Production & Operation Mgt	3
SUNY General Edu	cation courses as advised	3
	Credits	16
Spring		
AUTO 421	Automotive Industry Internship	12
	Credits	12
	Total Credits	120-121

# **Business Administration, A.A.S.**

#### Major Code: 0632

Graduates earning the Associate in Applied Science degree in Business Administration are equally divided into two groups. The degree may either transition into the workforce, or into a bachelor's program at Morrisville or another SUNY college. Those going into the work force find jobs in accounting, finance, human resource management, management training or marketing. Graduates work with retailers, banks, food processors, publishers and other business or government organizations.

This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

The program is designed to develop the broad understanding and attitudes needed by students to qualify for a wide range of entry-level positions. Building upon management skills acquired from the program, students should be capable of taking on the additional responsibilities of middle management as they acquire experience.

The course work consists of one-third liberal arts, sciences, and twothirds business courses. The specific courses offered give the student a well-rounded foundation from which to branch out in many directions.

### **Career Opportunities**

Employment preparation for management training in human resources, corporate communications, marketing, public service and the service industry, self-employment or family business.

Although not designed with transfer in mind, students typically transfer to other business or technology-related bachelor degree program.

### **Graduation Requirement**

Graduates must have 60 credits, including 20 credit hours in the Liberal Arts and Sciences. In addition, students must achieve a minimum grade point average of 2.0 overall for graduation. Demonstrated proficiency through MATH 102 Intermediate Algebra w Trig is required for this program.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Communicate effectively and purposefully, integrating technology into writing and presentations.
- Identify problems, analyze information, and form conclusions within the business context.

· Possess analytical/quantitative skills appropriate to the business community.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### **Knowledge and Skills Areas:**

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 102
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	ECON 100
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
Major Requirements		
ACCT 101	Principles of Accounting I	3
ACCT 102	Principles of Accounting II	3
BSAD 100	Introduction to Business	3
or BSAD 117	Intro to Entrepreneurship	
BSAD 102	Business Mathematics	3
BSAD 108	Business Law 1	3
BSAD 112	Marketing	3
BSAD 116	Business Organization & Mgmt	3
BSAD 140	Business Communications	3
BSAD 221	Business Statistics	3
BSAD 295	Business Mgmt/Decision Making	3
CITA 101	Principles Computer Apps	3
BSAD Elective as advised		3
Required SUNY General Education Coursework		
COMM 105	Research & Communication	3
MATH 102	Intermediate Algebra w Trig	3

Total Credits		60-61
Additional SUNY	General Education Credits as Advised	9
SUNY General Ed as Advised	ucation Natural Sciences (and Scientific Reaso	ning) 3-4
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
ECON 100	Introduction to Macroeconomics	3

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
ACCT 101	Principles of Accounting I	3
BSAD 100	Introduction to Business	3
or BSAD 117	or Intro to Entrepreneurship	
BSAD 102	Business Mathematics	3
CITA 101	Principles Computer Apps	3
COMM 105	Research & Communication	3
	Credits	15
Spring		
ACCT 102	Principles of Accounting II	3
BSAD 116	Business Organization & Mgmt	3
SUNY General Education D	Diversity: Equity, Inclusion, and Social Justice as Advised	3
MATH 102	Intermediate Algebra w Trig	3
SUNY General Education a	as advised	3
	Credits	15
Year 2		
Fall		
BSAD 108	Business Law 1	3
BSAD 112	Marketing	3
BSAD 140	Business Communications	3
ECON 100	Introduction to Macroeconomics	3
SUNY General Education N	latural Sciences (and Scientific Reasoning) as Advised	3-4
	Credits	15-16
Spring		
BSAD - Business Elective a	as advised	3
BSAD 221	Business Statistics	3
BSAD 295	Business Mgmt/Decision Making	3
SUNY General Education a	is advised	3
Elective as advised		3
	Credits	15
	Total Credits	60-61

Total Credits

# **Business Administration, A.S.**

#### Major Code: 0671

The associate in science degree in Business Administration requires half the course work to be divided among the humanities, the mathematics/ science and the social science fields of study. The emphasis is in the mathematics/science area where four courses are required for graduation. The other half of the required course work is in the applied business area as described in the Business Administration A.A.S. degree description. This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

While a large majority of students who graduate with the A.S. degree transfer to bachelor degree programs, experience has shown that the background acquired from the business courses is sufficient to make a student eligible for a wide range of positions in business and government, as well.

This degree is primarily a transfer program; however, some students chose to enter the workforce.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Communicate effectively and purposefully, integrating technology into writing and presentations.
- Identify problems, analyze information, and form conclusions within the business context.
- Possess analytical/quantitative skills appropriate to the business community

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	ECON 100 and ECON 140
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised

#### **Curriculum Requirements**

(required)

A minimum of 60 credits is required for degree completion.

	Code	Title	Credits
Major Requirements			
	ACCT 101	Principles of Accounting I	3
	ACCT 102	Principles of Accounting II	3
	BSAD 100	Introduction to Business	3
	BSAD 108	Business Law 1	3
	BSAD 112	Marketing	3
	BSAD 116	Business Organization & Mgmt	3
	BSAD 203	Business Law II	3

Total Credits	6	0-61
Additional SUNY (	General Education Credits as advised	12
Justice as Advised		
SUNY General Education Diversity: Equity, Inclusion, and Social 3		
SUNY General Education Natural Sciences (and Scientific Reasoning) 3-4 as Advised		
ECON 140	Introduction to Microeconomics	3
ECON 100	Introduction to Macroeconomics	3
MATH 147	Selected Topics In Precalculus	3
COMM 105	Research & Communication	3
Required SUNY G	eneral Education Coursework	
or CITA 110	Intro Information Technology	
CITA 101	Principles Computer Apps	3
BSAD 295	Business Mgmt/Decision Making	3
BSAD 221	Business Statistics	3

### Sample Course Sequence

Course	The	credits
Year 1		
Fall		
ACCT 101	Principles of Accounting I	3
BSAD 100	Introduction to Business	3
BSAD 108	Business Law 1	3
COMM 105	Research & Communication	3
MATH 147	Selected Topics In Precalculus	3
	Credits	15
Spring		
ACCT 102	Principles of Accounting II	3
BSAD 203	Business Law II	3
CITA 101	Principles Computer Apps	3
SUNY General Education D	iversity: Equity, Inclusion, and Social Justice as Advised	3
SUNY General Education a	s advised	3
	Credits	15
Year 2		
Fall		
BSAD 112	Marketing	3
BSAD 116	Business Organization & Mgmt	3
ECON 100	Introduction to Macroeconomics	3
SUNY General Education a	s advised	6
	Credits	15
Spring		
BSAD 221	Business Statistics	3
ECON 140	Introduction to Microeconomics	3
BSAD 295	Business Mgmt/Decision Making	3
SUNY General Education N	latural Sciences (and Scientific Reasoning) as Advised	3
SUNY General Education a	s Advised	3
	Credits	15
	Total Credits	60

# **Business Administration, B.B.A.**

#### Major Code: 0280

SUNY Morrisville's bachelor degree in Business Administration provides students with the opportunity to develop the business practices and skills necessary for planning and directing the management, business, and financial activities of business, government and other organizations. This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP). Graduates are prepared to coordinate, support, and perform a broad range of duties that promote organizational efficiency. The mission of the program is to give students the opportunity to graduate with the ability to identify new opportunities, solve business problems and improve operational optimization. Combining both theoretical and applied teaching, emphasis is placed on concepts, skills and techniques that are immediately transferable in the workplace.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- To communicate effectively through both oral and written means of communication
- To design, implement and evaluate strategies for identifying new business opportunities
- To design, implement and evaluate strategies for solving contemporary business problems
- · To recognize and promote ethical and responsible business practices
- To effectively meld technical knowledge with information technology proficiency
- To plan and direct the management, business and financial activities of business, government and other organizations
- To utilize quantitative analysis to evaluate operational efficiency, market segment opportunities and business profitability
- To identify technology and workforce strategies to enhance overall productivity
- To prepare a competitive industry analysis in support of strategic decision making

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BBA degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 153
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	ECON 100 or ECON 140
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

Core Competencies:

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion.

Code	Title C	redits
Major Requirement	nts	
BSAD 100	Introduction to Business	3
BSAD 108	Business Law 1	3
BSAD 116	Business Organization & Mgmt	3
BSAD 140	Business Communications	3
BSAD 203	Business Law II	3
BSAD 221	Business Statistics	3
BSAD 300	Management Communications	3
BSAD 310	Human Resource Management	3
BSAD 320	Entrepreneurship	3
BSAD 325	Marketing Management	3
BSAD 350	Principles Corporate Finance	3
BSAD 375	Management Information Systems	3
BSAD 380	International Business	3
BSAD 400	Production & Operation Mgt	3
BSAD 408	Responsible Business Ownership	3
BSAD 411	Leadership in Organizations	3
BSAD 470	Strategic Management	3
ACCT 101	Principles of Accounting I	3
ACCT 102	Principles of Accounting II	3
OFFT 100	Introduction to MS Word	1
OFFT 109	Introduction to MS PowerPoint	1
OFFT 110	Introduction to MS Excel	1
300-400 Upper Le advised	vel Credits as advised or Optional Concentration a	is 12
Additional Genera	l Electives as advised	15
Required SUNY G	eneral Education Coursework	
ECON 100	Introduction to Macroeconomics	3
ECON 140	Introduction to Microeconomics	3
COMM 105	Research & Communication	3
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
MATH 153	Business Calculus	3
SUNY General Edu as Advised	ucation Natural Sciences (and Scientific Reasonin	g) 3
Additional SUNY	General Education as Advised	15
Total Credits		120

#### **Optional Concentrations**

Accounting

Title	Credits
Intermediate Financial Acct I	3
Intermediate Financial Acct II	3
Cost Accounting	3
	Title Intermediate Financial Acct I Intermediate Financial Acct II Cost Accounting

ACCT 401	Auditing	3
Total Credits		12
Entrepreneurs	hip	
Code	Title	Credits
Select 12 credit	s from the following:	12
BSAD 329	Consumer Behavior	
BSAD 330	Lead/Manage Family Business	
BSAD 391	Internship in Business	
ENTR 327	Guerilla Mktg Tactics Sm Bus	
ENTR 342	Innovation & Venture Creation	
Total Credits		12
Markoting		
Code	Title	Credite
Select 12 credit	s from the following:	12
BSAD 327	Advertising Management	12
BSAD 329	Consumer Behavior	
BSAD 353	Sport Marketing - Strategic Ap	
BSAD 391	Internshin in Business	
BSAD 419	Global Marketing	
ENTB 327	Guerilla Mktg Tactics Sm Bus	
Total Credita		12
Total Credits		12
Sports Market	ing	
Code	Title	Credits
BSAD 343	Intro to Sport Management	3
Select three of t	the following:	9
BSAD 353	Sport Marketing - Strategic Ap	
BSAD 391	Internship in Business	
BSAD 418	Sport Law	
BSAD 443	Strategic Sports Business	

**Total Credits** 

ACCT 101

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
BSAD 100	Introduction to Business	3
BSAD 108	Business Law 1	3
COMM 105	Research & Communication	3
OFFT 100	Introduction to MS Word	1
OFFT 109	Introduction to MS PowerPoint	1
OFFT 110	Introduction to MS Excel	1
100-200 Lower Division Ele	ective as advised	3
	Credits	15
Spring		
BSAD 116	Business Organization & Mgmt	3
BSAD 140	Business Communications	3
SUNY General Education D	viversity: Equity, Inclusion, and Social Justice as Advised	3
SUNY General Education a	s advised	3
100-200 Lower Division Ele	ective as advised	3
	Credits	15
Year 2	Credits	15

Principles of Accounting I

ECON 100	Introduction to Macroeconomics	3
MATH 153	Business Calculus	3
100-200 Lower Divisio	on Elective as advised	3
SUNY General Educat	ion Natural Sciences (and Scientific Reasoning) as Advised	3
	Credits	15
Spring		
ACCT 102	Principles of Accounting II	3
BSAD 203	Business Law II	3
BSAD 221	Business Statistics	3
ECON 140	Introduction to Microeconomics	3
SUNY General Educat	ion as advised	3
	Credits	15
Year 3		
Fall		
BSAD 310	Human Resource Management	3
BSAD 325	Marketing Management	3
BSAD 350	Principles Corporate Finance	3
100-200 Lower Divisio	on Elective as advised	3
SUNY General Educat	ion as advised	3
	Credits	15
Spring		
BSAD 300	Management Communications	3
BSAD 320	Entrepreneurship	3
BSAD 375	Management Information Systems	3
BSAD 380	International Business	3
100-200 Lower or 300	-400 Upper Division Elective as advised	3
	Credits	15
Year 4		
Fall		
BSAD 400	Production & Operation Mgt	3
BSAD 408	Responsible Business Ownership	3
BSAD 411	Leadership in Organizations	3
300-400 Upper Divisio	on Elective as advised	3
SUNY General Educat	ion as advised	3
	Credits	15
Spring		
BSAD 470	Strategic Management	3
Electives - Upper Divis	sion as Advised	9
SUNY General Educat	ion Elective as Advised	3
	Credits	15
	Total Credits	120

# **Business Minor**

12

3

The Business minor will provide students with the understanding of business practices and skills necessary in management, marketing, and financial activities of the business. This minor will give students the hand-on experience with real case studies and projects. This minor requires 15 credit hours, with 9 credit hours in upper division.

Upon successful completion of this minor students will be able to:

- Communicate effectively and purposefully, integrating technology into writing and presentations.
- Identify problems, analyze information, and form conclusions within the business context.
- Possess analytical/quantitative skills appropriate to the business community.

A minimum of 15 credits is required for completion of the minor. Students must be enrolled in a Bachelor's degree program in order to declare a minor.

Code	Title	Credits
Required Courses	work	
ACCT 100	Accounting Info & Mgt Decision	3
or ACCT 101	Principles of Accounting I	
BSAD 116	<b>Business Organization &amp; Mgmt</b>	3
BSAD 325	Marketing Management	3
Select two course	es from the following:	6
BSAD 310	Human Resource Management	
BSAD 320	Entrepreneurship	
BSAD 330	Lead/Manage Family Business	
BSAD 400	Production & Operation Mgt	
BSAD 408	Responsible Business Ownership	
BSAD 411	Leadership in Organizations	
Total Credits		15

# **Cannabis Industry Minor**

The Cannabis Industry minor will provide students with an understanding of the many aspects related to the cannabis industry. This minor is appropriate for students in horticulture, agriculture, and natural science related majors and provides students opportunities for focus on a specific area of interest. This minor requires 16 credit hours, with at least 6 credit hours in the upper-division.

### **Program Learning Outcomes**

Upon successful completion of this minor students will be able to:

- · Demonstrate a broad understanding of Cannabis botany
- · Explain a variety of production and processing techniques
- · Evaluate market trends

#### **Curriculum Requirements**

A minimum of 16 credits is required for completion of the minor. Students must be enrolled in a Bachelor's degree program in order to declare a minor.

Code	Title	Credits
Required Cours	sework	
CANA 101	Introductory Cannabis	3
CANA 301	Advanced Cannabis Prop & Prod	3
CANA 350	Hemp Production & Processing	3
AGRO 110	Soil Science	3
ENSC 107	Integrated Pest Management	1
BIOL 102	Botany-Form Function Seed Plt	3
Total Credits		16

**Total Credits** 

# **Comprehensive Medical Coding Microcredential**

#### Major Code: MCMC

This microcredential prepares students to take and successfully pass AAPC's Certified Professional Coding Exam after completing the four

courses taught within SUNY Morrisville's Healthcare Office Coordinator degree program (#3051). Courses are: Medical Terminology, Human Biology, Medical Coding, and Advanced Medical Coding.

### Program Learning Outcomes

Upon successful completion of this microcredential students will be able to:

- · Analyze all bodily systems' human structure, function, and diseases, including additional current health topics in the BIOL 105 (Human Biology) course.
- · Pronounce, spell, and define medical terms from each bodily system. Recognize "root" words, prefixes, and suffixes of various terms within the HCOC 250 (Medical Terminology) course.
- · Apply accurate CPT, ICD-10, and HCPCS codes for patient encounters and services. List current coding guidelines. Enter codes onto forms and into electronic billing systems accurately to ensure optimum reimbursement via the HCOC 200 (Medical Coding) and HCOC 301 (Advanced Medical Coding) courses.

After successfully completing the HCOC 301 - Advanced Medical Coding course students are prepared to sit for the CPC coding exam through AAPC.

### **Curriculum Requirements**

A total of 12 credits is required for completion of the microcredential. Students will receive a digital badge upon completion.

Code	Title	Credits
BIOL 105	Human Biology	3
HCOC 250	Medical Terminology	3
HCOC 200	Medical Coding	3
HCOC 301	Advanced Medical Coding	3
Total Credits		12

# **Computer Information Systems,** A.A.S.

#### Maior Code: 0581

Computer Information Systems (CIS) focuses on the application of computers in a business environment with an emphasis on the analysis and design of business information systems. Computer information systems professionals play a key and vital role in the management and growth of an organization and they are in high demand in almost every industry.

With a CIS degree, it's less about theory and more about practical application. The Computer Information Systems (CIS) degree program here at SUNY Morrisville provides students the skills to work with companies IT systems, analyze problems and efficiently create solutions, and learn different type of technologies that should be used to solve a business problem. Students receive practical hands-on experience in interactive program development in a networked, pc-based windows programming environment. Students will develop a strong background in fundamental concepts of hardware and software as applied to computers in a business environment; programming, operating systems, systems development life cycle; use of typical software packages including word processing, spreadsheeting, and database. In addition, students will
get an introduction to core business disciplines such as accounting, macroeconomics, business organization and management.

Upon completion of program requirements, students are awarded the Associate in Applied Science (A.A.S.) degree. The hands-on approach in the Computer Information Systems (CIS) A.A.S. degree's program gives our college CIS A.A.S. degree students a real-world look at their field.

# **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Employ critical thinking and problem-solving skills in developing technical solution
- · Apply formal design methodologies to design information systems
- Explain theories regarding the application of information technologies to the solution of business problems
- Create and modify functional, clear, concise software design and implement with current programming languages
- Demonstrate proficiency in two or more operating systems or database systems
- · Create functional Web pages using scripting language
- · Install, configure, troubleshoot, and administer a basic network

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	ECON 100
The Arts	as advised
US History and Civic Engagment	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised

# **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title Cro	edits
Major Field Req	uirements	
CITA 110	Intro Information Technology	3
CITA 120	Computer Concepts & Op Sys	3
CITA 140	Introduction to Programming	3
CITA 200	Data Communications Networking	3
CITA 220	Systems Analysis	3
CITA 245	Intro to Database Concepts	3
CITA 280	Tools/Tech for Appl Devel.	3
CITA electives a	s advised	9
ACCT 101	Principles of Accounting I	3
BSAD 116	Business Organization & Mgmt	3
General Elective	es as advised	4
Required SUNY	General Education Coursework	
COMM 105	Research & Communication	3
ECON 100	Introduction to Macroeconomics	3
SUNY General E as Advised	ducation Mathematics (and Quantitative Reasoning)	3
SUNY General E Justice as Advis	iducation Diversity: Equity, Inclusion, and Social sed	3
SUNY General E as Advised	ducation Natural Sciences (and Scientific Reasoning)	3
Must also comp	lete General Education (p. 31)	5
Total Credits		60

## **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
CITA 110	Intro Information Technology	3
CITA 140	Introduction to Programming	3
CITA Elective as advised		3
COMM 105	Research & Communication	3
SUNY General Education M	lathematics (and Quantitative Reasoning) as Advised	3
GNED 100	First Year Experience	2
	Credits	17
Spring		
CITA 120	Computer Concepts & Op Sys	3
BSAD 116	Business Organization & Mgmt	3
SUNY General Education E	lectives as advised	6
CITA Elective as advised		3
	Credits	15
Year 2		
Fall		
CITA 200	Data Communications Networking	3
CITA 220	Systems Analysis	3
CITA 245	Intro to Database Concepts	3
ECON 100	Introduction to Macroeconomics	3
ACCT 101	Principles of Accounting I	3
	Credits	15
Spring		
CITA 280	Tools/Tech for Appl Devel.	3
SUNY General Education E	lectives as advised	5
General Electives as advise	ed	4

CITA Elective as advised 3 Credits 15
CITA Elective as advised 3

**Total Credits** 

# **Computer Information Systems, A.S.**

#### Major Code: 1171

This program has been deactivated and students will no longer be admitted to the major. Currently enrolled students will complete the degree in accordance with the approved teach-out plan.

Computer Information Systems (CIS) focuses on the application of computers in a business environment with an emphasis on the analysis and design of business information systems. Computer information systems professionals play a key and vital role in the management and growth of an organization and they are in high demand in almost every industry.

With a CIS degree, it's less about theory and more about practical application. The Computer Information Systems (CIS) degree program here at SUNY Morrisville provides students the skills to work with companies IT systems, analyze problems and efficiently create solutions, and learn different type of technologies that should be used to solve a business problem. Students receive practical hands-on experience in interactive program development in a networked, pc-based windows programming environment. Students will develop a strong background in fundamental concepts of hardware and software as applied to computers in a business environment; programming, operating systems, systems development life cycle; use of typical software packages including word processing, spreadsheeting, and database. In addition, students will get an introduction to core business disciplines such as accounting, macroeconomics, business organization and management.

The Computer Information Systems A.S. degree is a modification of the Computer Information Systems A.A.S. degree, designed to give the students a blend of the technical skills used by computing professionals and the business of managers in a four-year program. The additional course work ensures that the students obtain a thorough view of the modern business world and the impact of information technology on modern business practices.

Upon completion of program requirements, students are awarded the Associate of Science (A.S.) degree. The hands-on approach in the Computer Information Systems (CIS) A.S. degree's program gives our CIS A.S. degree students a real-world look at their field.

# **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Employ critical thinking and problem-solving skills in developing technical solution
- · Apply formal design methodologies to design information systems
- Explain theories regarding the application of information technologies to the solution of business problems
- Create and modify functional, clear, concise software design and implement with current programming languages
- Demonstrate proficiency in two or more operating systems or database systems
- Create functional Web pages using scripting language
- · Install, configure, troubleshoot, and administer a basic network

# **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
CITA 110	Intro Information Technology	3
CITA 120	Computer Concepts & Op Sys	3
CITA 140	Introduction to Programming	3
CITA 200	Data Communications Networking	3
CITA 210	Visual Languages & Devel Tools	3
CITA 150	Data Management Techniques	3
CITA as advised		3
ACCT 101	Principles of Accounting I	3
ACCT 102	Principles of Accounting II	3
BSAD 116	<b>Business Organization &amp; Mgmt</b>	3
COMP 101	Composition and Research	3
COMP 102	Writing About Literature	3
ECON 100	Introduction to Macroeconomics	3
MATH 151	General Calculus A	3
MATH as advised	ł	3
Liberal Art & Scie	nce Elective (as advised)	8
General Electives	s (as advised)	12
Total Credits		65

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
CITA 110	Intro Information Technology	3
CITA 140	Introduction to Programming	3
CITA elective (as advised)		3
COMP 101	Composition and Research	3
MATH 151	General Calculus A	3
GNED 100	First Year Experience	2
	Credits	17
Spring		
ACCT 101	Principles of Accounting I	3
BSAD 116	Business Organization & Mgmt	3
CITA 120	Computer Concepts & Op Sys	3
CITA 150	Data Management Techniques	3
COMP 102	Writing About Literature	3
	Credits	15
Year 2		
Fall		
ACCT 102	Principles of Accounting II	3
CITA 210	Visual Languages & Devel Tools	3
CITA 220	Systems Analysis	3
ECON 100	Introduction to Macroeconomics	3
Math (as advised)		3
	Credits	15
Spring		
Liberal Arts & Sciences Ele	ctive as Advised	3
General Electives as Advise	ed	12
	Credits	15
	Total Credits	62

# **Criminal Justice Minor**

The criminal justice minor allows students to get an understanding of criminal justice in addition to other disciplines.

# **Program Learning Outcomes**

Upon successful completion of this minor students will be able to:

- Explain due process and corresponding constitutional and legal rights.
- Name the various police agencies, their specialties and jurisdictions.
- Critique the varying goals and priorities of the many disciplines in the criminal justice system.
- Identify and describe diversity and cultural influences in human behavior, particularly in stressful events.

# **Curriculum Requirements**

A minimum of 15 credits is required for completion of the minor. Students must be enrolled in a Bachelor's degree program in order to declare a minor.

Code	Title	Credits
Required Courses	work	
CJUS 101	Intro Criminal Justice Systems	3
CJUS 202	Policing	3
CJUS - Upper Lev	el CJUS Courses as Advised	9
Total Credits		15

# Criminal Justice, A.A.S.

#### Major Code: 1100

The Criminal Justice program is designed to prepare students for professional employment in the criminal justice, corrections, or security field.

In recent years, the need for police and security officers has increased significantly along with the professional expectations and performance standards. The Criminal Justice program is designed for students seeking entry level employment in the Criminal Justice field and for current employees interested in advancement. Students earning this degree may continue their education to the bachelor degree level or beyond.

The goal of this program is to help students develop the necessary knowledge, skills, and abilities required for success as criminal justice professionals. Program graduates will be eligible for employment in the full range of law enforcement careers including policing, corrections, security, criminal investigation, and related career areas. Graduates are expected to find a wide range of employment options with public and private agencies.

According to the US Department of Labor, opportunities for employment in Criminal Justice are expected to be well above the average for other career fields. Area Corrections and Police agencies have indicated a strong interest in this program and anticipate openings for graduates. Potential employers include: Municipal and State Police, County Sheriff's Departments, NY State Department of Corrections, the Court System, Corporate Security and more.

# **Graduation Requirements**

Students will be required to maintain a 2.0 Grade Point Average to remain in the program. Students must complete all major course work with a 2.0 or above to be eligible for graduation in this major. A minimum of 20 credit hours is required in the humanities, mathematics or sciences and social sciences areas. Completion of MAGN 101 Elementary Algebra is required but this math does not meet the General Education requirement nor the Math/Science minimum requirement content area as stated above (MATH 102 Intermediate Algebra w Trig is highly recommended). Sixty-two credits in coursework, as described in curriculum tab, are required to graduate.

# **Program Learning Outcomes**

Upon Successful completion of this program, students will be able to:

- Effectively document investigations, incidents, and other information consistent with nationally recognized legal criterion
- Identify, collect, and preserve evidence according to standard police practice utilizing traditional, current, and technological methods in a manner that is mutually beneficial to all of the stakeholders in the criminal justice system
- Apply penal and criminal procedure laws in a law enforcement context

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Nautral Sciences (and Scientific Reasoning) (required)	as advised
Humanities	COMP 102
Social Sciences	PSYC 101 and SOCI 101
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### Core Competencies:

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 62 credits is required for degree completion.

Code	Title C	redits	
Major Field Requirements			
Student must earr courses.	n a minimum 2.0 GPA in all major field requirement		
CJUS 101	Intro Criminal Justice Systems	3	
CJUS 201	Corrections	3	
CJUS 202	Policing	3	
CJUS 220	Criminal Investigation I	3	
CJUS 221	Criminal Investigation II	3	
CJUS 230	Basics of Penal Law	3	
CJUS 231	Criminal Procedure Law	3	
Liberal Arts & Scie	ence Requirements		
COMM 105	Research & Communication	3	
COMP 102	Writing About Literature	3	
PSYC 101	Introduction to Psychology	3	
POLI 113	American Judiciary System	3	
SOCI 101	Intro to Sociology	3	
MATH - SUNY Ger	neral Education MATH as Advised	3	
CITA 101	Principles Computer Apps	3	
WELL 101	Stress and Wellness (or PHED - Physical Educatio as advised)	n 3	
GNED 100	First Year Experience	2	
SUNY General Edu or World History &	ucation Courses in US History & Civic Engagement Global Awareness as Advised	3	
SUNY General Edu	ucation World Languages as Advised	3	
SUNY General Edu as Advised	ucation Diversity, Equity, Inclusion & Social Justice	3	
SUNY General Edu	ucation Natural Sciences as Advised	3-4	
Additional Genera	l Elective Credits	2-3	
Total Credits 61-63			

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
CJUS 101	Intro Criminal Justice Systems	3
GNED 100	First Year Experience	2
COMM 105	Research & Communication	3
SUNY General Education N	Nathematics (and Quantitative Reasoning) as Advised	3
CITA 101	Principles Computer Apps	3
WELL 101 or PHED 141 - F	itness 1 as Advised	1-3
	Credits	15-17
Spring		
CJUS 201	Corrections	3
CJUS 202	Policing	3
COMP 102	Writing About Literature	3
General Elective as Advise	d	3
POLI 113	American Judiciary System	3
WELL 101 or PHED 141 - F	itness I as Advised	1-3
	Credits	16-18
Year 2		
Fall		
CJUS 220	Criminal Investigation I	3

	Total Credits	62-68
	Credits	15
SUNY General Education Diversity, Equity, Inclusion and Social Justice as Advised		3
PSYC 101	Introduction to Psychology	3
SUNY General Edu History & Global Av	cation courses in US History & Civic Engagement or World wareness as Advised	3
CJUS 231	Criminal Procedure Law	3
CJUS 221	Criminal Investigation II	3
Spring		
	Credits	16-18
WELL 101 or PHED	141 - Fitness I as Advised	1-3
SUNY General Edu	cation World Languages as Advised	3
SUNY General Edu	cation Natural Sciences (and Scientific Reasoning) as Advised	3
SOCI 101	Intro to Sociology	3
CJUS 230	Basics of Penal Law	3

# Criminal Justice, B.TECH.

#### Major Code: 0287

The bachelor of technology in Criminal Justice is designed to give students a thorough hands-on preparation for employment in the field, either as public safety officials or in the private sector. Students are challenged by courses that address practical and current issues in law enforcement. In addition to courses in the Criminal Justice area, students will work with advisors to complete a technological sequence with a minimum of nine credits. Examples of technological sequence disciplines include Information Technology, Natural Resources, Economics and White Collar Crime, Adolescents and the Criminal Justice System, and Public Safety and Security. The program also includes a 15-credit fulltime internship to give students extensive experience in a real-world Criminal Justice setting.

As a result of new technologies, including forensic sciences, DNA, new evidence collection equipment, crime scene investigation advances, surveillance expertise, computers, and the specialty services instituted since 9/11, the need for a higher level of training and education in the criminal justice field is essential. We have drawn on advances in all areas of the protective services to create this technologically-based academic degree program to support the criminal justice fields with highly gualified personnel.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- · Identify, collect, and preserve evidence according to standard police practice utilizing traditional, current, and technological methods in a manner that is mutually beneficial to all of the stakeholders in the criminal justice system.
- · Recognize and evaluate essential criminal justice-related skills pertaining to the application of criminal and criminal procedure laws to the myriad investigations that occur in criminal justice.
- · Identify and describe diversity and cultural influences in human behavior, particularly in stressful events.
- · Provide evidence in portfolio form of their academic and practical experiences.
- · Demonstrate an ability to perform a set of tasks to industry standards in a field chosen for exploration.
- · Integrate and convey concepts through the application of critical thinking, writing, and communication.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105 and COMP 310
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	COMP 102 and PHIL 311
Social Sciences	PSYC 101 and SOCI 101
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

# **Curriculum Requirements**

A minimum of 122 credits is required for degree completion.

Code	Title Cre	dits
Requirements		
CJUS 101	Intro Criminal Justice Systems	3
CJUS 201	Corrections	3
CJUS 202	Policing	3
CJUS 220	Criminal Investigation I	3
CJUS 221	Criminal Investigation II	3
CJUS 230	Basics of Penal Law	3
CJUS 231	Criminal Procedure Law	3
CJUS 301	Crime Scene Investigation & Mgt	3
CJUS 311	Interviewing Techniques in CJ	3
CJUS 414	Staff Misconduct/Work Violence	3
CJUS 449	Internship Preparation	1
CJUS 450	Criminal Justice Internship	15
COMM 105	Research & Communication	3
COMP 102	Writing About Literature	3
COMP 310	Advance Tech Communication	3
CITA 101	Principles Computer Apps	3
WELL 101	Stress and Wellness (or PHED - Physical Education as Advised)	3
GNED 100	First Year Experience	2

CJUS Upper Lev	el Electives as Advised	12
Additional Gene	ral Elective Credits as Advised	7-8
Technical Seque	ence Courses as Advised	9
Students will co area and will sel plans.	nsult with their advisor and faculty in the technical ect 9 credits that best meet their needs and career	
Required SUNY Coursework	General Education & Liberal Arts and Sciences	
SUNY General E Justice as Advis	ducation Diversity, Equity, Inclusion, and Social sed	3
SUNY General E	ducation World Language as Advised	3
SUNY General E as Advised	ducation Mathematics (and Quantitative Reasoning)	3
SUNY General E History and Glol	ducation US History and Civic Engagement or World bal Awareness as Advised	3
SUNY General E as Advised	ducation Natural Sciences (and Scientific Reasoning)	) 3-4
PHIL 311	Professional Ethics	3
POLI 113	American Judiciary System	3
PSYC 101	Introduction to Psychology	3
PSYC Upper Lev	el Elective as Advised	3
SOCI 101	Intro to Sociology	3
Total Credits	121-	-123
Sample Tech	nical Sequences	
Information le	chnology	
Information lee Code	chnology Title Cre	edits
Code Select three of t	Chnology Title Cre he following:	<b>edits</b> 9
Code Select three of t CITA 120 CITA 140	chnology Title Cre he following: Computer Concepts & Op Sys Introduction to Programming	edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150	chnology Title Cre he following: Computer Concepts & Op Sys Introduction to Programming Data Management Techniques	edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 190	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Data Management Techniques         Intro to LINUX/LINUX Systems       Cree	edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 190 CITA 200	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Data Management Techniques         Intro to LINUX/UNIX Systems       Data Communications Networking	edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 190 CITA 200 CITA 210	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Data Management Techniques         Intro to LINUX/UNIX Systems       Data Communications Networking         Visual Languages & Devel Tools       Visual Languages & Devel Tools	edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 190 CITA 200 CITA 210 CITA 260	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Data Management Techniques         Intro to LINUX/UNIX Systems       Data Communications Networking         Visual Languages & Devel Tools       Photography & Digital Imaging	edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 190 CITA 200 CITA 210 CITA 260 CITA 270	chnologyCreeTitleCreehe following:Computer Concepts & Op SysIntroduction to ProgrammingData Management TechniquesIntro to LINUX/UNIX SystemsData Communications NetworkingVisual Languages & Devel ToolsPhotography & Digital ImagingFundamentals Network Security	edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 190 CITA 200 CITA 210 CITA 260 CITA 270 CITA 305	chnologyCreeTitleCreehe following:Computer Concepts & Op SysIntroduction to ProgrammingData Management TechniquesData Management TechniquesIntro to LINUX/UNIX SystemsData Communications NetworkingVisual Languages & Devel ToolsPhotography & Digital ImagingFundamentals Network SecurityComputer Crime Digital ForensiComputer Crime Digital Forensi	edits 9
Information let           Code           Select three of t           CITA 120           CITA 140           CITA 150           CITA 150           CITA 200           CITA 210           CITA 200           CITA 210           CITA 200           CITA 210           CITA 250           CITA 270           CITA 305           STS 316	chnologyCreeTitleCreehe following:Computer Concepts & Op SysIntroduction to ProgrammingData Management TechniquesData Management TechniquesIntro to LINUX/UNIX SystemsData Communications NetworkingVisual Languages & Devel ToolsPhotography & Digital ImagingFundamentals Network SecurityComputer Crime Digital ForensiInvestigating Cyberculture	edits 9
Information lead           Code           Select three of t           CITA 120           CITA 140           CITA 150           CITA 190           CITA 200           CITA 210           CITA 200           CITA 305           STS 316           Total Credits	chnologyCreeTitleCreehe following:Computer Concepts & Op SysIntroduction to ProgrammingIntroduction to ProgrammingData Management TechniquesIntro to LINUX/UNIX SystemsIntro to LINUX/UNIX SystemsData Communications NetworkingVisual Languages & Devel ToolsPhotography & Digital ImagingFundamentals Network SecurityComputer Crime Digital ForensiInvestigating CybercultureInvestigating Cyberculture	edits 9 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 150 CITA 200 CITA 210 CITA 210 CITA 260 CITA 270 CITA 305 STS 316 Total Credits Natural Resour	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Introduction to Programming         Data Management Techniques       Intro to LINUX/UNIX Systems         Data Communications Networking       Visual Languages & Devel Tools         Photography & Digital Imaging       Fundamentals Network Security         Computer Crime Digital Forensi       Investigating Cyberculture	9 9 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 150 CITA 200 CITA 210 CITA 200 CITA 210 CITA 260 CITA 270 CITA 305 STS 316 Total Credits Natural Resour Code	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Data Management Techniques         Intro to LINUX/UNIX Systems       Data Communications Networking         Visual Languages & Devel Tools       Photography & Digital Imaging         Fundamentals Network Security       Computer Crime Digital Forensi         Investigating Cyberculture       Investigating Cyberculture	9 9 9 9 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 140 CITA 150 CITA 150 CITA 200 CITA 200 CITA 210 CITA 260 CITA 270 CITA 305 STS 316 Total Credits Natural Resour Code Select three of t	chnology       Creat         Title       Creat         he following:       Computer Concepts & Op Sys         Introduction to Programming       Introduction to Programming         Data Management Techniques       Intro to LINUX/UNIX Systems         Data Communications Networking       Visual Languages & Devel Tools         Photography & Digital Imaging       Fundamentals Network Security         Computer Crime Digital Forensi       Investigating Cyberculture         ritle         Creation in the following:	9 9 9 9 9 9 edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 150 CITA 200 CITA 200 CITA 210 CITA 200 CITA 260 CITA 270 CITA 305 STS 316 Total Credits Natural Resour Code Select three of t ENSC 106 ENVT 100	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Introduction to Programming         Data Management Techniques       Intro to LINUX/UNIX Systems         Data Communications Networking       Visual Languages & Devel Tools         Photography & Digital Imaging       Fundamentals Network Security         Computer Crime Digital Forensi       Investigating Cyberculture         rees         Title       Cree         Pesticide Use and Handling       Intro Cree	edits 9 9 9 9 edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 150 CITA 200 CITA 200 CITA 210 CITA 200 CITA 270 CITA 260 CITA 270 CITA 305 STS 316 Total Credits Natural Resour Code Select three of t ENSC 106 ENVT 100 NATE 110	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Data Management Techniques         Intro to LINUX/UNIX Systems       Data Communications Networking         Visual Languages & Devel Tools       Photography & Digital Imaging         Fundamentals Network Security       Computer Crime Digital Forensi         Investigating Cyberculture       Investigating Cyberculture         ces       Title       Cree         Intro Environmental Technology       Natural Becources Mageurements	edits 9 9 9 edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 150 CITA 200 CITA 200 CITA 210 CITA 200 CITA 270 CITA 270 CITA 305 STS 316 Total Credits Natural Resour Code Select three of t ENSC 106 ENVT 100 NATR 110 NATR 120	chnology       Creat         Title       Creat         he following:       Computer Concepts & Op Sys         Introduction to Programming       Data Management Techniques         Intro to LINUX/UNIX Systems       Data Communications Networking         Visual Languages & Devel Tools       Photography & Digital Imaging         Fundamentals Network Security       Computer Crime Digital Forensi         Investigating Cyberculture       Investigating Cyberculture         ces       Create         Title       Create         he following:       Pesticide Use and Handling         Intro Environmental Technology       Natural Resources Measurements	9 9 9 9 edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 150 CITA 200 CITA 200 CITA 200 CITA 200 CITA 200 CITA 270 CITA 305 STS 316 Total Credits Natural Resour Code Select three of t ENSC 106 ENVT 100 NATR 110 NATR 120 BENIC 102	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Introduction to Programming         Data Management Techniques       Intro to LINUX/UNIX Systems         Data Communications Networking       Visual Languages & Devel Tools         Photography & Digital Imaging       Fundamentals Network Security         Computer Crime Digital Forensi       Investigating Cyberculture         rees         Title       Cree         he following:       Pesticide Use and Handling         Intro To Recreation Area Mgmnt       Benewable Energy Resources	edits 9 9 9 9 edits 9
Information leg           Code         Select three of t           CITA 120         CITA 140           CITA 150         CITA 150           CITA 120         CITA 140           CITA 140         CITA 150           CITA 120         CITA 150           CITA 200         CITA 210           CITA 210         CITA 260           CITA 270         CITA 305           STS 316         Total Credits           Natural Resour         Code           Select three of t         ENSC 106           ENVT 100         NATR 110           NATR 120         RENG 102           ENRM 303         CITA 303	chnology       Cree         Title       Cree         he following:       Computer Concepts & Op Sys         Introduction to Programming       Data Management Techniques         Intro to LINUX/UNIX Systems       Data Communications Networking         Visual Languages & Devel Tools       Photography & Digital Imaging         Fundamentals Network Security       Computer Crime Digital Forensi         Investigating Cyberculture       Investigating Cyberculture         Cres         Title       Cree         he following:       Pesticide Use and Handling         Intro Environmental Technology       Natural Resources Measurements         Intro To Recreation Area Mgmnt       Renewable Energy Resources	edits 9 9 9 9 edits 9
Information lea Code Select three of t CITA 120 CITA 140 CITA 150 CITA 190 CITA 200 CITA 200 CITA 210 CITA 200 CITA 210 CITA 260 CITA 270 CITA 305 STS 316 Total Credits Natural Resour Code Select three of t ENSC 106 ENVT 100 NATR 110 NATR 110 NATR 120 RENG 102 ENRM 303 ENRM 305	chnology       Title       Cree         he following:       Computer Concepts & Op Sys       Introduction to Programming         Data Management Techniques       Intro to LINUX/UNIX Systems       Intro to LINUX/UNIX Systems         Data Communications Networking       Visual Languages & Devel Tools       Photography & Digital Imaging         Fundamentals Network Security       Computer Crime Digital Forensi       Investigating Cyberculture         ces       Title       Cree         Following:       Pesticide Use and Handling       Intro Environmental Technology         Natural Resources Measurements       Intro To Recreation Area Mgmnt       Renewable Energy Resources         Fundamentals Geospatial System       Environment Law Policy Lystice       Cree	edits 9 9 9 9 edits 9

**Total Credits** 

#### **Economics/White Collar Crime** Title Code Select three of the following: ECON 100 Introduction to Macroeconomics ECON 140 Introduction to Microeconomics ECON 300 Money, Banking Financial Mkts ECON 370 International Economics CJUS 315 White Collar Crime **BSAD 100** Introduction to Business **BSAD 116 Business Organization & Mgmt**

#### **Total Credits**

#### **Adolescents and Criminal Justice**

Code	Title	Credits
Select three of the	e following:	9
CJUS 235	Juvenile Delinquency	
COMM 131	Small Group Discussion	
COMM 121	Theories Interpersonal Comm	
PSYC 242	Adolescent Development	
SOCI 201	Social Problems	
SOCI 220	Marriage and Family	
Total Credits		9

Credits

9

9

#### **Public Safety/Security**

Code	Title	Credits
Select three of the	ne following:	9
BSAD 107	Legal Reg Aspects of Game Hosp	
CAS 103	Casino Security	
CAS 311	Surveillance & Security Tech	
<b>RRMT 450</b>	Facilities Safety and Security	
SOCI 390	Urban Sociology	
STS 316	Investigating Cyberculture	
Total Credits		9

#### Policing

<b>-</b>		
Code	Title	Credits
Select nine credit	s of the following:	9
CJUS 316	Animal Abuse Investigations	
CJUS 405	Crime Scene Photography	
CJUS 314	Diversity within CJ Systems	
CJUS 313	Sexual Offenses	
CJUS 404	Use of Force Continuums	
COMM 131	Small Group Discussion	
PHED 150 Self	Defense	
PSYC 242	Adolescent Development	
ENRM 303	Fundamentals Geospatial System	
Total Credits		9

# Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
CJUS 101	Intro Criminal Justice Systems	3
COMM 105	Research & Communication	3

GNED 100	First Year Experience	2
WELL 101	Stress and Wellness (or PHED - Physical Education)	3
SUNY General Educa	ation Natural Sciences (and Scientific Reasoning) as Advised	3
	Credits	14
Spring		
CJUS 201	Corrections	3
CJUS 202	Policing	3
COMP 102	Writing About Literature	3
MATH - SUNY Gener Advised	ral Education Mathematics (and Quantitative Reasoning) as	3
PSYC 101	Introduction to Psychology	3
POLI 113	American Judiciary System	3
	Credits	18
Year 2		
Fall		
CJUS 220	Criminal Investigation I	3
CJUS 230	Basics of Penal Law	3
SUNY General Educa	ation World Languages as Advised	3
SUNY General Educa	ation Diversity, Equity, Inclusion and Social Justice as Advised	3
SOCI 101	Intro to Sociology	3
	Credits	15
Spring		
CJUS 221	Criminal Investigation II	3
CJUS 231	Criminal Procedure Law	3
CITA 101	Principles Computer Apps	3
SUNY General Educa History & Global Awa	ation courses in US History & Civic Engagement or World areness as Advised	3
PSYC - Upper Level R	Psychology Course as Advised	3
Technical Sequence	Course	3
	Credits	18
Year 3		
Fall		
CJUS 301	Crime Scene Investigation &Mgt	3
CJUS 311	Interviewing Techniques in CJ	3
PHIL 311	Professional Ethics	3
Criminal Justice Elec	ctive	3
General Elective		3
	Credits	15
Spring		
CJUS 414	Staff Misconduct/Work Violence	3
COMP 310	Advance Tech Communication	3
Criminal Justice Ele	ctive	3
Technical Sequence	: Course	3
General Elective		3
	Credits	15
Year 4		
Fall		
CJUS 449	Internship Preparation	1
Criminal Justice Ele	ctives	6
General Electives		2
Technical Sequence	Course	3
<b>.</b> .	Credits	12
Spring	Original Institution Internation	
CJUS 450		15
	Credits	15
	Total Credits	122

# **Criminal Justice Police Certificate**

#### Major Code: 3244

This certificate program is only available to students who are enrolled in the Madison County Regional Phase I Police Academy. Click here (https://

www.morrisville.edu/police-academy/) for more information about the Police Academy, including information on how to enroll.

The Criminal Justice Police Certificate at SUNY Morrisville aims to help students develop the necessary knowledge, skills, and abilities required for a successful career in law enforcement. This program is approved by the New York State Division of Criminal Justice Services (DCJS) as a Phase I Pre-Employment Basic Training Course. All who seek permanent employment as municipal police officers must complete an approved Phase I course as a condition of employment. Upon completing the Criminal Justice Police Certificate, graduates will be eligible for preemployment throughout NYS as police officers. Students also earn 24 college credits, which can be applied to the Criminal Justice, A.A.S. or B.Tech. degrees at SUNY Morrisville or transfer to other accredited higher education institutions.

Upon successful completion of this certificate program, students will be able to:

- Analyze discretion, ethics, and integrity as it applies to decisionmaking in law enforcement.
- Explain the responsibilities of law enforcement, the structure of the criminal court system, juvenile law, and procedures.
- Apply the penal and criminal procedure laws as it relates to law enforcement.
- Effectively document investigations, incidents, and other information consistent with nationally recognized legal criteria.
- Identify, collect, and preserve evidence according to standard police practice utilizing traditional, current, and technological methods in a manner that is mutually beneficial to stakeholders in the criminal justice system.
- Employ skills essential to law enforcement officers in areas of fitness, self-defense, and crisis intervention.

A minimum of 24 credits is required for certificate completion. Students must pass all Phase I Police Academy requirements, including the Physical Fitness Test, in order to earn this certificate.

Code	Title	Credits	
Required Coursework			
CJUS 101	Intro Criminal Justice Systems	3	
CJUS 202	Policing	3	
CJUS 220	Criminal Investigation I	3	
CJUS 221	Criminal Investigation II	3	
CJUS 230	Basics of Penal Law	3	
CJUS 231	Criminal Procedure Law	3	
CJUS 404	Use of Force Continuums	1	
CJUS 498	Special Topics in CJUS	1	
PHED 141 Fitness	31	1	
PHED 142 Fitness	32	1	
PHED 143 Fitness	3 3	1	
PHED 150 Self-De	fense	1	
Total Credits		24	

# Culinary Arts Management, A.A.S.

#### Major Code: 2392

The Culinary Arts Management program combines classroom time, laboratory learning, hands-on experience and cooperative work experiences with a goal of developing students who are both ready for the world of work or for transfer to an upper-level curriculum. The program has a foundation in culinary arts courses focusing on basic skills, garde manger, meat/seafood/poultry fabrication, stocks, sauces, soups, baking and pastry. Students will also progress through management and business classes to a final semester capstone course where they will assist in the operation of the kitchen at the Copper Turret Restaurant in the Village of Morrisville. The Copper Turret, which is operated year round by the Morrisville Auxiliary Corporation, will serve as the learning laboratory for this program. Students will be prepared for positions in restaurants, country clubs, resorts, banquet facilities, commercial kitchens, and all other food service operations.

The Culinary Arts Management program leads to an Associate in Applied Science (A.A.S.) degree and provides students with a culinary education that has depth and breadth as well as crucial work experience. The Culinary Arts Management program is designed to expose students to a broad range of career options to which they can add specificity through their work experience during and after completing the curriculum. Graduates of the program are prepared for positions as chefs, sous chef, line cook, kitchen manager, pastry chef, garde manger, and shift managers in restaurants, schools, health care and university food operations, and other institutions.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Demonstrate skills and knowledge required of culinarians and apply them in a commercial kitchen operation
- Demonstrate industry-standard knowledge and skills regarding sanitation, food safety, nutrition and supervision in the hospitality industry
- Anticipate and manage labor and food costs in order to operate an economically sustainable establishment
- · Demonstrate the ability to work in a professional bakery
- Demonstrate the ability to work in a professional kitchen as a prep, line and pantry cook
- Demonstrate an understanding of purchasing in the hospitality industry by writing food specifications, applying purchasing practices, interpreting market trends, using new technology applications, and analyzing operational cost control
- Explain basic concepts involved in marketing and how they can be applied to food service operations to facilitate financial objectives
- Identify and illustrate the basic elements of equipment design and layout in food service facilities
- Possess an extensive business portfolio that displays an up to date resume, cover letter, skill set, work philosophy, career goals and extensive work samples
- Demonstrate an understanding of the global hospitality industry and how the food service industry fits

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised

as advised

# **Curriculum Requirements**

Critical Thinking and Reasoning

(required)

A minimum of 64 credits is required for degree completion.

Code	Title	Credits
ACCT Accounting	as advised	3
CUL 101	Culinary Arts I	4
CUL 201	Advanced Culinary Arts	4
CUL 211	Culinary Restaurant	6
CAS 240	Hospitality Sales & Marketing	3
FSAD 102	Applied Food Servic Sanitation	1
FSAD 153	Management I	3
FSAD 154	Equipment Selection & Layout	3
FSAD 201	Cooperative Summer Work	2
FSAD 255	Food Purchasing & Cost Control	4
FSAD 257	Senior Seminar	1
FSAD 259	Introduction To Catering	3
NUTR 108	Basic Nutrition	3
TOUR 106	Travel-Tourism/Hospitality	3
SUNY General Ed	ucation Communication Written and Oral as Adv	ised 3
SUNY General Ed Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
SUNY General Ed as Advised	ucation Natural Sciences (and Scientific Reason	ing) 3-4
SUNY General Ed	ucation Mathematics (and Quantitative Reasoni	ng) 3
as Advised		
Additional SUNY	General Education Credits as advised	9
Total Credits		64-65

# **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
COMM 105	Research & Communication	3
CUL 101	Culinary Arts I	4
FSAD 102	Applied Food Servic Sanitation	1
SUNY General Education D	iversity: Equity, Inclusion, and Social Justice as Advised	3
BSAD 112	Marketing	3
	3	
	Credits	17
Spring		
SUNY General Education a	s Advised	3
FSAD 153	Management I	3
FSAD 154	Equipment Selection & Layout	3
NUTR 108	Basic Nutrition	3
TOUR 106	Travel-Tourism/Hospitality	3
	Credits	15
Year 2		
Fall		
CUL 201	Advanced Culinary Arts	4
FSAD 201	Cooperative Summer Work	2
FSAD 255	Food Purchasing & Cost Control	4
FSAD 259	Introduction To Catering	3
SUNY General Education M	lathematics (and Quantitative Reasoning) as Advised	3
	Credits	16
Spring		
ACCT 100	Accounting Info & Mgt Decision	3
or ACCT 101	or Principles of Accounting I	
CUL 211	Culinary Restaurant	6
FSAD 257	Senior Seminar	1
SUNY General Education a	s advised	3
SUNY General Education N	atural Sciences (and Scientific Reasoning) as Advised	3
	Credits	16
	Total Credits	64

# **Customer Relationship Marketing Microcredential**

#### Major Code: MCRM

Engage with customer relationship marketing, a dynamic approach that fosters lasting connections between businesses and their clientele. As part of the Business Administration Programs (#0632 and #0671), the Customer Relationship Marketing Micro-Credential includes two three-credit courses. BSAD 112 (Marketing) provides students insight into marketing techniques in a dynamic business environment. BSAD 209 (Professional Sales) introduces students to the professional, trustbased sales process. Students will learn what is required to initiate, develop, acquire, manage, and enhance customer relationships in the sales process. Adult learner will also benefit professionally by increasing their marketing and sales experience.

### **Program Learning Outcomes**

Upon successful completion of this microcredential students will be able to:

- · Identify the 4 P's and the role of marketing in business and society.
- Identify the role of marketing research and apply the appropriate techniques in written form.

- Identify the stages of the product life cycle, know the process for new product development, and be able to develop a new product prototype based on needs, trends, or pertinent marketing information.
- · Identify methodology to gain sales knowledge.
- Describe communication strategies necessary for developing customer relationships.
- · Construct and deliver a well thought out and clear sales presentation.

## **Curriculum Requirements**

A total of 6 credits is required for completion of the microcredential. Students will receive a digital badge upon completion.

Code	Title	Credits
BSAD 112	Marketing	3
BSAD 209	Professional Sales	3
Total Credits		6

# **Cybersecurity Minor**

Cybersecurity, also referred to as information technology security, focuses on protecting computers, networks, programs, and data from unintended or un- authorized access, change, or destruction. Government agencies, the military, corporations, financial institutions, hospitals, and other groups collect, process, and store a great deal of confidential information on computers and transmit that data across networks to other computers. With the growing volume and sophistication of cyber attacks, ongoing attention is required to protect sensitive business and personal information, as well as safeguard national security.

## **Program Learning Outcomes**

Upon successful completion of this minor students will be able to:

- Describe the functioning and features of the various computer system components as well as their advantages and disadvantages.
- Define and describe the principles of data integrity, security, and encryption. Examine the concept of privacy and its legal protections.
- Design, configure, and deploy defenses against key attacks using key attack tools.
- Define, describe, and implement firewall configuration strategies and solutions.

# **Curriculum Requirements**

A minimum of 15 credits is required for completion of the minor. Students must be enrolled in a Bachelor's degree program in order to declare a minor.

Code	Title	Credits
<b>Required Cou</b>	rsework	
CITA 120	Computer Concepts & Op Sys	3
CITA 200	Data Communications Networking	3
CITA 270	Fundamentals Network Security	3
CITA 325	Network Defense & Countermeas.	3
CITA 375	Internet & Intranet Firewalls	3
Total Credits		15

# Dairy Management, B.TECH.

Major Code: 1605

Current students majoring in this program are currently completing their course of study. Moving forward, content from this program has been transitioned to the closely associated Dairy Management track within our Agricultural Science B.Tech. program. Interested students are strongly encouraged to explore that option.

The Northeast Dairy Industry has many advantages that are causing growth and creating greater profitability. The resulting growth of the Northeast Dairy Industry is generating a need for qualified people trained in the management of dairy farms and related businesses. Dairy farms, like other businesses, are really about people. The B.Tech. in Dairy Management is designed to prepare students to enter this very dynamic and rewarding industry. The program focuses on enhancing management and herdsmanship skills, emphasizing three areas: interpersonal skills such as communication, animal science and business management. The program is very practical and student-oriented, giving students many opportunities to experience working with dairy animals and managing dairy enterprises.

The facilities include a free-stall complex milking around 200 registered Holsteins, an electronically enhanced milking parlor and studentmanaged computer systems and a modern calf and heifer facility, all of which provides a tremendous learning environment for dairy and agricultural students.

Students will be required to complete the *Dairy Management Experience* course at the end of their career at Morrisville, which will includes either a 15-week dairy-related internship, or a one semester residency in the W. H. Miner Agricultural Research Institute's Advanced Dairy Management Program.

## **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- utilize and demonstrate effective time and human resource management
- develop problem-solving and critical thinking skills
- utilize practical knowledge and skill sets pertinent to the dairy and agriculture industries

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMP 310
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	AGSC 137
Natural Sciences (and Scientific Reasoning) (required)	AGRO 110
Humanities	as advised
Social Sciences	as advised

The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

**Core Competencies:** 

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

# **Curriculum Requirements**

A minimum of 120 credits is required for degree completion.

Code	Title	Credits
Requirements		
DANS 100	Dairy Nutrition	3
DANS 110	Breeding Dairy Cattle	3
DANS 120	Anatomy & Physiology-Dairy Cow	3
DANS 140	Dairy Cattle Judging	1
DANS 150	Dairy Farm Practicum I	2
DANS 151	Dairy Farm Practicum II	2
DANS 160	Introduction to Dairy Science	3
DANS 210	Dairy Health	3
DANS 220	Dairy Herd Management	3
DANS 225	Dairy Production & Management	3
DANS 240	Dairy Farm Data Management	1
DANS 301	Dairy Management Experience	16
DANS 305	Dairy Calf & Heifer Management	3
DANS 340	Advanced Dairy Reproduction	3
DANS 450	Advanced Dairy Herd Mgt	4
AGBS 100	Agricultural Economics	3
or AGBS 225	Environmental Economics	
AGBS 200	Marketing Agricultural Prodcts	3
AGBS 240	Farm Management and Finance	4
AGBS 305	Ag Financial Decision Making	3
AGBS 405	Farm & Rural Mngt Capstone	3
AGRO 110	Soil Science	3
AGRO 210	Field Crops	3
AGRO 310	Pasture Mgt and Forages Prod	3
300-400 Level BS	AD or AGBS course as advised	3
BSAD or AGBS co	ourse as advised	3
AGSC 350	Animal Genetics	3
Select one of the	following Options:	2
Option 1:		
AGSC 132	Introduction to Precision Farming	
Option 2:		
OFFT 110	Introduction to MS Excel	
OFFT 100	Introduction to MS Word	
or OFFT 106	6 Personal Computer Keyboarding	
or OFFT 109	9 Introduction to MS PowerPoint	
ACCT course as a	advised	3
Additional General Elective Credits as advised 7		

Required SUNY General Education Coursework	
SUNY General Education Communication Written and Oral as Advis	ed 3-6
COMP 310 Advance Tech Communication	3
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised	3
Select one of the following:	3
AGSC 137 Agricultural Statistics	
SUNY General Education Mathematics (and Quantitative Reasoning) as Advised	
SPAN Spanish as Advised	3
Additional SUNY General Education Credits as advised	6

120-123

# Sample Course Sequence

**Total Credits** 

Course	Title	Credits
Year 1		
Fall		
DANS 100	Dairy Nutrition	3
DANS 160	Introduction to Dairy Science	3
DANS 150	Dairy Farm Practicum I	2
AGBS 100	Agricultural Economics	3
AGRO 110	Soil Science	3
COMM 105	Research & Communication	3
	Credits	17
Spring		
DANS 110	Breeding Dairy Cattle	3
DANS 120	Anatomy & Physiology-Dairy Cow	3
DANS 140	Dairy Cattle Judging	1
DANS 151	Dairy Farm Practicum II	2
DANS 240	Dairy Farm Data Management	1
AGBS 200	Marketing Agricultural Prodcts	3
SUNY General Education a	s advised	3
	Credits	16
Year 2		
Fall		
DANS 210	Dairy Health	3
DANS 220	Dairy Herd Management	3
AGBS 240	Farm Management and Finance	4
AGRO 210	Field Crops	3
SUNY General Education a	s advised	3
	Credits	16
Spring		
DANS 225	Dairy Production & Management	3
OFFT 110	Introduction to MS Excel	1
Select one of the following	:	1
OFFT 100	Introduction to MS Word	
OFFT 106	Personal Computer Keyboarding	
OFFT 109	Introduction to MS PowerPoint	
ACCT 101	Principles of Accounting I	3
AGSC 137	Agricultural Statistics	3
SUNY General Education a	s advised	3
	Credits	14
Year 3		
Fall		
DANS 340	Advanced Dairy Reproduction	3
AGBS 305	Ag Financial Decision Making	3
AGRO 310	Pasture Mgt and Forages Prod	3
SPAN 101	Beginning College Spanish 1	3

AGBS or BSAD Elective as advised		3
	Credits	15
Spring		
DANS 305	Dairy Calf & Heifer Management	3
AGBS 405	Farm & Rural Mngt Capstone	3
COMP 310	Advance Tech Communication	3
SUNY General Educatio	on Diversity: Equity, Inclusion, and Social Justice as Advised	3
General Elective as adv	ised	2
	Credits	14
Year 4		
Fall		
AGSC 350	Animal Genetics	3
DANS 450	Advanced Dairy Herd Mgt	4
300-400 Upper Division	AGBS/BSAD Elective as advised	3
General Elective as adv	ised	3
	Credits	13
Spring		
DANS 301	Dairy Management Experience	16
	Credits	16
	Total Credits	121

# **Diesel Equipment Technology, A.A.S.**

#### Major Code: 2391

The A.A.S. curriculum was patterned after an industrial training curriculum. This curriculum offers courses in agricultural, industrial and vehicular mechanics. The program provides the courses necessary to move from the technician level to management within a business. It is designed for students who may be considering additional course work after completing their two-year degree. Career Opportunities include diesel technician - truck, construction, electric power generation, agricultural, service writer, vocational teacher (with additional education), parts technician and factory representative.

# **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Develop a comprehensive understanding of the mechanical function of the compression-ignition engines
- Develop a comprehensive understanding of electrical systems and electronic controls used for diesel-powered equipment
- Develop a comprehensive understanding of hydraulic systems, components and control systems used for transmitting hydraulic power in diesel-powered equipment
- Develop the ability to accurately and efficiently diagnose and repair failures in mechanical, electrical and hydraulic systems in dieselpowered equipment

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral	as advised
(required)	

Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 102
Natural Sciences (and Scientific Reasoning) (required)	AGEN 161
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### Core Competencies:

Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

# **Curriculum Requirements**

A minimum of 62 credits is required for degree completion.

Code	Title	Credits	
Major Requirements			
AGEN 161	Basic Hydraulics	3	
DTEC 105	Diesel Powertrains I	4	
DTEC 110	Diesel Powertrains II	4	
DTEC 125	Diesel Electrical Systems	4	
DTEC 150	Diesel Systems	3	
DTEC 225	Diesel Electronics	4	
AGEN 131	Fundamentals of Hydraulics	3	
DTEC 350	Advanced Diesel Fuel Systems	3	
AUTO 102	Metals	3	
AGEN 261	Advanced Hydraulics	4	
AGEN 270	Tractor Overhaul and Repair	4-5	
or DTEC 300	Diesel Equip Tech Internship 2		
AUTO 260	Auto Air Cond & Refrg Recovery	1	
OFFT 110	Introduction to MS Excel	1	
AGEN 100	Equipment Care & Maintenance	3	
Required SUNY G	eneral Education Coursework		
SUNY General Edu	ucation Communication Written and Oral as Adv	ised 3-6	
SUNY General Edu as Advised (with I	ucation Natural Sciences (and Scientific Reason ab)	ing) 3-4	
MATH 102	Intermediate Algebra w Trig	3	
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3	
Additional SUNY	General Education as Advised	3-6	
Total Credits		59-67	

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
AGEN 100	Equipment Care & Maintenance	3

	Credits	18
AUTO 260	Auto Air Cond & Refrg Recovery	1
SUNY General Educa	tion Communication Written and Oral as Advised	3
AUTO 102	Metals	3
DTEC 225	Diesel Electronics	4
DTEC 105	Diesel Powertrains I	4
AGEN 161	Basic Hydraulics	3
Spring		
	Credits	14
OFFT 110	Introduction to MS Excel	1
MATH 102	Intermediate Algebra w Trig	3
DTEC 125	Diesel Electrical Systems	4
AGEN 131	Fundamentals of Hydraulics	3

#### Year 2

Fall		
AGEN 261	Advanced Hydraulics	4
DTEC 150	Diesel Systems	3
SUNY General Education	Communication Written and Oral as Advised	3
SUNY General Education	Natural Sciences (and Scientific Reasoning) as Advised	3-4
SUNY General Education	as Advised	3
	Credits	16-17
Spring		
AGEN 270 or DTEC 300	Tractor Overhaul and Repair or Diesel Equip Tech Internship 2	4-5
Social Science Elective a	s advised	3
DTEC 350	Advanced Diesel Fuel Systems	3
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised		3
-	Credits	13-14
	Total Credits	61-63

# **Diesel Mechanics Certificate**

#### Major Code: 3243

Provides students a one-year college-level experience of specialized training in Diesel Mechanics. The Diesel Mechanics certificate program provides fundamental skills for entry-level service positions in heavy construction equipment, focused on systems and service knowledge of large construction equipment and heavy-duty trucks. Included are subject areas such as hydraulics, electricity, electronics, diesel engines, construction machinery, transmissions, heavy truck systems and other related topics.

Upon successful completion of this certificate program, students will be able to:

- Describe the mechanical function of the compression-ignition engines, modern construction equipment and heavy-duty trucks.
- Compare electrical systems and electronic controls used on dieselpowered construction equipment and heavy-duty trucks.
- Recognize hydraulic systems, components and control systems used for transmitting hydraulic power in diesel-powered construction equipment and heavy-duty trucks.
- Demonstrate the ability to accurately and efficiently diagnose and repair failures in mechanical, electrical and hydraulic systems in diesel-powered construction equipment and heavy-duty trucks.

A minimum of 28 credits is required for certificate completion.

Code	Title	Credits
<b>Required Coursew</b>	vork	
AGEN 100	Equipment Care & Maintenance	3

Total Credits		29
DTEC 290	Diesel Equip Tech Internship 1	1
<b>Optional Course</b>	ework	
DTEC 225	Diesel Electronics	4
DTEC 150	Diesel Systems	3
DTEC 110	Diesel Powertrains II	4
DTEC 105	Diesel Powertrains I	4
AGEN 161	Basic Hydraulics	3
DTEC 125	Diesel Electrical Systems	4
AGEN 131	Fundamentals of Hydraulics	3

# Diesel Technology, A.O.S.

#### Major Code: 1604

This A.O.S. program consists of courses in vehicular and industrial mechanics. The curriculum is best suited for those students who wish to find immediate employment working on diesel and all aspects of industrial and agricultural equipment. The student is allowed to take a variety of courses to gain a broad background in state-of-the-art technology.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Develop a comprehensive understanding of the mechanical function of the compression-ignition engines
- Develop a comprehensive understanding of electrical systems and electronic controls used for diesel-powered equipment
- Develop a comprehensive understanding of hydraulic systems, components and control systems used for transmitting hydraulic power in diesel-powered equipment
- Develop the ability to accurately and efficiently diagnose and repair failures in mechanical, electrical and hydraulic systems in dieselpowered equipment

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
Requirements		
DTEC 105	Diesel Powertrains I	4
DTEC 110	Diesel Powertrains II	4
DTEC 125	Diesel Electrical Systems	4
DTEC 150	Diesel Systems	3
DTEC 225	Diesel Electronics	4
AGEN 131	Fundamentals of Hydraulics	3
DTEC 350	Advanced Diesel Fuel Systems	3
AGEN 161	Basic Hydraulics	3
AUTO 102	Metals	3
AGEN 261	Advanced Hydraulics	4
AGEN 270	Tractor Overhaul and Repair	4-5
or DTEC 300	Diesel Equip Tech Internship 2	
AUTO 260	Auto Air Cond & Refrg Recovery	1
OFFT 110	Introduction to MS Excel	1
RENG 102	Renewable Energy Resources	3
AGEN 100	Equipment Care & Maintenance	3

#### **General Elective Course Selection**

Select 12 Credit	s from the courses below:	12
DTEC 151	Seminar Caterpillar Power Syst	
DTEC 290	Diesel Equip Tech Internship 1	
DTEC 295	Diesel Eqip Tech Internship 3	
DTEC 300	Diesel Equip Tech Internship 2	
AGEN 120	Water Supply & Sanitation	
AGEN 210	Advanced Small Power Equipment	
AUTO 109	Chassis Analysis I	
AUTO 202	Autobody Fundamentals	
AUTO 259	Non-Structural Repair Refinish	
DTEC 325	Electrical Power Generation	
Total Credits		59-60

Total Credits

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
AGEN 100	Equipment Care & Maintenance	3
AGEN 131	Fundamentals of Hydraulics	3
DTEC 125	Diesel Electrical Systems	4
RENG 102	Renewable Energy Resources	3
OFFT 110	Introduction to MS Excel	1
Elective as Advised (MAGN	l if needed)	3
	Credits	17
Spring		
AGEN 161	Basic Hydraulics	3
DTEC 105	Diesel Powertrains I	4
DTEC 225	Diesel Electronics	4
AUTO 102	Metals	3
	Credits	14
Year 2		
Fall		
AGEN 261	Advanced Hydraulics	4
DTEC 150	Diesel Systems	3
DTEC 110	Diesel Powertrains II	4
Major Electives as Advised		4
AUTO 260	Auto Air Cond & Refrg Recovery	1
	Credits	16
Spring		
AGEN 270	Tractor Overhaul and Repair	4-5
or DTEC 300	or Diesel Equip Tech Internship 2	
Major electives as Advised		8
	Credits	12-13
	Total Credits	59-60

### **Direct Support Professional I Microcredential**

#### Major Code: MDS1

The Direct Support Professional I microcredential was developed in partnership with the Office of People with Developmental Disabilities (OPWDD) and ACHIEVE and is only available to ACHIEVE direct support professional employees at this time.

As part of the Human Services, A.A.S. degree program (#0604), the Direct Support Professional I (DSP I) microcredential includes two courses. This includes one 3-credit course (HUMS 200 Helping Process & Crisis

Intervention) and one 1-credit course (HUMS 125 Mental Health & Wellness) for a total of 4 credits. HUMS 200 is a 3-credit course that will provide students with the skills and strategies necessary in effective helping from client-centered and strength-based perspectives. Students will be introduced to the role of helper as well as the process of helping, and gain knowledge and understanding of crisis intervention skills. Students will also gain knowledge and understanding of diversity and cultural competence. HUMS 125 is a 1-credit course that will address the intrapersonal, social and environmental risk factors influencing health, mental health and wellness. Students will engage in activities that promote human flourishing and will gain an understanding of protective factors that promote the growth and development of individuals, groups and families across a variety of settings. By completing each of these courses, students will be able to fulfill the educational requirements for completion of the National Alliance of Direct Support Professional DSP I accreditation.

### **Curriculum Requirements**

A total of 4 credits is required for completion of the microcredential. Students will receive a digital badge upon completion.

Code	Title	Credits
HUMS 200	Helping Proc./Crisis Inter.	3
or M-HU 200	Helping Proc./Crisis Inter.	
HUMS 125	Mental Health & Wellness	1
or M-HU 125	Mental Health & Wellness	
Total Credits		4

Total Credits

### Direct Support Professional II **Microcredential**

Major Code: MDS2

The Direct Support Professional I microcredential was developed in partnership with the Office of People with Developmental Disabilities (OPWDD) and ACHIEVE and is only available to ACHIEVE direct support professional employees at this time.

As part of the Human Services, A.A.S. degree program (#0604), the Direct Support Professional II (DSP II) microcredential includes two courses: HUMS 201 Counseling and Case Management (3 credits) and HUMS 150 Special Topics in Human Services (1 credit).

Develop counseling and case management techniques by learning intentional interviewing strategies and effective interventions using a strengths-based perspective. Address critical practice, policy and research topics in the human services field as they emerge.

Students will be able to fulfill the educational requirements for completion of the National Alliance of Direct Support Professional DSP II accreditation. The DSP I microcredential is the pre-requisite for the DSP II microcredential.

### **Curriculum Requirements**

A total of 4 credits is required for completion of the microcredential. Students will receive a digital badge upon completion.

Code	Title	Credits
HUMS 201	Counseling & Case Management	3
or M-HU 201	Counseling & Case Management	
HUMS 150	Special Topics: Human Services	1

or M-HU 150 Special Topics: Human Services

**Total Credits** 

# **Direct Support Professional III Microcredential**

#### Major Code: MDS3

The Direct Support Professional I microcredential was developed in partnership with the Office of People with Developmental Disabilities (OPWDD) and ACHIEVE and is only available to ACHIEVE direct support professional employees at this time.

As part of the Human Services, A.A.S. degree program (#0604), the Direct Support Professional III (DSP III) microcredential includes: HUMS 101 Introduction to Human Services (3 credits) and HUMS 100 Careers in the Helping Professions (1 credit).

Gain knowledge of multiple modalities of practice interventions, helping skills and human services delivery systems in the DSP III microcredential. Learn about the variety of positions available in the helping profession and gain an increased understanding of applied learning.

Fulfill the educational requirements of the National Alliance of Direct Support Professional DSP III accreditation. The DSP I and DSP II microcredentials are the pre-requisites for the DSP III microcredential.

# **Curriculum Requirements**

A total of 4 credits is required for completion of the microcredential. Students will receive a digital badge upon completion.

Code	Title	Credits
HUMS 101	Introduction to Human Services	3
or M-HU 101	Introduction to Human Services	
HUMS 100	Careers in Helping Professions	1
or M-HU 100	Careers in Helping Professions	
Total Credits		4

**Total Credits** 

# **Environmental & Natural Resources** Management, B.TECH.

#### Major Code: 3001

The Bachelor of Technology (B.Tech.) degree in Environmental & Natural Resources Management (ENRM) focuses on providing students with advanced technical education in environmental and natural resources, highlighting the management, communication and business skills needed for graduates in the 21st century.

The ENRM B.Tech. is a full four-year program with two separate tracks: Natural Resources Conservation (NRC) and Aquaculture and Aquatic Sciences (AQAS). While the course offerings are somewhat different during the first two years of the two tracks, these are identical for the last four semesters, including a 15-credit, full-semester internship that places students in a supervised work environment with a cooperating agency. This provides students with opportunities to gain valuable experience, make professional contacts, and build their resumes in preparation for future employment and career decisions.

Most internships are paid. Opportunities exist nationwide in both the public and private sectors. Many placement sites are available in New York State, but students who wish to travel can find opportunities in other parts of the country. Successful internships have included experiences in forestry, arboriculture, outdoor recreation management, GIS (geographic information system) mapping, wetlands delineation and management, wildlife management studies, and environmental education.

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The ENRM B.Tech. degree program is offered as a standalone, eightsemester, degree program. Students are also admitted to the program after completing an A.S., A.A.S. or equivalent degree with a minimum 2.20 grade point average. A student who does not meet this requirement may be admitted as a junior on a conditional basis. A major in Natural Resources, Environmental Science, Environmental Technology, Aquaculture and Aquatic Science or a closely related field is strongly recommended. An individual seeking to enroll in the Environmental & Natural Resources Management B.Tech. program with an unrelated associate degree may be granted admittance with an understanding that up to 18 prerequisite credits will be required.

The B.Tech. in Environmental & Natural Resources Management is designed to prepare students for entry into public and industrial jobs at the field, supervisory, and management levels where technical, business, and communication skills are necessary. Students completing the B.Tech. in Environmental & Natural Resources Management can pursue jobs in the forest products industry; the aquatic resources industry, including sport and commercial fisheries, wetland management, and aquaculture; the recreation industry, arboriculture and urban forestry, and environmental technology, including water treatment and brownfield reclamation.

## Program Learning Outcomes

Upon successful completion of this program:

- · Students will utilize their developed expertise in concepts, theories, and emerging methodologies to tackle real-world issues in natural resource management.
- · Students will become independent, self-motivated professionals who can recognize problems in their renewable resources technical field of expertise and formulate solutions to such problems.
- Students will conduct themselves in a manner consistent with an embodied sense of conservation stewardship.
- Students will assess, analyze, synthesize, and evaluate information objectively and deal professionally and ethically with clients, the public, and agency personnel.
- Students will communicate clearly and effectively using appropriate verbal, visual, electronic, and written techniques necessary to interact in the profession.
- · Students will recognize and interpret natural resource laws and policies.
- Students will demonstrate hands-on experience in natural resource sampling, inventory, and measurement techniques.
- Students will recognize and interpret natural resource problems and opportunities across spatial scales from local to global through implementing and managing geospatial technologies (Global Navigational Satellite System (GNSS), Geographic Information System -- GIS, and remote sensing).
- · Students will apply critical thinking and problem-solving skills in formulating and evaluating alternative solutions to complex problems in natural resource management and recommending and defending the best alternatives.

- Students will anticipate, analyze, and evaluate natural resource issues and opportunities and utilize an integrated approach to ecosystem impact assessment and adaptive management.
- Students will exercise life-long learning and management skills developed before graduation and utilize existing technology, products, and services to maximize work efficiency and success.
- Students will seek the input and perspectives of diverse stakeholders regarding natural resource issues and practice a collaborative spirit in team efforts and project coordination.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	AGSC 137 or MATH 123
Natural Sciences (and Scientific Reasoning) (required)	BIOL or BIOL 120 or CHEM 101 or CHEM 121
Humanities	PHIL 311
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning (required)	as advised

### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion.

#### **NRC Track**

Code	Title	Credits
Curriculum Re	quirements - First Four Semesters	
NATR 100	Intro to Forestry and NR	3
NATR 101	General Ecology	3
NATR 103	Natural Resources Equipment Op	2
NATR 110	Natural Resources Measurements	3
NATR 113	Intro toGlobal Positioning Sys	1
NATR 115	Forest Ecology	3
NATR 120	Intro To Recreation Area Mgmnt	3
NATR 142	Plane Surveying I	3
NATR 144	Seminar/Environmental Resc I	1

NATR 145	Intro Environmental Technology	3
NATR 210	Dendrology	3
NATR 213	Basics Geospatial Technology	2
NATR 250	Aquatic Ecology	3
BIOL 102	Botany-Form Function Seed Plt	3
AGRO 110	Soil Science	3
Technical Elective	s selected from the following subjects: AGBS,	2

AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, ENSC, ENRM, HORT, NATR, RENG

#### **Required SUNY General Education Coursework**

Total Credits		121
PHIL 311	Professional Ethics	3
or AGSC 137	Agricultural Statistics	
MATH 123	Elementary Statistics	3
SUNY General Ed	ucation as advised	3
CITA 405	Project Management (or RENG 3XX - Renewable Energy Elective as advised)	3
BSAD 300	Management Communications	3
BSAD 116	Business Organization & Mgmt	3
ENRM 470	Internship in Environmental & Natural Resource Management	15
ENRM 450	Environmental & Natural Resource Management Internship Orientation	1
ENRM 421	Geospatial Tech Application II	2
ENRM 420	Geospatial Tech Applications I	1
ENRM 412	Ecosystem Adaptive Management	3
ENRM 332	Environment Planning & NR Mgt	3
ENRM 312	Field Sampling Design & Techniques	3
ENRM 305	Environment Law Policy Justice	3
ENRM 303	Fundamentals Geospatial System	4
ENRM 302	Riparian Ecology & Wetland Mgt	3
ENRM 345	Surface & Groundwater Mgt. <sup>1</sup>	3
Curriculum Requ	irements - Final Four Semesters	
NATR 252	Fish Ecology and Management	
NATR 232	Wildlife Ecology & Management	
NATR 221	Invasive Species Management	
NATR 215	Practices Of Silviculture	
NATR 211	Forest Protection	
Select three of th	e following:	9
Core Specializati	on	
SUNY General Ed	ucation Diversity: Equity, Inclusion, and Social	3
as Advised		, 0
SUNV General Ed	ucation Mathematics (and Quantitative Reasoning)	u u
SUNY General Ed	ucation Communication Written and Oral as Advise	d 6

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AQAS students will take NATR 210 Dendrology in Year 3 fall semester.

#### **AQAS Track**

Code Curriculum Boquir	Title	Credits
Cumculum Requi	ements - riist roui Semesters	
NATR 101	General Ecology	3
NATR 144	Seminar/Environmental Resc I	1

NATR 150	Aquaculture	3
NATR 152	Fish Reproduction	2
NATR 158	Fish Nutrition	2
NATR 250	Aquatic Ecology	3
NATR 252	Fish Ecology and Management	3
NATR 254	Fish Health Management	3
NATR 156	Aquaculture Practicum I	1
NATR 256	Aquaculture Practicum II	1
Select two of the	following Practicum/Research Electives:	2
NATR 257	Aquaculture Practicum III	
NATR 258	Aquaculture Practicum IV	
NATR 288	Research in Aquatic Science I	
NATR 289	Research Aquatic Science II	
Select one of the	following:	2-3
AGEN 110	Small Power Equipment	
NATR 103	Natural Resources Equipment Op	
AGEN 151	Applied Hydraulics Hydropower	
AGEN 120	Water Supply & Sanitation	3
or FNBM 345	Surface & Groundwater Mot	0
NATE 113	Intro toGlobal Positioning Sys	1
BSAD - Business	Elective as advised	י 2
Select one of the	following	3-1
	Racio Chemietry	J-4
CHEM 121	Conoral College Chemietry I	
BIOL 120	Netural Descurses Messurements	
Technical Electiv AGEN, AGSC, BIC NATR, RENG, SO	es selected from the following subjects: AGBS, pL, BSAD, CHEM, CITA, CJUS, ENSC, ENRM, HORT, CI	6-7
Required SUNY (	General Education Coursework	
SUNY General Ec	lucation Communication Written and Oral as Advised	1 3
SUNY General Ec as Advised	lucation Mathematics (and Quantitative Reasoning)	3
BIOL 285	General Microbiology	3-4
or NATR 153	Marine Biology	
Curriculum Requ	irements - Final Four Semesters	
ENRM 345	Surface & Groundwater Mgt. <sup>2</sup>	3
ENRM 302	Riparian Ecology & Wetland Mgt	3
ENRM 303	Fundamentals Geospatial System	4
ENRM 305	Environment Law Policy Justice	3
ENRM 312	Field Sampling Design & Techniques	3
ENRM 332	Environment Planning & NR Mgt	3
ENRM 412	Ecosystem Adaptive Management	3
ENRM 420	Geospatial Tech Applications I	1
ENRM 421	Geospatial Tech Application II	2
ENRM 450	Environmental & Natural Resource Management Internship Orientation	1
ENRM 470	Internship in Environmental & Natural Resource Management	15
BSAD 300	Management Communications	3
CITA 405	Project Management (or RENG 3XX - Renewable Energy Elective)	3
SUNY General Ed	lucation as advised	3

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Total Credits		107-111
PHIL 311	Professional Ethics	3
or AGSC 137	Agricultural Statistics	
MATH 123	Elementary Statistics	3

Proficiency through MATH 102 Intermediate Algebra w Trig Required. 2

AQAS students will take NATR 210 Dendrology in Year 3 fall semester.

### Sample Course Sequence NRC Track

Course	Title	Credits
Year 1		
Fall		
BIOL 102	Botany-Form Function Seed Plt	3
SUNY General Education C	ommunication Written and Oral as Advised	3
NATR 145	Intro Environmental Technology	3
SUNY General Education M	lathematics (and Quantitative Reasoning) as Advised	3
NATR 100	Intro to Forestry and NR	3
NATR 144	Seminar/Environmental Resc I	1
NATR 113	Intro toGlobal Positioning Sys	1
	Credits	17
Spring		
NATR 101	General Ecology	3
NATR 103	Natural Resources Equipment Op	2
NATR 110	Natural Resources Measurements	3
NATR 115	Forest Ecology	3
NATR 213	Basics Geospatial Technology	2
Select one of the following	:	2-3
SUNY General Education	on Communication Written and Oral as Advised	
SUNY General Education	on Diversity: Equity, Inclusion, and Social Justice as	
Advised		
Technical Elective as a	dvised	
	Credits	15-16
Year 2		
Fall		
NATR 120	Intro To Recreation Area Mgmnt	3
NATR 142	Plane Surveying I	3
NATR 210	Dendrology	3
NATR 250	Aquatic Ecology	3
Select one of the following	:	2-3
SUNY General Education	on Communication Written and Oral as Advised	
SUNY General Educatio Advised	on Diversity: Equity, Inclusion, and Social Justice as	
Technical Elective as a	dvised	
	Credits	14-15
Spring		
AGRO 110	Soil Science	3
Select one of the following	:	2-3
SUNY General Education	on Communication Written and Oral as Advised	
SUNY General Educatio	on Diversity: Equity, Inclusion, and Social Justice as	
Technical Elective as a	dvised	
General Education Elective	as advised	3
Capstone Courses	····	9
Select three of the follo	wing Capstone Courses:	5
NATE 211	Forest Protection	
NATB 215	Practices Of Silviculture	
NATR 221	Invasive Species Management	

NATR 232	Wildlife Ecology & Management	
NATR 252	Fish Ecology and Management	
Students in the NRC Technology or the U	Track can further specialize by enrolling in the Forest rban Forestry Concentration	
	Credits	17-18
Year 3 Fall		
ENRM 312	Field Sampling Design & Techniques	3
ENRM 302	Riparian Ecology & Wetland Mgt	3
BSAD 116	Business Organization & Mgmt	3
MATH 123	Elementary Statistics	3
SUNY General Educa	ation as advised	3
	Credits	15
Spring		
ENRM 303	Fundamentals Geospatial System	4
ENRM 305	Environment Law Policy Justice	3
ENRM 332	Environment Planning & NR Mgt	3
ENRM 420	Geospatial Tech Applications I	1
ENRM 450	Environmental & Natural Resource Management	1
	Internship Orientation	
General Elective as a	advised	1
PHIL 311	Professional Ethics	3
	Credits	16
Year 4		
Fall		
BSAD 300	Management Communications	3
ENRM 412	Ecosystem Adaptive Management	3
ENRM 421	Geospatial Tech Application II	2
Select one of the fol	lowing:	3
ENRM - 300 Leve	el Renewable Energy Elective as Advised	
CITA 450	Applied Database Manager	
SUNY General Educa	ation as advised	3
ENRM 345	Surface & Groundwater Mgt.	3
	Credits	17
Spring		
ENRM 470	Internship in Environmental & Natural Resource	15
	Management	
	Credits	15
	Total Credits	126-129

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AQUA students will take NATR 210 Dendrology in Year 3 fall semester.

### **AQAS Track**

Course	Title	Credits
Year 1		
Fall		
SUNY General Educatio	n Communication Written and Oral as Advised	3
NATR 144	Seminar/Environmental Resc I	1
NATR 101	General Ecology	3
NATR 150	Aquaculture	3
NATR 156	Aquaculture Practicum I	1
SUNY General Educatio	n Mathematics (and Quantitative Reasoning) as Advised	3
NATR 113	Intro toGlobal Positioning Sys	1
	Credits	15
Spring		
Select one of the follow	ing:	3-4
NATR 110	Natural Resources Measurements	
CHEM 101	Basic Chemistry	
CHEM 121	General College Chemistry I	
BIOL 120	General Biology I	
SUNY General Educatio	n Communication Written and Oral as Advised	3

10.111.100	FISH NUTRITION	2
NATR 252	Fish Ecology and Management	3
NATR 256	Aquaculture Practicum II	1
Technical Elective as advi	sed	3
	Credits	15-16
Year 2		
Fall		
Select one of the following	g:	2-3
AGEN 110	Small Power Equipment	
NATR 103	Natural Resources Equipment Op	
AGEN 151	Applied Hydraulics Hydropower	
BIOL 285	General Microbiology	3-4
or NATR 153	or Marine Biology	
NATR 280	Herpetology	3
NATR 152	Fish Reproduction	2
NATR 250	Aquatic Ecology	3
NATR 257	Aquaculture Practicum III (as advised)	1
OF NATE 288	or Research in Aquatic Science i	
o :	Credits	14-16
Spring		
AGEN 120 or ENBM 345	or Surface & Groundwater Mat	2-3
SLINY General Education I	Diversity Equity Inclusion and Social Justice as Advised	3
NATE 254	Fish Health Management	3
NATB 258	Aquaculture Practicum IV (as Advised)	1
or NATR 289	or Research Aquatic Science II	
BSAD - Business Elective	as advised	3
Technical Elective as advi	sed	3
	Credits	15-16
Voor 2		
real 5		
Fall		
Fall ENRM 312	Field Sampling Design & Techniques	3
Fall ENRM 312 ENRM 302	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt	3
Fall ENRM 312 ENRM 302 BSAD 116	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt	3 3 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics	3 3 3 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised	3 3 3 3 3 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits	3 3 3 3 3 3 <b>15</b>
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits	3 3 3 3 3 3 <b>15</b>
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System	3 3 3 3 3 3 3 15 4
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice	3 3 3 3 3 3 15 4 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 332	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt	3 3 3 3 3 3 3 15 4 3 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 322 ENRM 420	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I	3 3 3 3 3 3 3 15 4 3 3 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 322 ENRM 420 ENRM 450	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I Environmental & Natural Resource Management	3 3 3 3 3 3 15 4 3 3 3 1 1
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 322 ENRM 420 ENRM 450	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I Environmental & Natural Resource Management Internship Orientation	3 3 3 3 3 3 <b>15</b> 4 3 3 1 1 1
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 322 ENRM 420 ENRM 450 General Elective as advise	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I Environmental & Natural Resource Management Internship Orientation d	3 3 3 3 3 3 15 4 3 3 1 1 1
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 322 ENRM 420 ENRM 450 General Elective as advise PHIL 311	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I Environmental & Natural Resource Management Internship Orientation d Professional Ethics	3 3 3 3 3 3 15 4 3 3 1 1 1 1 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 420 ENRM 420 ENRM 450 General Elective as advise PHIL 311	Field Sampling Design & Techniques         Riparian Ecology & Wetland Mgt         Business Organization & Mgmt         Elementary Statistics         as advised         Credits         Fundamentals Geospatial System         Environment Law Policy Justice         Environment Planning & NR Mgt         Geospatial Tech Applications I         Environmental & Natural Resource Management         Internship Orientation         d         Professional Ethics         Credits	3 3 3 3 3 3 3 3 3 4 3 3 1 1 1 1 3 2 16
Fail Fail ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 420 ENRM 420 General Elective as advise PHIL 311 Year 4	Field Sampling Design & Techniques         Riparian Ecology & Wetland Mgt         Business Organization & Mgmt         Elementary Statistics         as advised         Credits         Fundamentals Geospatial System         Environment Law Policy Justice         Environment Planning & NR Mgt         Geospatial Tech Applications I         Environmental & Natural Resource Management Internship Orientation         d         Professional Ethics         Credits	3 3 3 3 3 3 3 3 3 5 4 3 3 1 1 1 1 3 3 16
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 322 ENRM 420 ENRM 420 General Elective as advise PHIL 311 Year 4 Fall	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I Environmental & Natural Resource Management Internship Orientation Professional Ethics Credits	3 3 3 3 3 3 3 3 3 3 1 4 3 3 1 1 1 3 3 16
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 420 ENRM 450 General Elective as advise PHIL 311 Year 4 Fall BSAD 300	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I Environmental & Natural Resource Management Internship Orientation d Professional Ethics Credits Management Communications	3 3 3 3 3 3 3 15 4 3 3 1 1 1 1 3 6 3 3
Fail ENRM 312 ENRM 302 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 322 ENRM 420 ENRM 420 ENRM 450 General Elective as advise PHIL 311 Year 4 Fail BSAD 300 ENRM 412	Field Sampling Design & Techniques         Riparian Ecology & Wetland Mgt         Business Organization & Mgmt         Elementary Statistics         as advised         Credits         Fundamentals Geospatial System         Environment Law Policy Justice         Environment Planning & NR Mgt         Geospatial Tech Applications I         Environmental & Natural Resource Management Internship Orientation         rd         Professional Ethics         Credits         Management Communications         Ecosystem Adaptive Management	3 3 3 3 3 3 3 15 4 3 3 1 1 1 1 3 3 16 3 3 3 3 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 322 ENRM 420 ENRM 420 ENRM 450 General Elective as advise PHIL 311 Year 4 Fall BSAD 300 ENRM 412 ENRM 421	Field Sampling Design & Techniques         Riparian Ecology & Wetland Mgt         Business Organization & Mgmt         Elementary Statistics         as advised         Credits         Fundamentals Geospatial System         Environment Law Policy Justice         Environment Planning & NR Mgt         Geospatial Tech Applications I         Environmental & Natural Resource Management Internship Orientation         rd         Management Communications         Ecosystem Adaptive Management Geospatial Tech Application II	3 3 3 3 3 3 3 15 4 3 3 1 1 1 3 3 16 3 3 3 3 2
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 303 ENRM 305 ENRM 322 ENRM 420 ENRM 450 General Elective as advise PHIL 311 Year 4 Fall BSAD 300 ENRM 412 ENRM 421 Select one of the following	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I Environmental & Natural Resource Management Internship Orientation  d Professional Ethics Credits Management Communications Ecosystem Adaptive Management Geospatial Tech Application II g;	3 3 3 3 3 3 3 15 4 3 3 1 1 1 3 16 3 3 3 2 2 3
Fail S Fail ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 322 ENRM 420 ENRM 450 General Elective as advise PHIL 311 Year 4 Fail BSAD 300 ENRM 412 ENRM 421 Select one of the following ENRM - 300 Level Ren	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I Environmental & Natural Resource Management Internship Orientation d Professional Ethics Credits Management Communications Ecosystem Adaptive Management Geospatial Tech Application II g: ewable Energy Elective as advised	3 3 3 3 3 3 3 15 4 3 3 1 1 1 3 16 3 3 3 2 2 3
Fail ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 303 ENRM 305 ENRM 305 ENRM 420 ENRM 420 ENRM 420 ENRM 420 ENRM 420 ENRM 420 ENRM 420 ENRM 450 Ceneral Elective as advise PHIL 311 Year 4 Fail BSAD 300 ENRM 412 ENRM 421 Select one of the following ENRM - 300 Level Ren CITA 450	Field Sampling Design & Techniques Riparian Ecology & Wetland Mgt Business Organization & Mgmt Elementary Statistics as advised Credits Fundamentals Geospatial System Environment Law Policy Justice Environment Planning & NR Mgt Geospatial Tech Applications I Environmental & Natural Resource Management Internship Orientation d Professional Ethics Credits Management Communications Ecosystem Adaptive Management Geospatial Tech Application II Field Database Manager Field Statabase Manage	3 3 3 3 3 3 3 15 4 3 3 1 1 1 3 16 3 3 3 3 2 2 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 305 ENRM 420 ENRM 420 EN	Field Sampling Design & Techniques         Riparian Ecology & Wetland Mgt         Business Organization & Mgmt         Elementary Statistics         as advised         Credits         Fundamentals Geospatial System         Environment Law Policy Justice         Environment Planning & NR Mgt         Geospatial Tech Applications I         Environmental & Natural Resource Management         Internship Orientation         d         Professional Ethics         Credits         Management Communications         Ecosystem Adaptive Management         Geospatial Tech Application II         g:         wable Energy Elective as advised         Applied Database Manager         as advised	3 3 3 3 3 3 3 15 4 3 3 16 1 3 3 16 3 3 3 2 3 3 3 3 2 3 3
Fall ENRM 312 ENRM 302 BSAD 116 MATH 123 SUNY General Education a Spring ENRM 303 ENRM 305 ENRM 305 ENRM 322 ENRM 420 ENRM 420 EN	Field Sampling Design & Techniques         Riparian Ecology & Wetland Mgt         Business Organization & Mgmt         Elementary Statistics         as advised         Credits         Fundamentals Geospatial System         Environment Law Policy Justice         Environment Planning & NR Mgt         Geospatial Tech Applications I         Environmental & Natural Resource Management         Internship Orientation         d         Professional Ethics         Credits         Management Communications         Ecosystem Adaptive Management         Geospatial Tech Application II         g:         ewable Energy Elective as advised         Applied Database Manager         as advised         Surface & Groundwater Mgt.	3 3 3 3 3 3 3 3 3 3 1 5 4 3 3 1 1 1 3 3 3 3 2 2 3 3 3 3 3 3 3 3 3

#### Spring

	Total Credits	122-126
	Credits	15
	Management	
ENRM 470	Internship in Environmental & Natural Resource	15
1 3		

1

AQAS students will take NATR 210 Dendrology in Year 3 fall semester.

# **Environmental Conservation Science,** A.S.

#### Major Code: 3002

The Environmental Conservation Science A.S. program was crafted so students can seamlessly transfer to the New York State College of Environmental Science and Forestry (ESF) at Syracuse University, Plattsburgh State University, Brockport State University, and other baccalaureate degree- granting institutions thereby ensuring junior status in baccalaureate degree curriculums. This is ensured with the articulation agreements that were established with these institutions. Students who successfully complete the Environmental Conservation Science A.S. program also have the option of pursuing the Bachelor of Technology (B.Tech) in Environmental and Natural Resource Management (ENRM) at SUNY Morrisville.

The Environmental Conservation Science major is intended as a foundation program for students wishing to matriculate to other universities to continue their education in specific baccalaureate programs. Transfer articulation agreements exist with a number of SUNY and state institutions to facilitate student planning and transfer. Admission to advanced study programs at certain universities may require the completion of courses at a higher level than those required for graduation in this program.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Be well prepared to transfer into baccalaureate degree granting institutions at the junior level in an environmentally related field of study;
- Have a good foundation in the sciences including chemistry and/or physics and the biological sciences;
- Have completed 8 general education pillars (this will position them properly for completing all 10 pillars when they are awarded a baccalaureate degree);
- · Have a good foundation in basic environmentally-related course work;
- Develop a critical and unbiased approach to solving environmental problems; and
- Develop organizational skills, collaborative work experience, and sensitivity to an organizational culture.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	BIOL 102, NATR 145
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

Core Competencies:

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 61 credits is required for degree completion.

Code	Title	Credits	
Major Requirements			
BIOL/ENSC 102	Botany-Form Function Seed Plt	3	
NATR 145	Intro Environmental Technology	3	
NATR 100	Intro to Forestry and NR	3	
NATR 113	Intro toGlobal Positioning Sys	1	
NATR 144	Seminar/Environmental Resc I	1	
CITA - Computer A	applications as advised	3	
Technical Elective	es as advised	9	
Select 9 credits from the following subjects: AGBS, AGEN, AGSC, BIOL, BSAD, CHEM, CJUS, ENSC, ENRM, ENVT, HORT, NATR, PHYS, RENG)			
General Electives	as advised	6	
Required SUNY G	eneral Education Coursework		
BIOL 120	General Biology I (w/ Lab)	4	
or BIOL 260	Principles of Zoology		
CHEM/PHYS Elec	tives as advised (exluding CHEM 101)	8	
SUNY General Edu	ucation Communication Written and Oral as Advi	sed 9	
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3	
SUNY General Edu as Advised	ucation Mathematics (and Quantitative Reasonin	ig) 3	
Demonstrated for degree com	proficiency through MATH 103 (minimum) requir pletion.	ed	
SUNY General Edu	ucation as advised	6	
Total Credits		62	

# Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
BIOL 102	Botany-Form Function Seed Plt	3
SUNY General Education C	ommunication Written and Oral as Advised	3
NATR 145	Intro Environmental Technology	3
SUNY General Education M	lathematics (and Quantitative Reasoning) as Advised	3
NATR 100	Intro to Forestry and NR	3
NATR 144	Seminar/Environmental Resc I	1
NATR 113	Intro toGlobal Positioning Sys	1
	Credits	17
Spring		
BIOL 120	General Biology I	4
or BIOL 260	or Principles of Zoology	
SUNY General Education D	iversity: Equity, Inclusion, and Social Justice as Advised	3
Technical Elective as advis	ed	3
SUNY General Education a	s advised	6
	Credits	16
Year 2		
Fall		
CHEM or PHYS as advised		4
Technical Elective as advised		
General Elective as advised	ł	3
SUNY General Education a	s advised	3
	Credits	13
Spring		
CHEM or PHYS as advised		4
CITA 101	Principles Computer Apps (as Advised)	3
or CITA 110	or Intro Information Technology	
Technical Elective as advised		3
General Elective as advised		3
SUNY General Education as advised		3
	Credits	16
	Total Credits	62

1

Demonstrated proficiency with at least MATH 103 College Algebra w/ Trig required.

# Equine Science & Management, A.A.S.

#### Major Code: 0687

The strengths of the Equine Science and Management program are mainly twofold: first in the range of courses, which offer practical experience in handling horses. The program provides the student with the opportunity to concentrate on breeding, training, nutrition, and management specifically with horses, rather than with a generalized group of livestock. The second strength of the program is the quality of the faculty, staff and facilities available to the student. The college has two 100-foot by 200-foot indoor arenas, an 80-foot by 264-foot indoor riding arena, two 100-foot by 200-foot outdoor arenas, a half-mile racing track, three horse barns, a 34,000 square foot breeding and training facility, two hot walkers, Eurociser, paddocks, and all of the associated equipment and supplies necessary for a suitable educational experience. Additionally, there are more than 250 horses on site.

The SUNY Morrisville Equine Rehabilitation Center (SUNY MorrisvilleERC) facility includes a 22,000 square foot rehabilitation center building with classroom and administrative offices, a large rehabilitation treatment

area, and ten stalls. A 31-stall barn for Equine Rehab over-flow, the Draft and Driving Horse Program, and a 140 by 300 foot indoor riding arena are also located at this facility. Therapeutic modalities available at the Equine Rehabilitation Center include aquatic therapies (underwater treadmill, cold salt water spa therapy, indoor swimming pool), therapeutic ultrasound, laser therapy (Class IIIB), cold compression therapy, solariums, and therapeutic exercises.

SUNY Morrisville employs 14 full-time faculty and staff, with a wide range of professional experience, in the Equine Science program area. The curriculum provides for the development of skills including care and training of horses, riding, driving, breeding and business and stable management. Students who major in Equine Science have varied objectives. Many intend to pursue a career in some aspect of the horse industry, while others may take technical courses from other areas of study to expand their employment base.

The career option prepares students to directly enter the industry upon graduation or to continue their equine education in one of the options in the bachelor of technology in Equine Science. The general option enables students to experience the horse industry while preparing for an allied field of employment. Both options are very flexible and can be developed based on individual interests and goals.

# **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Demonstrate safe procedures, sound judgment and critical thinking skills in human and horse interactions when handling on the ground, astride or driving.
- Develop and/or recognize proper body position and effective use of seat, leg, hands and/or voice aids for ground-handling, riding or driving.
- Conduct the necessary research, analysis, evaluation, and critical thinking skills required of equine management and demonstrate the ability to develop a well organized approach to address common problems related to equine training and management.
- Demonstrate an understanding of equine behavior and how it relates to developing trained responses.
- Understand the importance of providing a balanced ration and be able to apply principles of nutrition to meet the needs of horses that is commensurate with varied uses and workloads.
- Understand the principles and techniques of modern equine reproduction and how utilization of sound breeding management practices can improve breeding efficiency.
- Utilize a systematic method of evaluating conformation and observing performance to accurately gauge individual improvement and to make qualified comparisons between horses.
- Develop and implement health management practices and skills to recognize signs of lameness and a fundamental understanding of treatment therapies.
- Develop a positive, confident outlook and a responsible work ethic that is likely to attract success as an equine professional.
- Develop sound ethical principles and judgment when dealing with employers, employees, and clients.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	ESCI 110, ESCI 305, AGRO 110, or ENSC 101
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning (required)	as advised

# **Curriculum Requirements**

A minimum of 64 credits is required for degree completion.

### **General Option**

Code	Title	Credits
Major Field Requi	rements	
AGBS 100	Agricultural Economics	3
AGBS 240	Farm Management and Finance	4
AGRO 110	Soil Science	3
or ENSC 101	Agricultural Science	
ESCI 110	Equine Anatomy & Physiology	3
ESCI 130	Equine & Stable Management	3
ESCI 140	Equine Judging	2
ESCI 150	Farm Practicum I Equine	2
ESCI 151	Farm Practicum II (Equine)	2
ESCI 210	Equine Nutrition	3
ESCI 235	Fitting And Marketing-Equine	1
ESCI 305	Equine Reproduction/Mgt	3
ESCI 312	Equine Health & Lameness	3
Computer Literacy Requirement		2-3
Select one of the following options:		
Option 1:		
CITA 101	Principles Computer Apps	
Option 2:		
OFFT 100	Introduction to MS Word	
OFFT 100	Introduction to MS Word	
or OFFT 109	Introduction to MS PowerPoint	
<b>General Electives</b>	as advised	17

SUNY General Edu	ucation Requirements		
SUNY General Edu	acation Communication Written and Oral as Advis	ed 3-6	
SUNY General Education Diversity: Equity, Inclusion, and Social 3 Justice as Advised			
SUNY General Edu as Advised	SUNY General Education Mathematics (and Quantitative Reasoning) 3 as Advised		
SUNY General Edu as Advised	ucation Natural Sciences (and Scientific Reasonir	ig) 3	
Additional SUNY (	General Education credits as advised	0-3	
Total Credits		63-70	
<b>Career Option</b>			
Code	Title 0	credits	
Major Field Requi	rements		
AGBS 100	Agricultural Economics	3	
AGBS 240	Farm Management and Finance	4	
AGRO 110	Soil Science	3	
or ENSC 101	Agricultural Science		
ESCI 110	Equine Anatomy & Physiology	3	
ESCI 130	Equine & Stable Management	3	
ESCI 140	Equine Judging	2	
ESCI 150	Farm Practicum I Equine	2	
ESCI 151	Farm Practicum II (Equine)	2	
ESCI 210	Equine Nutrition	3	
ESCI 235	Fitting And Marketing-Equine	1	
ESCI 305	Equine Reproduction/Mgt	3	
ESCI 312	Equine Health & Lameness	3	
Select 17 credits of	of the following to replace general elective credits	: 17	
ERID 102	Intermediate Equitation		
or ERID 104	Advanced Equitation		
ERID 109	IntermediateEquitationHuntSeat		
or ERID 110	Advanced Equitation Hunt Seat		
ERID 103	Inter. Western Equitation II		
or ERID 105	Adv Western Equitation II		
ERID 111	Intermediate Hunt Seat		
or ERID 112	Advanced Hunt Seat		
ERID 200	Western Riding		
ERID 250	Breaking And Training		
or ERID 240	Intro Train Hunters & Jumpers		
ERID 210	English Dressage		
or ERID 220	Western Dressage		
Select one of the	ne following:		
ESCI 170	Draft Horse Management		
ESCI 225	Equine Artificial Insemination		
ERID 255	Intermed Breaking & Training		
ERID 260	Inter Training Hunters Jumpers		
Computer Literacy	/ Requirement	2-3	
Select one of the	following options:		
Option 1:			
CITA 101	Principles Computer Apps		
Option 2:			
OFFT 110	Introduction to MS Excel		
OFFT 100	Introduction to MS Word		

or OFFT 109 Introduction to MS PowerPoint
SUNY General Education Requirements
SUNY General Education Communication Written and Oral as Advised 3-6
SUNY General Education Diversity: Equity, Inclusion, and Social 3
Justice as Advised
SUNY General Education Mathematics (and Quantitative Reasoning) 3
as Advised
SUNY General Education Natural Sciences (and Scientific Reasoning) 3-9
as Advised
SUNY General Education as advised 3
Total Credits 66-76

### Sample Course Sequence General Option

Course	Title	Credits
Year 1		
Fall		
ESCI 130	Equine & Stable Management	3
ESCI 150	Farm Practicum I Equine	2
AGBS 100	Agricultural Economics	3
AGRO 110	Soil Science	3
SLINK Constal Education C	or Agricultural Science	2
General Electives as advise	ad	3
General Electives as advise		3
Spring	Creans	17
Spring	Fauine Anotomy & Physiology	2
ESCI 151	Earm Bracticum II (Equipo)	3
ESCI 140	Fauine Judaina	2
SUNV Conoral Education a		2
SUNV General Education M	(athematics (and Quantitative Reasoning) as Advised	3
General Electives as advise		2
	Cradite	
Vear 2	Creans	15
Fall		
AGBS 240	Farm Management and Finance	4
ESCI 210	Fauine Nutrition	3
ESCI 235	Fitting And Marketing-Equipe	-
CITA or OFFT Computer Lit	eracy Credits as advised	2-3
SUNY General Education D	iversity: Equity, Inclusion, and Social Justice as Advised	3
General Electives as advise	ed	4
	Credits	17-18
Spring		
ESCI 305	Equine Reproduction/Mgt	3
ESCI 312	Equine Health & Lameness	3
SUNY General Education a	s advised	3
General Electives as advise	ed	3
	Credits	12

Total Credits

#### **Career Option**

Course	Title	Credits
Year 1		
Fall		
ESCI 130	Equine & Stable Management	3
ESCI 150	Farm Practicum I Equine	2
AGBS 100	Agricultural Economics	3
AGRO 110 or ENSC 101	Soil Science or Agricultural Science	3

	Total Credits	64-69
	Credits	12-15
ESCI 225	Equine Artificial Insemination	
ERID 260	Inter Training Hunters Jumpers	
ERID 255	Intermed Breaking & Training	
Select one of the followin	g:	1-4
Of EKID 220	or western Dressage	
ERID 210	English Dressage	2
SUNY General Education	as advised	3
ESCI 312	Equine Health & Lameness	3
ESCI 305	Equine Reproduction/Mgt	3
Spring		
	Credits	17-19
or ERID 250	or Breaking And Training	
ERID 240	Intro Train Hunters & Jumpers	3-4
ERID 200	Western Riding	1
SUNY General Education	as advised	3
CITA or OFFT Computer L	iteracy Credits as advised	2-3
ESCI 235	Fitting And Marketing-Equine	1
ESCI 210	Equine Nutrition	3
AGBS 240	Farm Management and Finance	4
Fall		
Year 2		
	Credits	17
ESCI 170	Draft Horse Management	2
or ERID 112	or Advanced Hunt Seat	
ERID 111	Intermediate Hunt Seat	1
or ERID 105	or Adv Western Equitation II	
ERID 103	Inter. Western Equitation II	1
SUNY General Education	Mathematics (and Quantitative Reasoning) as Advised	3
SUNY General Education	as advised	3
ESCI 140	Equine Judging	2
ESCI 151	Farm Practicum II (Equine)	2
ESCI 110	Equine Anatomy & Physiology	3
Spring		
	Credits	18
or ERID 110	or Advanced Equitation Hunt Seat	-
FBID 109		2
or FRID 102	or Advanced Equitation	Z
		3
SUNY General Education	Communication Written and Oral as Advised	3

# Equine Science, B.TECH.

#### Major Code: 1321

61-62

This degree offering focuses on developing and enhancing the management and horsemanship skills of students at all levels. As students progress through the degree, they will select one of the following options as a specialization: equine science and management (hunt seat, western, or draft concentration); breeding management; equine rehabilitation and therapy; or equine business management. The program concludes with a semester of work internship or international exchange program in which students work in real-world businesses outside of the college to complete the degree requirements.

The strengths of the Equine Science Program are mainly twofold: first in the range of courses, which offers ample practical experience in handling horses and provides the student with the opportunity to concentrate on breeding, training, nutrition, and management specifically with horses, rather than with a generalized group of livestock. The second strength of the program is the quality of the faculty, staff and facilities available to the student. The college has two 100-foot by 200-foot indoor arenas, an 80-foot by 264-foot indoor riding arena, two 100-foot by 200-foot outdoor arenas, a half-mile racing track, three horse barns, a 34,000 square foot breeding and training facility, four hot walkers, Eurociser, paddocks, and all of the associated equipment and supplies necessary for a suitable educational experience. The SUNY Morrisville Equine Rehabilitation Center (SUNY Morrisville ERC) facility includes a 22,000 square foot rehabilitation center building with classroom and administrative offices, a large rehabilitation treatment area, and ten stalls. Additionally, a 31stall barn for Equine Rehab client over-flow, the Draft and Driving Horse Program, and a 140 by 300 foot indoor arena are also located at this facility. Therapeutic modalities available at the Equine Rehabilitation Center include aquatic therapies (underwater treadmill, cold salt water spa therapy, indoor swimming pool), therapeutic ultrasound, laser therapy (Class IIIB), cold compression therapy, solariums, and therapeutic exercises.

Faculty and staff have a broad range of industry experience, including licensure by the United States Trotting Association and/or New York State Racing and Wagering Board as trainers and/or drivers, certification for specific technical areas, and are carded judges for various breed organizations including AQHA, NRHA, and APHA. The college also has intercollegiate riding teams (hunt seat and western) and state-of-the-art equipment in all facets of the program.

All of the above provide for an industry-ready and quality equine education.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Demonstrate safe procedures, sound judgment and critical thinking skills in human and horse interactions when handling on the ground, astride or driving.
- · Further develop and be able to evaluate proper body position and effective use of seat, leg, hands and/or voice aids for groundhandling, riding or driving.
- · Conduct the necessary research, analysis, evaluation, and critical thinking skills required of equine management and demonstrate the ability to develop a well-organized approach to address common problems related to equine training and management.
- · Utilize an understanding of equine behavior and to develop trained responses in project horses.
- · Develop a balanced ration by evaluating potential feedstuff and utilize the principles of nutrition to meet the needs of horses that is commensurate with varied uses and workloads.
- · Apply the principles and techniques of modern equine reproduction and evaluate current breeding management practices to improve breeding efficiency.
- · Utilize a systematic method of evaluating conformation and observing performance to accurately gauge individual improvement and to make qualified comparisons between horses.
- · Develop and implement health management practices and skills to recognize signs of lameness and a fundamental understanding of treatment therapies.
- · Develop a positive, confident outlook and a responsible work ethic that is likely to attract success as an equine professional.
- · Develop sound ethical principles and judgment when dealing with employers, employees, and clients.
- · Demonstrate the ability to develop and implement a business plan for a small to moderate-sized horse establishment.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### **Knowledge and Skills Areas:**

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	AGRO 110 or ENSC 101
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion. Students must select an option in Equine Science & Management, Equine Business Management, Breeding Management, or Equine Rehabilitation & Therapy (see below for curriculum information).

Code	Title	Credits
Required CORE Co	burses	
AGBS 100	Agricultural Economics	3
AGBS 240	Farm Management and Finance	4
AGRO 110	Soil Science	3
or ENSC 101	Agricultural Science	
ESCI 110	Equine Anatomy & Physiology	3
ESCI 130	Equine & Stable Management	3
ESCI 140	Equine Judging	2
ESCI 150	Farm Practicum I Equine	2
ESCI 151	Farm Practicum II (Equine)	2
Computer Literacy	y Requirement	2-3
Select one of the	following options:	
Option 1:		
CITA 101	Principles Computer Apps	
Option 2:		
OFFT 110	Introduction to MS Excel	
OFFT 100	Introduction to MS Word	

or OFFT 109	Introduction to MS PowerPoint	
ESCI 210	Equine Nutrition	3
ESCI 235	Fitting And Marketing-Equine	1
ESCI 305	Equine Reproduction/Mgt	3
ESCI 312	Equine Health & Lameness	3
Select one of the	following:	3
ACCT Account	ing Elective as Advised	
AGBS 250	Decision Making for Ag Manager	
AGRO 310	Pasture Mgt and Forages Prod	3
AGSC 350	Animal Genetics	3
ESCI 310	Applied Equine Nutrition	3
ESCI 315	Equine Business Management	3
ESCI 450	Equine Sci Intern Orientation	1
ESCI 420	Equine Internship	15
Suggested Electiv	ves as Advised	11
Required Option (	Courses (see below for curriculum information)	26
<b>Required SUNY G</b>	eneral Education Courses	
SUNY General Edu	ucation Communication Written and Oral as Adv	ised 3-6/
SUNY General Edu	ucation Diversity: Equity, Inclusion, and Social	3
Justice as Advise	d	
SUNY General Edu as Advised	ucation Mathematics (and Quantitative Reasoni	ing) 3
Additional SUNY	General Education as Advised	9-12
Select from the	following categories: Humanities, Social	
Science, US Hi	story & Civic Engagement, World History & Glob	al
Awareness, Wo	orld Languages	
Total Credits	,	120-127
Fauine Scienc	e & Management Option	
Equine Scienc	ce & Management Option	Credits
Equine Science Code Required Option (	ce & Management Option Title Courses	Credits
Equine Science Code Required Option C Select one or both	ce & Management Option Title Courses	Credits
Equine Science Code Required Option C Select one or both ERID 102	ce & Management Option Title Courses nof the following: Intermediate Equitation	Credits
Equine Science Code Required Option C Select one or both ERID 102 or FBID 104	<b>title Courses</b> In of the following: Intermediate Equitation Advanced Equitation	Credits
Equine Science Code Required Option (C Select one or both ERID 102 or ERID 104 ERID 109	<b>EXAMPLANCE FOR CONTRACT OPTION</b> Title Courses To of the following: Intermediate Equitation Advanced Equitation IntermediateEquitationHuntSeat	Credits
Equine Science Code Required Option (C Select one or both ERID 102 or ERID 104 ERID 109 or EBID 110	<b>EXAMPLANCE OF CONTROL OF CONTRON</b>	Credits
Equine Science Code Required Option (C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any	<b>ce &amp; Management Option</b> <b>Title</b> <b>Courses</b> a of the following: Intermediate Equitation Advanced Equitation HuntSeat Advanced Equitation Hunt Seat of the following:	Credits 2-4
Equine Science Code Required Option (C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103	<b>EXAMPLANCE OPTION</b> Title Courses Of the following: Intermediate Equitation Advanced Equitation IntermediateEquitationHuntSeat Advanced Equitation Hunt Seat of the following: Inter Western Equitation II	<b>Credits</b> 2-4 1-4
Equine Science Code Required Option (C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105	<b>EXAMPLANCE OF CONTROL OF CONTRON</b>	<b>Credits</b> 2-4 1-4
Equine Science Code Required Option O Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111	<b>title Courses</b> Intermediate Equitation Advanced EquitationHuntSeat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Intermediate Hunt Seat	Credits 2-4 1-4
Equine Science Code Required Option O Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111	<b>ce &amp; Management Option</b> Title Courses of the following: Intermediate Equitation Advanced Equitation IntermediateEquitationHuntSeat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat	Credits 2-4 1-4
Equine Science Code Required Option O Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111 or ERID 112	<b>ce &amp; Management Option</b> <b>Title</b> <b>Courses</b> a of the following: Intermediate Equitation Advanced Equitation Hunt Seat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat Draft Horse Management	Credits 2-4 1-4
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 103 ERID 111 or ERID 112	<b>E &amp; Management Option</b> Title Courses of the following: Intermediate Equitation Advanced Equitation Hunt Seat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat Advanced Hunt Seat Advanced Hunt Seat Advanced Hunt Seat	Credits 2-4 1-4
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111 or ERID 112 ESCI 170 Select one of the	<b>EXAMPLANCE OF CONTROLOGY OF CONTROL OF CONT</b>	Credits 2-4 1-4
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111 or ERID 112 ESCI 170 Select one of the ERID 240	<b>EXAMPLANCE OF CONTROLOGY OF CONTROL OF CONT</b>	Credits 2-4 1-4
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 103 ERID 103 or ERID 105 ERID 111 or ERID 112 ESCI 170 Select one of the ERID 240 ERID 250 & ERID 200	<b>ce &amp; Management Option</b> Title Courses of the following: Intermediate Equitation Advanced Equitation Hunt Seat Advanced Equitation Hunt Seat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat Advanced Hunt Seat Draft Horse Management following: Intro Train Hunters & Jumpers Breaking And Training and Western Biding <sup>1</sup>	Credits 2-4 1-4 4
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111 or ERID 105 ERID 111 Select one of the ERID 240 ERID 250 & ERID 200 ERID 255	<b>EXAMPLANCE OPTION</b> Title Courses In of the following: Intermediate Equitation Advanced Equitation IntermediateEquitationHuntSeat Advanced Equitation Hunt Seat Advanced Equitation Hunt Seat Of the following: Inter. Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat Draft Horse Management following: Intro Train Hunters & Jumpers Breaking And Training and Western Riding <sup>1</sup>	Credits 2-4 1-4
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111 or ERID 105 ERID 111 Select one of the ERID 240 ERID 250 & ERID 200 ERID 255 or ERID 260	<b>EXERCISES</b>	Credits 2-4 1-4 4
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 110 ERID 111 or ERID 112 ESCI 170 Select one of the ERID 240 ERID 250 & ERID 200 ERID 255 or ERID 260	<b>EXAMPLANCE OPTION</b> Title Courses 1 of the following: Intermediate Equitation Advanced Equitation IntermediateEquitationHuntSeat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat Advanced Hunt Seat Draft Horse Management following: Intro Train Hunters & Jumpers Breaking And Training and Western Riding <sup>1</sup> Intermed Breaking & Training Inter Training Hunters Jumpers	Credits 2-4 1-4 4
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 103 or ERID 103 ERID 103 or ERID 105 ERID 111 or ERID 112 ESCI 170 Select one of the ERID 240 ERID 250 & ERID 200 ERID 255 or ERID 260 200 Level ERID EI	<b>Exe &amp; Management Option</b> Title Courses 1 of the following: Intermediate Equitation Advanced Equitation IntermediateEquitationHuntSeat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat Advanced Hunt Seat Draft Horse Management following: Intro Train Hunters & Jumpers Breaking And Training and Western Riding <sup>1</sup> Intermed Breaking & Training Inter Training Hunters Jumpers ectives as advised: Example Decements	Credits 2-4 1-4 4 4
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111 or ERID 112 ESCI 170 Select one of the ERID 240 ERID 250 & ERID 200 ERID 255 or ERID 260 200 Level ERID EI ERID 210	<b>EXAMPLANCE OPTION</b> Title Courses a of the following: Intermediate Equitation Advanced Equitation IntermediateEquitationHuntSeat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat Advanced Hunt Seat Draft Horse Management following: Intro Train Hunters & Jumpers Breaking And Training and Western Riding <sup>1</sup> Intermed Breaking & Training Inter Training Hunters Jumpers ectives as advised: English Dressage Woatern Dreasage <sup>2</sup>	Credits 2-4 1-4 4 4 2
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111 or ERID 105 ERID 111 Select one of the ERID 240 ERID 250 & ERID 200 ERID 255 or ERID 260 200 Level ERID EI ERID 210 ERID 220	<b>Exe &amp; Management Option</b> Title Courses a of the following: Intermediate Equitation Advanced Equitation IntermediateEquitationHuntSeat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat Advanced Hunt Seat Draft Horse Management following: Intro Train Hunters & Jumpers Breaking And Training and Western Riding <sup>1</sup> Intermed Breaking & Training Inter Training Hunters Jumpers ectives as advised: English Dressage Western Dressage <sup>2</sup> English Dressage	Credits 2-4 1-4 4 2
Equine Science Code Required Option C Select one or both ERID 102 or ERID 104 ERID 109 or ERID 110 Select one or any ERID 103 or ERID 105 ERID 111 or ERID 105 ERID 111 Select one of the ERID 240 ERID 250 & ERID 200 ERID 255 or ERID 200 ERID 255 or ERID 260 200 Level ERID EI ERID 210 ERID 220 or ERID 210	<b>Exe &amp; Management Option</b> Title Courses a of the following: Intermediate Equitation Advanced Equitation IntermediateEquitationHuntSeat Advanced Equitation Hunt Seat of the following: Inter. Western Equitation II Adv Western Equitation II Adv Western Equitation II Intermediate Hunt Seat Advanced Hunt Seat Advanced Hunt Seat Draft Horse Management following: Intro Train Hunters & Jumpers Breaking And Training and Western Riding <sup>1</sup> Intermed Breaking & Training Inter Training Hunters Jumpers ectives as advised: English Dressage Western Dressage <sup>2</sup> English Dressage	Credits 2-4 1-4 4 2

ERID 350	Advanced Equine Special II	4
ERID 400	Adv Equine Specialization III	4
Total Credits		25-30
1		
ERID 200 Western others.	Riding required for Western Specialization, elec	tive for:
FBID 220 Western	Dressage for Western Specialization	
LIND 220 Western	Diessage for western Specialization	
Equine Busine	ess Management Option	
Code	Title	Credits
Required Option C	Courses	
100-200 Lower Div	vision coursework selected from ERID, ESCI, AG	SC, 14
BSAD as advised		
300-400 Upper Div	vision coursework selected from list below:	12
AGBS 305	Ag Financial Decision Making	
AGBS 350	Ag Business Development	
AGBS 400	Distribution/Mkt Ag Products	
AGBS 405	Farm & Rural Mngt Capstone	
AGBS 410	Ag Human Resource Management	
AGBS 450	Ag Policy & Development	
AGBS 460	International Ag Marketing	
AGBS 480	Retailing Agriculture Products	
BSAD 300	Management Communications	
BSAD 310	Human Resource Management	
BSAD 320	Entrepreneurship	
BSAD 325	Marketing Management	
BSAD 327	Advertising Management	
BSAD 329	Consumer Behavior	
BSAD 330	Lead/Manage Family Business	
BSAD 408	Responsible Business Ownership	
BSAD 411	Leadership in Organizations	
Total Credits		26
Breeding Man	agement Option	
Code	Title	Credits
Required Option C	Courses	
Select one or both	n of the following:	2-4
ERID 102	Intermediate Equitation	
or ERID 104	Advanced Equitation	
ERID 109	IntermediateEquitationHuntSeat	
or ERID 110	Advanced Equitation Hunt Seat	
Select one or any	of the following:	1-4
ERID 103	Inter. Western Equitation II	
or ERID 105	Adv Western Equitation II	
ERID 111	Intermediate Hunt Seat	
or ERID 112	Advanced Hunt Seat	
ESCI 170	Draft Horse Management	
ERID 250	Breaking And Training	3-4
or ERID 240	Intro Train Hunters & Jumpers	
ESCI 225	Equine Artificial Insemination	1
ESCI 320	Equine Young Stock Management	1

ESCI 340	Equine Promotion & Sales	3
ERID 350	Advanced Equine Special II	4
ESCI 400	Adv Equine Reproduction/Mgt	4
General Electives	as Advised	7

26-32

**Total Credits** 

### **Equine Rehabilitation & Therapy Option**

Code	Title	Credits
Required Option O	Courses	
Select one or both	n of the following:	2-4
ERID 102	Intermediate Equitation	
or ERID 104	Advanced Equitation	
ERID 109	IntermediateEquitationHuntSeat	
or ERID 110	Advanced Equitation Hunt Seat	
Select one or any	of the following:	1-4
ERID 103	Inter. Western Equitation II	
or ERID 105	Adv Western Equitation II	
ERID 111	Intermediate Hunt Seat	
or ERID 112	Advanced Hunt Seat	
ESCI 170	Draft Horse Management	
Select one of the	following:	3-4
ERID 250	Breaking And Training	
ERID 240	Intro Train Hunters & Jumpers	
ESCI 313	Lab in Equine Health Lameness	1
ESCI 335	Equine Aquatic Therapies	2
ESCI 345	Advanced Equine Anatomy	2
ESCI 370	Concepts for Diagnosis	1
ESCI 380	Equine Rehab Therapies	3
ESCI 405	Problems and Diseases	2
ESCI 430	Clinical Application	4
Total Credits		21-27

### Sample Course Sequence Equine Science & Management Option

Course	Title	Credits
Year 1		
Fall		
ESCI 130	Equine & Stable Management	3
ESCI 150	Farm Practicum I Equine	2
AGBS 100	Agricultural Economics (Equine)	3
AGRO 110 or ENSC 101	Soil Science or Agricultural Science	3
SUNY General Education C	communication Written and Oral as Advised	3
Select one or both of the fo	bllowing:	2-4
ERID 102 or ERID 104	Intermediate Equitation or Advanced Equitation	
ERID 109	IntermediateEquitationHuntSeat	
or ERID 110	or Advanced Equitation Hunt Seat	
	Credits	16-18
Spring		
ESCI 110	Equine Anatomy & Physiology	3
ESCI 151	Farm Practicum II (Equine)	2
ESCI 140	Equine Judging	2
SUNY General Education a	s advised	3
SUNY General Education M	Athematics (and Quantitative Reasoning) as Advised	3
Select one or all of the follo	owing:	1-4

ERID 103 or ERID 105	Inter. Western Equitation II or Adv Western Equitation II	
ERID 111 or ERID 112	Intermediate Hunt Seat or Advanced Hunt Seat	
ESCI 170	Draft Horse Management	
	Credits	14-17
Year 2		
Fall		
ESCI 210	Equine Nutrition	3
ESCI 235	Fitting And Marketing-Equine	1
AGBS 240	Farm Management and Finance	4
SUNY General Education	on Diversity: Equity, Inclusion, and Social Justice as Advised	3
ERID 240	Intro Train Hunters & Jumpers	3-4
or ERID 250	or Breaking And Training	
ERID 200	Western Riding (required for Western specialization)	1
CITA or OFFT Computer	r Literacy Credits as advised	2-3
	Credits	17-19
Spring		
ESCI 305	Equine Reproduction/Mgt	3
ESCI 312	Equine Health & Lameness	3
SUNY General Educatio	on as advised	3
Select from the follo Civic Engagement,	owing categories: Humanities, Social Science, US History & World History & Global Awareness, World Languages	
ERID 255	Intermed Breaking & Training	4
or ERID 260	or Inter Training Hunters Jumpers	
General Elective as adv	ised	2-3
	Credits	15-16
Year 3		
Fall		
AGRO 310	Pasture Mgt and Forages Prod	3
ESCI 310	Applied Equine Nutrition	3
ESCI 315	Equine Business Management	3
ERID 300	Adv. Equine Specialization I	4
	Credits	13
Spring		
AGSC 350	Animal Genetics	3
ESCI 450	Equine Sci Intern Orientation	1
ERID 350	Advanced Equine Special II	4
SUNY General Educatio	on as advised	3
Select from the follo Civic Engagement, V	owing categories: Humanities, Social Science, US History & World History & Global Awareness, World Languages	
General Electives as ad	vised	4
	Credits	15
Year 4		
Fall		
AGBS 250	Decision Making for Ag Manager (or ACCT Elective as advised)	3
SUNY General Educatio	on as advised	3
Select from the followir Civic Engagement, Wor	ng categories: Humanities, Social Science, US History & Id History & Global Awareness, World Languages	
ERID 400	Adv Equine Specialization III	4
General Electives as ad	vised	4
	Credits	14
Spring		
ESCI 420	Equine Internship	15
	Credits	15
	Total Credits	110-127
	i otai cieults	119-127

### **Equine Business Management Option**

Course	Title	Credits
Year 1		
Fall		
ESCI 130	Equine & Stable Management	3

ESCI 150	Farm Practicum I Equine	2
AGBS 100	Agricultural Economics (Equine)	3
AGRO 110	Soil Science	3
SUNV Conoral Education (	Communication Written and Oral as Advised	2
		J
	Credits	14
Spring		
ESCI 110	Equine Anatomy & Physiology	3
ESCI 151	Farm Practicum II (Equine)	2
SUNY General Education a	as advised	3
SUNY General Education N	Mathematics (and Quantitative Reasoning) as Advised	3
ESCI 140	Equine Judging	2
General Electives as advis	ed	3
	Credits	16
Year 2		
Fall		
ESCI 210	Equine Nutrition	3
ESCI 235	Fitting And Marketing-Equine	1
AGBS 240	Farm Management and Finance	4
CITA or OFFT Computer Li	teracy Credits as advised	2-3
SUNV Concred Education F	Diversity Equity Inclusion and Social Justice on Advised	2-3
Concercil Electives as advis	ord	3
General Electives as advis	ed	3
	Credits	16-17
Spring		
ESCI 305	Equine Reproduction/Mgt	3
ESCI 312	Equine Health & Lameness	3
SUNY General Education a	as advised	3
Select from the follow	ing categories: Humanities, Social Science, US History &	
Civic Engagement, Wo	rld History & Global Awareness, World Languages	
Civic Engagement, Wo General Electives as advis	rld History & Global Awareness, World Languages ed	6
Civic Engagement, Wo General Electives as advis	rld History & Global Awareness, World Languages ed Credits	6 15
Civic Engagement, Wo General Electives as advis Year 3	rld History & Global Awareness, World Languages ed Credits	6 15
Civic Engagement, Wo General Electives as advis Year 3 Fall	rld History & Global Awareness, World Languages ed Credits	6 15
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod	<u>6</u> 15 3
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition	6 15 3 3
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management	6 15 3 3 3
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Ur	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised	6 15 3 3 3 3
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUINY General Education a	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised	6 15 3 3 3 3 3 3 3
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Selact from the follow:	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing catagories: Humanities Social Science US History &	6 15 3 3 3 3 3 3 3 3 3
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followi Civic Engagement, Wo	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages	6 15 3 3 3 3 3 3 3 3
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followin Civic Engagement, Wo	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages	6 15 3 3 3 3 3 3 3 15
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followin Civic Engagement, Wo	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages Credits	6 15 3 3 3 3 3 3 3 15
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followi Civic Engagement, Wo	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages Credits	6 15 3 3 3 3 3 3 3 5 15
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followi Civic Engagement, Wo Spring AGSC 350 ESCI 450	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages Credits Animal Genetics Evuine Sci Intern Orientation	6 15 3 3 3 3 3 3 3 3 3 5 15
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followi Civic Engagement, Wo Spring AGSC 350 ESCI 450	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages Credits Animal Genetics Equine Sci Intern Orientation more Division Courses as advised	6 15 3 3 3 3 3 3 3 3 3 5 15 3 1 5
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followi Civic Engagement, Wo Spring AGSC 350 ESCI 450 300-400 AGBS or BSAD Up	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages Credits Animal Genetics Equine Sci Intern Orientation oper Division Courses as advised credits	6 15 3 3 3 3 3 3 3 3 3 15 3 15 3 1 6 4
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followi Civic Engagement, Wo Spring AGSC 350 ESCI 450 300-400 AGBS or BSAD Up General Electives as advis	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages Credits Animal Genetics Equine Sci Intern Orientation oper Division Courses as advised ed	6 15 3 3 3 3 3 3 3 3 3 1 5 3 1 5 4 4
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followi Civic Engagement, Wo Spring AGSC 350 ESCI 450 300-400 AGBS or BSAD Up General Electives as advis	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages Credits Animal Genetics Equine Sci Intern Orientation oper Division Courses as advised ed Credits	6 15 3 3 3 3 3 3 3 3 3 1 5 3 1 6 4 4 14
Civic Engagement, Wo General Electives as advis Year 3 Fall AGRO 310 ESCI 310 ESCI 315 300-400 AGBS or BSAD Up SUNY General Education a Select from the followi Civic Engagement, Wo Spring AGSC 350 ESCI 450 300-400 AGBS or BSAD Up General Electives as advis	rld History & Global Awareness, World Languages ed Credits Pasture Mgt and Forages Prod Applied Equine Nutrition Equine Business Management oper Division Courses as advised as advised ing categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages Credits Animal Genetics Equine Sci Intern Orientation oper Division Courses as advised ed Credits	6 15 3 3 3 3 3 3 3 3 3 1 5 3 1 6 4 4 14
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	Total Credits	121-122
	Credits	15
ESCI 420	Equine Internship	15
Spring		

### **Breeding Management Option**

	Je	
Course	Title	Credits
Year 1		
Fall		
ESCI 130	Equine & Stable Management	3
ESCI 150	Farm Practicum I Equine	2
AGBS 100	Agricultural Economics (Equine)	3
AGRO 110 or ENSC 101	or Agricultural Science	3
SUNY General Education C	Communication Written and Oral as Advised	3
Select one or both of the f	ollowing:	2-4
ERID 102 or ERID 104	Intermediate Equitation or Advanced Equitation	
ERID 109	IntermediateEquitationHuntSeat	
or ERID 110	or Advanced Equitation Hunt Seat	
	Credits	16-18
Spring		
ESCI 110	Equine Anatomy & Physiology	3
ESCI 151	Farm Practicum II (Equine)	2
ESCI 140	Equine Judging	2
SUNY General Education a	is advised	3
SUNY General Education N	Nathematics (and Quantitative Reasoning) as Advised	3
Select one or all of the foll	owing:	1-4
ERID 103 or ERID 105	Inter. Western Equitation II or Adv Western Equitation II	
ERID 111	Intermediate Hunt Seat	
or ERID 112	or Advanced Hunt Seat	
ESCI 170	Draft Horse Management	
	Credits	14-17
Year 2		
Fall		
ESCI 210	Equine Nutrition	3
ESCI 235	Fitting And Marketing-Equine	1
AGBS 240	Farm Management and Finance	4
ERID 250	Breaking And Training	3-4
or ERID 240	or Intro Train Hunters & Jumpers	
CITA or OFFT Computer Li	teracy Credits as advised	2-3
SUNY General Education E	Diversity: Equity, Inclusion, and Social Justice as Advised	3
Spring	Credits	16-18
ESCI 305	Equine Reproduction/Mgt	3
ESCI 312	Equine Health & Lameness	3
ESCI 225	Equine Artificial Insemination	1
SUNY General Education a	as advised	3
Select from the followi Civic Engagement, Wo	ng categories: Humanities, Social Science, US History & rld History & Global Awareness, World Languages	
General Electives as advis	ed	6
	Credits	16
Year 3		
Fall		
AGRO 310	Pasture Mgt and Forages Prod	3
ESCI 310	Applied Equine Nutrition	3
ESCI 315	Equine Business Management	3
ESCI 320	Equine Young Stock Management	1
ESCI 340	Equine Promotion & Sales	3
SUNY General Education a	is advised	3

Select from the Civic Engageme	following categories: Humanities, Social Science, US History & nt, World History & Global Awareness, World Languages	
	Credits	16
Spring		
AGSC 350	Animal Genetics	3
ESCI 450	Equine Sci Intern Orientation	1
ESCI 400	Adv Equine Reproduction/Mgt	4
General Electives as	advised	5
	Credits	13
Year 4		
Fall		
AGBS 250	Decision Making for Ag Manager (or ACCT Elective as advised)	3
ERID 350	Advanced Equine Special II	4
SUNY General Educ	ation as advised	3
Select from the Civic Engageme	following categories: Humanities, Social Science, US History & nt, World History & Global Awareness, World Languages	
General Electives as	advised	4
	Credits	14
Spring		
ESCI 420	Equine Internship	15
	Credits	15
	Total Credits	120-127

#### **Equine Rehabilitation & Therapy Option**

Course	Title	Credits
Year 1		
Fall		
ESCI 130	Equine & Stable Management	3
ESCI 150	Farm Practicum I Equine	2
AGBS 100	Agricultural Economics (Equine)	3
AGRO 110 or ENSC 101	Soil Science or Agricultural Science	3
SUNY General Education C	communication Written and Oral as Advised	3
Select one or both of the fo	ollowing:	2-4
ERID 102 or ERID 104	Intermediate Equitation or Advanced Equitation	
ERID 109 or ERID 110	IntermediateEquitationHuntSeat or Advanced Equitation Hunt Seat	
	Credits	16-18
Spring		
ESCI 110	Equine Anatomy & Physiology	3
ESCI 151	Farm Practicum II (Equine)	2
ESCI 140	Equine Judging	2
SUNY General Education a	s advised	3
SUNY General Education N	lathematics (and Quantitative Reasoning) as Advised	3
Select one or any of the fol	llowing:	1-4
ERID 103 or ERID 105	Inter. Western Equitation II or Adv Western Equitation II	
ERID 111	Intermediate Hunt Seat	
or ERID 112	or Advanced Hunt Seat	
ESCI 170	Draft Horse Management	
Year 2 Fall	Credits	14-17
ESCI 210	Equine Nutrition	3
ESCI 235	Fitting And Marketing-Equine	1
AGBS 240	Farm Management and Finance	4
ERID 240 or ERID 250	Intro Train Hunters & Jumpers or Breaking And Training	3-4
CITA or OFFT Computer Lit	eracy Credits as advised	2-3
SUNY General Education D	iversity: Equity, Inclusion, and Social Justice as Advised	3
	Credits	16-18

Spring		
ESCI 305	Equine Reproduction/Mgt	3
ESCI 312	Equine Health & Lameness	3
ESCI 313	Lab in Equine Health Lameness	1
SUNY General Educat	ion as advised	3
Select from the fo Civic Engagement	llowing categories: Humanities, Social Science, US History & ;, World History & Global Awareness, World Languages	
General Electives as a	dvised	5
	Credits	15
Year 3		
Fall		
AGRO 310	Pasture Mgt and Forages Prod	3
ESCI 310	Applied Equine Nutrition	3
ESCI 315	Equine Business Management	3
ESCI 335	Equine Aquatic Therapies	2
ESCI 345	Advanced Equine Anatomy	2
ESCI 370	Concepts for Diagnosis	1
	Credits	14
Spring		
AGSC 350	Animal Genetics	3
ESCI 450	Equine Sci Intern Orientation	1
BIOL /CHEM as Advis	ed	4
ESCI 380	Equine Rehab Therapies	3
SUNY General Educat	ion as advised	3
Select from the fo Civic Engagement	llowing categories: Humanities, Social Science, US History & ;, World History & Global Awareness, World Languages	
General Electives as a	dvised	4
	Credits	18
Year 4		
Fall		
AGBS 250	Decision Making for Ag Manager (or ACCT Elective as advised)	3
ESCI 430	Clinical Application	4
ESCI 405	Problems and Diseases	2
SUNY General Educat	ion as advised	3
Select from the follow Civic Engagement, Wo	ring categories: Humanities, Social Science, US History & orld History & Global Awareness, World Languages	
General Electives as a	ndvised	4
	Credits	16
Spring		
ESCI 420	Equine Internship	15
	Credits	15

# **Exercise Science**, A.S.

#### Major Code: 2542

The Exercise Science Associate degree (previously named Human Performance & Health Promotion) will prepare students to find employment in general fitness positions in wellness facilities and general fitness facilities. The curriculum includes a strong foundation in math and science, along with fitness-related classes in general fitness and wellness and exercise physiology. The program is unique in its inclusion of two exercise physiology classes to ensure the complete and comprehensive understanding, by the student, of the body's response to exercise. Students are taught to handle a diverse set of exercise and fitness situations to strengthen their confidence and marketability in the field. Students are well equipped for immediate entry into the workforce, but are especially prepared for transfer to other programs in the following areas: Exercise Science, B.S. at SUNY Morrisville, Exercise Physiology, Physical Education, Kinesiology, Athletic Training, and Health Education. The Exercise Science program also prepares graduates for employment in fitness centers, recreational facilities, or corporate wellness programs and for certification from the American College of Sports Medicine.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Describe the role of physical activity in the prevention of and treatment of chronic diseases.
- Describe the chronic and acute responses of the body to physical activity.
- Distinguish between aerobic and anaerobic physical exercise and recommend activities to specifically test or to train either system.
- Evaluate whether the allied health profession is the student's desired career path, and assess ability to model appropriate professional behavior.
- Accurately assess a client's heart rate and blood pressure at rest and during physical activity.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMP 101, COMM 111
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 103, MATH 141
Natural Sciences (and Scientific Reasoning) (required)	BIOL 120, BIOL 150, BIOL 151, PHYS 107
Humanities	PHIL 201
Social Sciences	PSYC 101, SOCI 250
The Arts	as advised
US History and Civic Engagment	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning (required)	as advised

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
EXSC 100	Intro to Wellness & Fitness	4
EXSC 101	Fieldwork in EXSC	1
EXSC 200	Exercise Physiology I	4
EXSC 201	Exercise Physiology II	4

MAST 100	CPR for Healthcare Providers	1
NUTR 110	Nutrition I	3
BIOL 120	General Biology I	4
BIOL 150	Human Anatomy + Physiology I	4
BIOL 151	Human Anatomy + Physiology II	4
PHYS 107	Introductory Physics I	4
COMP 101	Composition and Research	3
COMM 111	Introduction to Speech	3
MATH 103	College Algebra w/ Trig	3
SOCI 250	Social Gerontology	3
PSYC 101	Introduction to Psychology	3
MATH 141	Statistics	3
PHIL 201	Introduction To Philosophy	3
SUNY General Education courses in Arts, US History & Civic 3 Engagement, World History & Global Awareness, or World Languages as Advised		
SUNY General Edu Justice as Advise	ucation Diversity, Equity, Inclusion and Social d	3

60

**Total Credits** 

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
EXSC 100	Intro to Wellness & Fitness	4
BIOL 120	General Biology I	4
NUTR 110	Nutrition I	3
COMP 101	Composition and Research	3
GNED 100	First Year Experience	2
MATH 103	College Algebra w/ Trig (or higher in the algebra sequence after placement and in consultation with the academic program advisor)	3
	Credits	19
Spring		
EXSC 101	Fieldwork in EXSC	1
COMM 111	Introduction to Speech	3
PHYS 107	Introductory Physics I	4
SUNY General Education E	lective as Advised	3
SUNY General Education D	iversity, Equity, Inclusion and Social Justice as Advised	3
	Credits	14
Year 2		
Fall		
BIOL 150	Human Anatomy + Physiology I	4
PSYC 101	Introduction to Psychology	3
EXSC 200	Exercise Physiology I	4
PHIL 201	Introduction To Philosophy	3
	Credits	14
Spring		
MATH 141	Statistics	3
BIOL 151	Human Anatomy + Physiology II	4
EXSC 201	Exercise Physiology II	4
SOCI 250	Social Gerontology	3
MAST 100	CPR for Healthcare Providers	1
	Credits	15
	Total Credits	62

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# **Exercise Science**, B.S.

#### Major Code: 1226

The Exercise Science degree (previously named Human Performance and Health Promotion) will prepare students for fitness positions in wellness facilities, as well as in general fitness facilities and gyms. Towards this end, the curriculum will include a strong foundation in math and science, along with basic fitness-related classes in general fitness and wellness, sport psychology, motor learning, strength and conditioning, exercise physiology, exercise appraisal and programming, biomechanics and fitness program administration. Specialized classes will include introduction to exercise field work, emergency response procedures, cardiopulmonary assessment, exercise physiology for special populations, and kinesiology.

The baccalaureate program culminates in two internships designed to provide the student with significant hands-on training and experience in the field of Exercise Science. The first internship involves direct participation in the daily operations of the college-run wellness center. The students will be responsible for all aspects of the operation including administration, management, and exercise programming. The Capstone Internship involves a practical off-campus learning experience immersing students in the day-to-day operations of approved agencies. Sites for internships will include corporate fitness centers, wellness clinics, and community-based health clubs.

The Exercise Science degree will prepare students for preventative and rehabilitative fitness positions in cardiac rehabilitation and wellness facilities, cardiology offices, hospitals and nursing homes, as well as in general fitness facilities and gyms.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Lead, supervise, and effectively guide and motivate individuals in an exercise program.
- Administer fitness assessments, develop and implement prescriptions based on those assessments
- Conduct experiments and collect data related to exercise science, and then interpret how this data relates to physiological adaptations.
- Describe how disease negatively affects health and quality of life and how exercise can mitigate effects
- Apply principles discussed within the Exercise Science curriculum in a practical, professional environment
- Describe the influence of psychological principles in sport, exercise, and other performance related contexts
- Present and organize information in a manner that is consistent with the principles of scientific writing

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

(required)	COMP 101, COMP 310, and COMM 111
Divsersity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 141 and MATH 151
Natural Sciences (and Scientific Reasoning) (required)	BIOL 120, BIOL 150, BIOL 151, and PHYS 107
Humanities	PHIL 201 and PHIL 311
Social Sciences	PSYC 101, PSYC 384, PSYC 386, and SOCI 250
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion.

Code	Title	Credits
EXSC 100	Intro to Wellness & Fitness	4
EXSC 101	Fieldwork in EXSC	1
EXSC 200	Exercise Physiology I	4
EXSC 201	Exercise Physiology II	4
EXSC 300	Sport & Exercise Psychology	3
EXSC 301	Kinesiology & Applied Anatomy	4
EXSC 304	Community Service in Sport Sci	1
EXSC 305	Fitness Assess and Ex Rx	4
EXSC 400	App Strength Cond Principles	3
EXSC 401	Cardiopulmonary Assess for Ex	3
EXSC 402	Wellness Center Internship	3
EXSC 403	Ex Phys Special Populations	3
EXSC 404	Fitness Leadership and Admin	3
EXSC 405	EXSC Internship	6
NUTR 110	Nutrition I	3
NUTR 250	Sports Nutrition	3
MAST 100	CPR for Healthcare Providers	1
PHYS 107	Introductory Physics I	4
BIOL 120	General Biology I	4
BIOL 150	Human Anatomy + Physiology I	4
BIOL 151	Human Anatomy + Physiology II	4
COMP 101	Composition and Research	3
COMP 310	Advance Tech Communication	3
COMM 111	Introduction to Speech	3
MATH 141	Statistics	3
MATH 151	General Calculus A	3
SOCI 250	Social Gerontology	3
PHIL 201	Introduction To Philosophy	3

Total Credits		120
Electives as Advis	ed	7
SUNY General Edu LAS Credits)	ucation Electives as Advised (General Education or	5
SUNY General Edu Justice as Advised	ication Diversity, Equity, Inclusion and Social d	3
SUNY General Edu Engagement, Worl	ucation as Advised: Arts, US History & Civic Id History & Global Awareness, or World Languages	3
PSYC 386	Social Psychology	3
PSYC 384	Group Behavior	3
PSYC 101	Introduction to Psychology	3
PHIL 311	Professional Ethics	3

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
EXSC 100	Intro to Wellness & Fitness	4
BIOL 120	General Biology I	4
NUTR 110	Nutrition I	3
COMP 101	Composition and Research	3
GNED 100	First Year Experience	2
MATH 151	General Calculus A	3
	Credits	19
Spring		
EXSC 101	Fieldwork in EXSC	1
COMM 111	Introduction to Speech	3
PHYS 107	Introductory Physics I	4
General Education as Advis	sed	3
Elective as Advised		3
	Credits	14
Year 2		
Fall		
BIOL 150	Human Anatomy + Physiology I	4
PSYC 101	Introduction to Psychology	3
EXSC 200	Exercise Physiology I	4
SUNY General Education D	iversity, Equity, Inclusion and Social Justice as Advised	3
Elective as Advised		2
	Credits	16
Spring		
MATH 141	Statistics	3
BIOL 151	Human Anatomy + Physiology II	4
EXSC 201	Exercise Physiology II	4
SOCI 250	Social Gerontology	3
PHIL 201	Introduction To Philosophy	3
MAST 100	CPR for Healthcare Providers	1
	Credits	18
Year 3		
Fall		
EXSC 300	Sport & Exercise Psychology	3
EXSC 301	Kinesiology & Applied Anatomy	4
PHIL 311	Professional Ethics	3
PSYC 384	Group Behavior	3
	Credits	13
Spring		
EXSC 304	Community Service in Sport Sci	1
EXSC 305	Fitness Assess and Ex Rx	4
COMP 310	Advance Tech Communication	3
NUTR 250	Sports Nutrition	3

General Education as Advised		3
	Credits	14
Year 4		
Fall		
EXSC 400	App Strength Cond Principles	3
EXSC 401	Cardiopulmonary Assess for Ex	3
EXSC 402	Wellness Center Internship	3
EXSC 403	Ex Phys Special Populations	3
	Credits	12
Spring		
EXSC 404	Fitness Leadership and Admin	3
EXSC 405	EXSC Internship	6
PSYC 386	Social Psychology	3
General Education Elective as Advised		2-3
	Credits	14-15
	Total Credits	120-121

# Food & Agribusiness, M.S.

#### Major Code: M500

The Food and Agribusiness MS (FAB) is a fully online 2-year, parttime program that prepares professionals for careers throughout the food system. FAB is a rigorous program that draws from agricultural economics, food marketing, supply chain management, organizational management, econometrics, agriculture and food regulation, and more-all tailored to the special problems that food businesses face. High levels of engagement are achieved through collaborative communication technologies that allow tight-knit student cohorts and professors to work close together with frequent contact. Students acquire managerial and analytical skills through highly involved group projects, computational analysis, microeconomic theory, case studies of food producers' and marketers' managerial decisions, hot-topic policy debates, and business and marketing planning-culminating in a real-world Master's project or consulting experience. FAB enhances professional success throughout the food system and agriculture. This program is ideal for students seeking to advance into middle- and upperlevel positions in management, marketing, and policymaking, and related careers. Graduates are equipped with the tools to solve the tremendous challenges facing the food system and society as a whole.

Upon successful completion of this program, you will be able to:

- 1. Demonstrate expert knowledge of global food and agricultural commodity markets and best agribusiness practices.
- 2. Analyze organizational performance, and economic and agribusiness relationships using economic and business theory.
- Use economic and business theory to identify useful agribusiness questions, and answer those questions by creating econometric, statistical, and other quantitative models and applying them to real world data.
- 4. Maintain professional readiness to contribute to positive change at the individual, team, and corporate agribusiness levels.
- Communicate analysis and reasoning through well-articulated conversations with collaborators and stakeholders, professional presentations, and written reports.

### **Curriculum Requirements**

A minimum of 34 credits is required for degree completion.

Code	Title	Credits
FAB 500	Leadership and Organizational Behavior for Agribusiness	3
FAB 510	Quantitative Methods for Agribusiness and the Food System	3
FAB 520	Advanced Quantitative Methods	3
FAB 530	Agribusiness Economics	3
FAB 550	Supply Chain Management of Perishable Goods	s 3
FAB 600	Finance for Food and Agribusiness	3
FAB 610	Personnel Management for the Food System	3
FAB 640	Food Labeling	3
or FAB 660	Agricultural and Food Policy	
FAB 650	Marketing in Agribusiness and the Food System	n 3
FAB 670	Seminar in FAB	1
FAB 680	FAB Project Capstone	3
or FAB 690	Agribusiness Consulting	
FAB 700	Master's Project & Consulting	3
Total Credits		34

# **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
FAB 500	Leadership and Organizational Behavior for	3
	Agribusiness	
FAB 510	Quantitative Methods for Agribusiness and the Food	3
	System	
	Credits	6
Spring		
FAB 520	Advanced Quantitative Methods	3
FAB 600	Finance for Food and Agribusiness	3
FAB 640	Food Labeling	3
or FAB 660	or Agricultural and Food Policy	
	Credits	9
Year 2		
Fall		
FAB 530	Agribusiness Economics	3
FAB 550	Supply Chain Management of Perishable Goods	3
FAB 670	Seminar in FAB	1
	Credits	7
Spring		
FAB 650	Marketing in Agribusiness and the Food System	3
FAB 680	FAB Project Capstone	3
or FAB 690	or Agribusiness Consulting	
	Credits	6
Summer		
FAB 610	Personnel Management for the Food System	3
FAB 700	Master's Project & Consulting	3
	Credits	6
	Total Credits	34

# **Game Programming Minor**

The Game Programming minor is for students in a Bachelors degree program who want to develop the skills to create software for 2D and 3D video games. The minor provides students with courses that cover game design concepts, user interface design, and software development of video games. Students wishing to specialize in game programming may complete the Game Programming minor by taking 15 credits (five CITA courses).

# **Program Learning Outcomes**

Upon successful completion of this minor students will be able to:

- Apply the principles of game development, from concept to final product
- Apply concepts of Object-Oriented Programming (OOP) in a game design context
- Create the software for a multi-player 2D, 3D game suitable for distribution
- · Demonstrate the ability to generate prototypes for game interfaces

# **Curriculum Requirements**

A minimum of 15 credits is required for completion of the minor. Students must be enrolled in a Bachelor's degree program in order to declare a minor.

Code	Title	Credits
<b>Required Coursev</b>	vork	
CITA 112		3
or CITA 113	Intro to Game Design & Dev	
CITA 212	Fundamentals of Game Design	3
CITA 312	Intermediate Game Design	3
CITA 385	User Interface Design	3
or CITA 386	Game Interface Design	
CITA 412	Advanced Game Design & Applica	3
Total Credits		15

# Game Programming, B.TECH.

#### Major Code: 3095

The Game Programming Bachelor of Technology degree is an experiential program in which students receive a grounding in software development with an emphasis on game programming. The program's purpose is to provide students with the necessary knowledge and experience to program video games and simulations for both entertainment and education. The skills taught through the program also are highly transferable to other types of software development. Students who complete the program will receive a Bachelor of Technology degree in Game Programming. Completion requires 120 semester hours of coursework, which includes a 12 semester-hour internship. The program can be completed in eight (8) semesters.

# **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- · Create and animate three-dimensional (3D) objects.
- Create two dimensional (2D) and three dimensional (3D) games for players from various demographics.
- Design intuitive and accessible game interfaces aligned with industry guidelines and standards.
- Demonstrate programming skills using multiple languages, environments, and platforms.
- Analyze, design, and code software solutions within various development frameworks and project management methodologies.
- · Manage source code using version control software.

- · Publish a games portfolio online.
- Describe one form of artistic expression and its impact on the aesthetic quality of a game.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105 and COMP 310
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 149
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	HUMN 261
Social Sciences	as advised
The Arts	CITA 133
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised

as advised

# **Curriculum Requirements**

Critical Thinking and Reasoning

(required)

A minimum of 120 credits is required for degree completion.

Code	Title	Credits
Major Requirements		
CITA 110	Intro Information Technology	3
CITA 113	Intro to Game Design & Dev	3
CITA 140	Introduction to Programming	3
CITA 212	Fundamentals of Game Design	3
CITA 214	Game Asset Creation	3
CITA 216	Introduction to 3D Modeling	3
CITA 225	Introduction to Data Structure	3
CITA 245	Intro to Database Concepts	3
CITA 255	App Development	3
CITA 312	Intermediate Game Design	3
CITA 314	Extended Reality Game Program	3
CITA 355 Advance	ed App and Mobile Web Development	3
CITA 386	Game Interface Design	3
CITA 395	Internship Orientation Seminar	1
CITA 405	Project Management	3

Total Credits		120
General Electives	as advised	11
SUNY General Ed advised	ucation & Liberal Arts and Sciences credits as	12
SUNY General Ed Justice as Advise	ucation Diversity: Equity, Inclusion, and Social ed	3
SUNY General Ed as Advised	ucation Natural Sciences (and Scientific Reasoning)	3
COMP 310	Advance Tech Communication	3
HUMN 261	Games, World Build, Story	3
MATH 149	Elementary Linear Algebra	3
COMM 105	Research & Communication	3
Required SUNY G	eneral Education Coursework	
CITA 480	Internship Information Tech	12
ACCT, BSAD and/	or CITA 300-400 Upper Level Electives as advised	6
BSAD 300	Management Communications	3
BSAD 116	<b>Business Organization &amp; Mgmt</b>	3
CITA 300-400 Upp	per Level Elective as advised	3
CITA 100-200 Lov	ver Level Elective as advised	3
CITA 417	Game Engine Architecture	3
CITA 412	Advanced Game Design & Applica	3

## **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
GNED 100	First Year Experience	2
CITA 110	Intro Information Technology	3
CITA 113	Intro to Game Design & Dev	3
CITA 140	Introduction to Programming	3
COMM 105	Research & Communication	3
SUNY General Education a	s advised	3
	Credits	17
Spring		
CITA 214	Game Asset Creation	3
MATH 149	Elementary Linear Algebra	3
SUNY General Education a	s advised	9
	Credits	15
Year 2		
Fall		
100-200 CITA Lower Level	Elective as advised	3
CITA 212	Fundamentals of Game Design	3
CITA 245	Intro to Database Concepts	3
CITA 255	App Development	3
HUMN 261	Games, World Build, Story	3
	Credits	15
Spring		
BSAD 116	Business Organization & Mgmt	3
CITA 216	Introduction to 3D Modeling	3
CITA 225	Introduction to Data Structure	3
COMP 310	Advance Tech Communication	3
SUNY General Education a	s advised	3
	Credits	15
Year 3		
Fall		
CITA 312	Intermediate Game Design	3
CITA 386	Game Interface Design	3
300-400 ACCT, BSAD or CIT	TA Upper Level Electives as advised	3

General Elective as advised	3
SUNY Genderal Education as advised	3
Credits	15
Spring	

	Total Credits	121
	Credits	12
CITA 480	Internship Information Tech	12
Spring		
	Credits	17
General Electives	as advised	7
CITA 417	Game Engine Architecture	3
CITA 412	Advanced Game Design & Applica	3
CITA 405	Project Management	3
CITA 395	Internship Orientation Seminar	1
Fall		
Year 4		
	Credits	15
300-400 ACCT, BS	AD or CITA Upper Level Electives as advised	3
BSAD 300	Management Communications	3
300-400 CITA Upp	er Level Elective as advised	3
CITA 355 Advance	ed App and Mobile Web Development	3
CITA 314	Extended Reality Game Program	3
opinig		

# Health Related Studies, A.S.

#### Major Code: 1451

The Health-Related Studies degree will prepare students for transfer into bachelor's degree programs that prepare graduates to work in the health care industry. The curriculum provides a strong foundation in the sciences including courses in the areas of biology, anatomy and physiology, and chemistry. Most transfer institutions have unique entrance requirements (information that should be acquired as soon as possible). The Health-Related Studies program offers a degree of flexibility that allows students to satisfy the different entrance requirements at the various transfer institutions, as well as to obtain entry-level positions in some laboratories.

The Health-Related Studies program includes course offerings that articulate with higher-division institutions in all of the following career options: nuclear medicine, physical therapy, health information management, health services management, physician assistant, diagnostic medical sonography (ultrasound), occupational therapy, respiratory care, medical technology, cytotechnology, cardiovascular perfusion, addiction counseling sciences, emergency medical services, mental health technology, occupational and environmental health, and science-intensive pre-professional fields (medical, dental, chiropractic, veterinarian).

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Apply selected biologic and chemical concepts to biological problems.
- · Solve scientific problems using algebra, trigonometry, and statistics.
- Display both written and oral communication skills using scientific terminology.
- Collaborate and cooperate as a group member in a culturally diverse scientific environment.
- Use available research tools including, but not limited to, the internet to find answers to scientific questions.

- Critically evaluate and integrate scientific literature, principles, and concepts.
- Practice safe laboratory techniques, including adherence to all safety rules and regulations.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 103 and MATH 141
Natural Sciences (and Scientific Reasoning) (required)	BIOL 120, BIOL 121, BIOL 150, BIOL 151, CHEM 121, and CHEM 122
Humanities	COMP 102
Social Sciences	PSYC 101
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning (required)	as advised

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
BIOL 120	General Biology I	4
BIOL 121	General Biology II	4
BIOL 150	Human Anatomy + Physiology I	4
BIOL 151	Human Anatomy + Physiology II	4
CHEM 121	General College Chemistry I	4
CHEM 122	General College Chemistry II	4
Additional Require	ed Science	
Select a minimum	of two courses of the following:	6-8
BIOL 135	Myology I	
BIOL 136	Myology II	
BIOL 137	Neurology	
BIOL 285	General Microbiology	
BIOL 300	Biol Normal & Neoplastic Cells	
BIOL 301	Pathophysiology	

Total Credits		60-62
SUNY General Education Diversity, Equity, Inclusion and Social Justice as Advised		3
SUNY General Ed	ucation Electives as Advised	10
GNED 100	First Year Experience	2
PSYC 101	Introduction to Psychology	3
MATH 141	Statistics	3
MATH 103	College Algebra w/ Trig	3
COMP 102	Writing About Literature	3
COMM 105	Research & Communication	3
PHYS 128	General Physics II	
PHYS 127	General Physics I	
PHYS 108	Introductory Physics II	
PHYS 107	Introductory Physics I	
CHEM 242	Organic Chemistry II	
CHEM 241	Organic Chemistry I	
BIOL 405	Basic Immunology	
BIOL 302	Epidemiology	

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
BIOL 120	General Biology I	4
CHEM 121	General College Chemistry I	4
MATH 103	College Algebra w/ Trig (or higher in the algebra sequence after placement and consultation with the academic program)	3
COMM 105	Research & Communication	3
GNED 100	First Year Experience	2
	Credits	16
Spring		
BIOL 121	General Biology II	4
CHEM 122	General College Chemistry II	4
MATH 141	Statistics	3
COMP 102	Writing About Literature	3
SUNY General Education D	iversity: Equity, Inclusion, and Social Justice as Advised	3
	Credits	17
Year 2		
Fall		
BIOL 150	Human Anatomy + Physiology I	4
PSYC 101	Introduction to Psychology	3
SUNY General Education as	s advised	3
Select one of the following	science courses:	3-4
BIOL 135	Myology I	
BIOL 136	Myology II	
BIOL 285	General Microbiology	
BIOL 300	Biol Normal & Neoplastic Cells	
BIOL 301	Pathophysiology	
BIOL 405	Basic Immunology	
CHEM 241	Organic Chemistry I	
PHYS 107	Introductory Physics I	
PHYS 127	General Physics I	
	Credits	13-14
Spring		
BIOL 151	Human Anatomy + Physiology II	4
SUNY General Education co	ourses as advised	7
Select one of the following science courses:		3-4

	Total Credits	60-62
	Credits	14-15
PHYS 128	General Physics II	
PHYS 108	Introductory Physics II	
CHEM 242	Organic Chemistry II	
BIOL 405	Basic Immunology	
BIOL 302	Epidemiology	
BIOL 300	Biol Normal & Neoplastic Cells	
BIOL 285	General Microbiology	
BIOL 137	Neurology	

# Healthcare Office Coordinator, A.A.S.

#### Major Code: 3051

Effective December 31, 2024, this program has been deactivated and students will no longer be admitted to the major. Currently enrolled students will complete the degree in accordance with the approved teach-out plan.

The Healthcare Office Coordinator program is designed to give students a background in medical office work for the electronic age. To supplement the regular program of study, special features emphasize medical coding and billing as well as medical transcription, information processing and/or the opportunity to acquire specialized knowledge working within the front end of a medical office. Program prepares students to sit for national credentialing exams. Students in the Healthcare Office Coordinator degree program will have the opportunity to work with upto-date computers and software, including electronic health records systems. Students participate in an internship program their second year where they combine their education and interpersonal skills. Various required courses listed in the proposed curriculum structure below may be earned through articulation agreements with various high schools and BOCES programs. No previous business education is required. Graduates of the two-year Healthcare Office Coordinator program receive the associate in applied science (AAS) degree. Credits may be transferred into either of the following four-year degree programs: Business Administration or Technology Management. This program is fully accredited by the Accreditation Council for Business Schools and Programs (ACBSP). This program is offered fully online.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Use electronic health records systems to register new patients, maintain doctors' schedules, update records, including vitals, medication orders, family history, insurance information, medical encounters, and more;
- Apply appropriate critical thinking skills and identify human relation skills in structured case settings;
- Analyze medical language using prefixes, suffixes, root words, and combining forms;
- Identify and practice legal and ethical responsibilities of an administrative medical specialist, (i.e. HIPAA mandates, medical records, health information, and consents and disclosures as well as telephone etiquette);
- Identify the coding diagnoses and procedures using ICD-10, HCPS and CPT coding systems;
- Transcribe a dictated letter or report into a mail-ready document using a computer and transcribing equipment;
- Identify and apply technological skills including: operating systems, spreadsheets, database management

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 102
Natural Sciences (and Scientific Reasoning) (required)	BIOL 105
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised

### (required) Curriculum Requirements

Critical Thinking and Reasoning

A minimum of 62 credits is required for degree completion. A minimum average of C is required in all Healthcare Office Coordinator courses.

as advised

Code	Title	Credits		
Major Field Requirements				
BSAD Elective as	advised	3		
BSAD 140	Business Communications	3		
HCOC 116	Medical Keyboarding	2		
HCOC 117	Healthcare Office Orientation	1		
OFFT 120	Introduction to MS Office I (Word, PowerPoint, a Outlook)	and 3		
OFFT 130	Data Entry	1		
OFFT 135	Machine Transcription	2		
HCOC 200	Medical Coding	3		
HCOC 201	Outpatient Billing	2		
HCOC 202	Inpatient Billing	2		
HCOC 216	Healthcare Office Simulation	3		
HCOC 218	Electronic Health Records Mgmt	3		
OFFT 220	Introduction to MS Office II (Excel and Access)	3		
HCOC 235	Medical Transcription	3		
HCOC 250	Medical Terminology	3		
HCOC 291	Healthcare Office Internship I	1		
HCOC 292	Healthcare Office Intern II	1		

Any Elective as advised		
Required SUNY G	eneral Education Coursework	
MATH 102	Intermediate Algebra w Trig	3
COMM 105	Research & Communication	3
BIOL 105	Human Biology (additional 1 credit lab is optional)	3-4
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised		
Additional SUNY General Education as advised		
Total Credits 62-6		

# **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
COMM 105	Research & Communication	3
HCOC 116	Medical Keyboarding	2
HCOC 117	Healthcare Office Orientation	1
OFFT 120	Introduction to MS Office I (Word, PowerPoint, and Outlook)	3
HCOC 250	Medical Terminology	3
OFFT 130	Data Entry	1
SUNY General Education a	as advised	3
	Credits	16
Spring		
BSAD Elective as advised		3
HCOC 218	Electronic Health Records Mgmt	3
OFFT 220	Introduction to MS Office II (Excel and Access)	3
SUNY General Education a	is advised	6
	Credits	15
Year 2		
Fall		
BIOL 105	Human Biology	3
OFFT 135	Machine Transcription	2
HCOC 200	Medical Coding	3
SUNY General Education M	Nathematics (and Quantitative Reasoning) as Advised	3
BSAD 140	Business Communications	3
SUNY General Education a	is advised	2
	Credits	16
Spring		
General Elective as advise	d	3
HCOC 201	Outpatient Billing	2
HCOC 202	Inpatient Billing	2
HCOC 216	Healthcare Office Simulation	3
HCOC 235	Medical Transcription	3
HCOC 291	Healthcare Office Internship I	1
HCOC 292	Healthcare Office Intern II	1
	Credits	15
	Total Credits	62

# **History Minor**

The history minor is for students in a bachelor's degree program who also want to gain a better understanding of human societies through the study of the discipline of history.

# **Program Learning Outcomes**

Upon successful completion of the minor, students will be able to:

- · Demonstrate college-level research and writing skills
- Identify and explain the significance of key people, ideas, and events in the history of a period or region
- Explain the development of distinctive institutions of western civilization and the impact of the Western world on other world regions
- Explain key points in the history of a period of world history or non-Western/US region that demonstrates the nature change over time.
- Demonstrate a knowledge of the basic narrative of American history including key American institutions, the effect of these institutions on different groups, and the evolving relationship of the US with the world

### **Curriculum Requirements**

The minor requires 15 credits (five HIST courses) with at least one HIST course from each of the areas covered by the discipline: American History, Other World Civilization, and Western Civilization. At least two HIST courses must be at the 300-level or higher.

Courses regularly offered: (See the rest of the catalog for a complete list of HIST courses).

#### **American History**

Code	Title	Credits
HIST 101	United States History to 1800	3
HIST 102	U.S. History 1800 to 1900	3
HIST 103	U.S. History from 1900-Present	3
HIST 225	Women in the United States	3
HIST 320	History of New York State	3

#### Western Civilization

Code	Title	Credits
HIST 161	European History to 1648	3
HIST 162	European History from 1500	3
HIST 182	History Technology From 1750	3
HIST 371	The World Wars	3
HIST 372	The Cold War	3
HIST 380	History of Science Medicine	3

#### **Other World Civilization**

Code	Title	Credits
HIST 151	World History to 1600	3
HIST 152	World History from 1500	3
HIST 171	Environmental History	3
HIST 181	History of Technology to 1800	3
HIST 351	The World Since 1914	3
HIST 375	Russian History	3

# Horticulture Business Management, B.TECH.

#### Major Code: 1941

In combining the study of plant science and commercial business management at the baccalaureate level, the Horticulture Business Management degree program is the first of its kind in New York State. The purpose of this program is to provide students entering the horticulture industry with the necessary knowledge, skills, and training to own, manage or work in a commercial horticulture business operation.

Both nationwide and within New York State, horticulture is a healthy and dynamic industry that includes several divisions and branches such as Floriculture; Viticulture; Specialty Crop Production; Organic Fruit and Vegetable Production; Greenhouse and Nursery Production; Controlled Environment Agriculture (CEA); Landscape Development and Management; and Landscape Design. The educational objectives of the Horticulture Business Management are to ensure that successful BT candidates acquire all the scientific, technical, critical thinking, and managerial knowledge and skills pertaining to the field of horticulture.

The BT in Horticulture Business Management is consistent with the overall mission of SUNY Morrisville to cultivate the entrepreneurial context of education and to prepare its graduates for career opportunities in existing and emerging areas of agriculture and technology.

## **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Secure entry-to mid-level professional positions in the horticulture industry including retail and wholesale nursery/greenhouse firms, retail garden centers, landscape businesses, food crop production, horticultural product development, and marketing firms.
- Assume leadership and supervisory positions in project management of horticultural and landscape endeavors.
- Establish and operate a business such as a garden center, farm, nursery, flower shop, landscape contracting or similar business.
- Apply problem-solving skills in greenhouse operations, crop production, flower shop operations, and landscape installation
- Utilize current technology, products and services to maximize business efficiency and success

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	AGSC 137 or as advised
Natural Sciences (and Scientific Reasoning) (required)	BIOL 102, HORT 150, HORT 201
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### Core Competencies:

Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

# **Curriculum Requirements**

A minimum of 122 credits is required for degree completion.

Code	Title	Credits	
Major Requirements			
AGRO 110	Soil Science	3	
BIOL 102	Botany-Form Function Seed Plt	3	
BSAD 108	Business Law 1 (or as advised)	3	
BSAD 112	Marketing (or as advised)	3	
BSAD 116	Business Organization & Mgmt	3	
ENSC 107	Integrated Pest Management	1	
HORT 101	Plant Materials	3	
HORT 103	Landscape Planning & Design I	3	
HORT 106	Floral Design	3	
HORT 108	Herbaceous Plant Materials	2	
HORT 109	Landscape & Turf Management	3	
HORT 110	Horticulture Practices I	2	
HORT 150	Fruit & Vegetable Production	3	
HORT 200	Greenhouse Management	3	
HORT 201	Plant Propagation	3	
HORT 202	Greenhouse Production	3	
HORT 206	Sustainable Landscapes	3	
HORT 210	Horticultural Practices II	2	
HORT 241	Plant Protection	3	
HORT 310	Horticultural Practices III	2	
HORT 320	Horticulture Internship Orient	1	
HORT 403	Planting Design	4	
HORT 430	Horticulture Business Develop	3	
HORT 440	Hort Business Internship	15	
300-400 Upper Div	vision Electives as advised	20	
<b>General Electives</b>	as advised	7-10	
Required SUNY General Education Coursework			
SUNY General Education Communication Written and Oral as Advised 3-6			
Select one of the following: 3			
AGSC 137	Agricultural Statistics		
SUNY General Education Mathematics (and Quantitative Reasoning) as Advised			
SUNY General Education Diversity: Equity, Inclusion, and Social 3 Justice as Advised			
Additional SUNY (	General Education as advised	9-12	
Select from the following categories: Humanities, Social Science, US History & Civic Engagement, World History & Global Awareness, World Languages			
Total Credits		122-131	

# Sample Course Sequence

Year 1		
Fall		
HORT 101	Plant Materials	3
HORT 109	Landscape & Turf Management	3
BIOL 102	Botany-Form Function Seed Plt	3
HORT 110	Horticulture Practices I	2
SUNY General Education C	Communication Written and Oral as Advised	3
	Credits	14
Spring		
HORT 108	Herbaceous Plant Materials	2
HORT 210	Horticultural Practices II	2
HORT 103	Landscape Planning & Design I	3
BSAD 116	Business Organization & Mgmt (or as advised)	3
HORT 150	Fruit & Vegetable Production	3
SUNY General Education a	s advised	3
	Credits	16
Year 2		
Fall		
HORT 201	Plant Propagation	3
HORT 200	Greenhouse Management	3
ENSC 107	Integrated Pest Management	1
HORT 106	Floral Design	3
SUNY General Education a	s advised	3
	Credits	13
Spring		
HORT 241	Plant Protection	3
HORT 202	Greenhouse Production	3
AGRO 110	Soil Science	3
BSAD 108	Business Law 1 (or as advised)	3
HORT 206	Sustainable Landscapes	3
	Credits	15
Year 3		
Fall		
HORT 310	Horticultural Practices III	2
SUNY General Education N	Nathematics (and Quantitative Reasoning) as Advised	3
BSAD 112	Marketing (or as advised)	3
SUNY General Education E	ective and DEISJ as advised	5
300-400 Upper Division Ge	neral Elective as advised	2
	Credits	15
Spring		
HORT 430	Horticulture Business Develop	3
SUNY General Education a	s advised	6
Select from the followi	ng categories: Humanities, Social Science, US History &	
Civic Engagement, Wo	rld History & Global Awareness, World Languages	
300-400 Upper Division Ge	neral Electives as advised	7
	Credits	16
Year 4		
Fall		_
HURT 320	Horticulture Internship Urient	1
HURI 403	Planting Design	4
300-400 Upper Division Ge	neral Electives as advised	10
	Credits	15
Spring		-
HURT 440	Hort Business Internship	15
	Credits	15
	Total Credits	119
# Horticulture, A.A.S.

#### Major Code: 0610

Students choose between the following options: Horticulture Production, Landscape Management, or General Transfer. Horticulture is a diverse field and this program provides a wide range of training to prepare students for careers in various disciplines. Students have opportunities to participate in income-generating and community service projects. Some choose to enter the industry after two years. Others transfer to upper division horticulture and plant science programs at Cornell University, SUNY-ESF, and many others. Horticulture is one of the largest industries in the state and offers many professional options. The Horticulture Production option prepares students for practical, reallife situations in areas such as crop production, greenhouse operations, and integrated pest management. The Landscape Management option prepares students for careers in landscape design/build professions or transfer to related bachelor degree programs. The General Transfer option is a SUNY General Education and science-based course of study for transfer to related four-year programs.

### **Career Opportunities**

Greenhouse operator/grower, floral designer, flower shop manager, wholesale florist, farm and garden store owner or manager, landscape/ lawn technician, nursery operator/grower, maintenance supervisor of public grounds, public gardener, golf course superintendent, salesperson of horticultural products or greenhouse equipment, representative for wholesale growers and equipment suppliers, and more.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Demonstrate knowledge of green industry practices such as plant materials and their landscape uses, specialty crop production, plant physiology, plant protection, and pesticide use & handling;
- Demonstrate problem-solving skills in the fields of landscape management, specialty crop production systems and greenhouse management.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	BIOL 102, HORT 150, HORT 201
Humanities	as advised
Social Sciences	as advised
The Arts	as advised

I	US History and Civic Engagement	as advised
1	World History and Global Awareness	as advised
1	World Languages	as advised
(	Core Competencies:	
	Information Literacy (required)	as advised

as advised

### **Curriculum Requirements**

Critical Thinking and Reasoning

(required)

A minimum of 64 credits is required for degree completion.

#### **Horticulture Production Option**

Code	Title 0	Credits
Major Field Requirements		
AGRO 110	Soil Science (Natural Science GENED as advised	l) 3
BIOL 102	Botany-Form Function Seed Plt (Natural Science GENED)	3
BSAD 116	Business Organization & Mgmt	3
ENSC 106	Pesticide Use and Handling	2
ENSC 107	Integrated Pest Management	1
HORT 101	Plant Materials	3
HORT 108	Herbaceous Plant Materials	2
HORT 110	Horticulture Practices I (or as Advised)	2
HORT 150	Fruit & Vegetable Production	3
HORT 200	Greenhouse Management	3
HORT 201	Plant Propagation (Natural Science GENED)	3
HORT 202	Greenhouse Production	3
HORT 206	Sustainable Landscapes	3
HORT 210	Horticultural Practices II (or as Advised)	2
HORT 241	Plant Protection (Natural Science GENED)	3
Required SUNY G	eneral Education Coursework	
Select one of the	following:	3
AGSC 137	Agricultural Statistics	
SUNY General Reasoning) as	Education Mathematics (and Quantitative Advised	
SUNY General Ed	ucation Communication Written and Oral as Advis	ed 3-6
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
SUNY General Edu as Advised	ucation Natural Sciences (and Scientific Reasonir	ng) 9
Additional SUNY	General Education as advised	0-3
Students will con courses	sult with their academic advisor to select elective	13
Total Credits		70-76

#### Landscape Management Option

Provides students with the foundational knowledge, hands-on skills, and experience that enable them to successfully pursue a career in the landscape industry.

Code	Title C	redits
BIOL 102	Botany-Form Function Seed Plt	3
BSAD 116	Business Organization & Mgmt	3
ENSC 106	Pesticide Use and Handling (or as Advised)	2
HORT 101	Plant Materials	3
HORT 103	Landscape Planning & Design I	3
HORT 105	Landscape Planning & Design II	3
HORT 206	Sustainable Landscapes	3
ENSC 107	Integrated Pest Management	1
HORT 108	Herbaceous Plant Materials	2
HORT 109	Landscape & Turf Management	3
Select one of the	following:	2
HORT 110	Horticulture Practices I	
HORT 210	Horticultural Practices II	
HORT 201	Plant Propagation	3
HORT 240	Landcadd	3
HORT 241	Plant Protection	3
NATR 160	Principles of Arboriculture	2
NATR 161	Practices of Arboriculture	1
Select one of the	following:	3
AGSC 137	Agricultural Statistics	
SUNY General Edu as Advised	ucation Mathematics (and Quantitative Reasoning	)
SUNY General Edu	ucation Communication Written and Oral as Advise	ed 6
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised		
Additional SUNY General Education, General Electives, and/or 1		12
Prerequisites as a	dvised	
Students will c courses	onsult with their academic advisor to select	
Total Credits		64

#### **General Transfer Option**

Code	Title C	redits
BIOL 102	Botany-Form Function Seed Plt	3
CHEM 121	General College Chemistry I	4
CHEM 122	General College Chemistry II	4
ENSC 107	Integrated Pest Management	1
HORT 101	Plant Materials	3
HORT 110	Horticulture Practices I (or as advised)	2
HORT 210	Horticultural Practices II (or as advised)	2
HORT 241	Plant Protection	3
Select one of the	following:	3
AGSC 137	Agricultural Statistics	
SUNY General Reasoning) as	Education Mathematics (and Quantitative Advised	
SUNY General Edu	ucation Communication Written and Oral as Advise	ed 6
SUNY General Education Diversity: Equity, Inclusion, and Social 3 Justice as Advised		
Additional SUNY ( Prerequisites as a	General Education, General Electives, and/or advised	30

Т	otal Credits	64
	courses	
	Students will consult with their academic advisor to select	

#### Sample Course Sequence Horticulture Production Option

Courses taken "as Advised" will need to have a course substitution submitted prior to enrolling.

Course	Title	Credits
Year 1		
Fall		
HORT 101	Plant Materials	3
BIOL 102	Botany-Form Function Seed Plt	3
HORT 110	Horticulture Practices I (or as Advised)	2
AGRO 110	Soil Science	3
SUNY General Education (	Communication Written as advised	3
	Credits	14
Spring		
HORT 108	Herbaceous Plant Materials	2
HORT 210	Horticultural Practices II (or as Advised)	2
Select one of the following	<b>j</b> :	3
AGSC 137	Agricultural Statistics	
SUNY General Educati Advised	on Mathematics (and Quantitative Reasoning) as	
SUNY General Education (	Communication Oral as advised	3
SUNY General Education,	General Elective, and/or Prerequisite as advised	
HORT 150	Fruit & Vegetable Production	3
	Credits	13
Year 2		
Fall		
HORT 200	Greenhouse Management	3
HORT 201	Plant Propagation	3
ENSC 107	Integrated Pest Management	1
SUNY General Education,	General Electives, and/or Prerequisites as advised	6
SUNY General Education	Diversity: Equity, Inclusion, and Social Justice as Advised	3
	Credits	16
Spring		
HORT 202	Greenhouse Production	3
BSAD 116	Business Organization & Mgmt	3
ENSC 106	Pesticide Use and Handling	2
HORT 241	Plant Protection	3
HORT 206	Sustainable Landscapes	3
SUNY General Education,	General Elective, and/or Prerequisite as advised	3
	Credits	17
	Total Credits	60

#### Landscape Management

Courses taken "as Advised" will need to have a course substitution submitted prior to enrolling.

Course	Title	Credits
Year 1		
Fall		
HORT 101	Plant Materials	3
HORT 109	Landscape & Turf Management	3
HORT 110	Horticulture Practices I (or as Advised)	2
BIOL 102	Botany-Form Function Seed Plt	3
SUNY General Education	Communication Written as advised	3
	Credits	14

#### Spring

HORT 103	Landscape Planning & Design I	3
HORT 108	Herbaceous Plant Materials	2
Select one of the following	g:	3
AGSC 137	Agricultural Statistics	
SUNY General Educati Advised	ion Mathematics (and Quantitative Reasoning) as	
SUNY General Education	Communication Oral as advised	3
SUNY General Education,	General Electives, and/or Prerequisites as advised	6
	Credits	17
Year 2		
Fall		
HORT 105	Landscape Planning & Design II	3
HORT 201	Plant Propagation	3
ENSC 107	Integrated Pest Management	1
NATR 160	Principles of Arboriculture	2
NATR 161	Practices of Arboriculture	1
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised		3
SUNY General Education,	General Elective, and/or Prerequisite as advised	3
	Credits	16
Spring		
HORT 240	Landcadd	3
HORT 241	Plant Protection	3
HORT 206	Sustainable Landscapes	3
ENSC 106	Pesticide Use and Handling	2
BSAD 116	Business Organization & Mgmt	3
SUNY General Education, General Elective, and/or Prerequisite as advised		3

Credits Total Credits

#### **General Transfer Option**

Courses taken "as Advised" will need to have a course substitution submitted prior to enrolling.

Course	Title	Credits
Year 1		
Fall		
HORT 101	Plant Materials	3
BIOL 102	Botany-Form Function Seed Plt	3
HORT 110	Horticulture Practices I (or as Advised)	2
SUNY General Educatio	n Communication Written as advised	3
SUNY General Educatio	n Diversity: Equity, Inclusion, and Social Justice as Advised	3
	Credits	14
Spring		
HORT 210	Horticultural Practices II (or as Advised)	2
SUNY General Education Communication Oral as advised		3
SUNY General Educatio	n, General Electives, and/or Prerequisites as advised	9
Select one of the follow	ing:	3
AGSC 137	Agricultural Statistics	
SUNY General Educ	ation Mathematics (and Quantitative Reasoning) as	
Advised		
	Credits	17
Year 2		
Fall		
ENSC 107	Integrated Pest Management	1
CHEM 121	General College Chemistry I (Lecture and Lab)	4
SUNY General Educatio	n, General Electives, and/or Prerequisites as advised	12
	Credits	17
Spring		
HORT 241	Plant Protection	3
CHEM 122	General College Chemistry II (Lecture and Lab)	4

SUNY General Education, General Electives, and/or Prerequisites as advised	
Credits	16
Total Credits	64

# Hospitality Management, B.B.A.

#### Major Code: 0073

17

64

This program, which builds on associate degrees in Hotel Management, Restaurant Management, Culinary Arts Management, Business Management, Recreation and Resort Management, prepares students for rewarding careers in the global service economy. The curriculum combines resort and recreation management theory, evolving technology applications, business management and operational services. The program includes a semester where seniors fulfill an internship at resort and recreation facilities.

Career Opportunities: Management-level positions worldwide at resorts, attractions, vacation excursion companies, hotels, restaurants, sports and entertainment complexes, theme parks, commercial recreation establishments, casinos and cruise lines, world professional associations and travel-related companies.

#### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Appraise situations and make strategic decisions from a top manager's viewpoint.
- · Critically evaluate a strategic plan for an organization.
- Discuss ethical, regulatory, environmental, social, political and technological issues related to human resource management.
- Demonstrate methods to motivate staff to maximize revenues, reduce turnover and increase customer satisfaction.
- · Develop approaches for training a diverse staff.
- Explain current technology applications in Resort and Recreation facilities and select software applications appropriate for operational challenges.
- Complete needs assessment, design, and implementation training program at the property or corporate level.
- Explain the principles of "Hospitality Law" and be able to practically apply the basic legal theory and prevention techniques.
- Describe factors that have contributed to globalization and global economy as well as their impact on resorts.
- Describe and implement qualitative and quantitative research methodologies.
- Collect, synthesize and analyze customer satisfaction data and present findings using various methodologies.
- Recognize and explain the liability and compliance issues associated with resort security and safety.
- · Communicate effectively both in written and oral presentations.
- Research and analyze the work environment in large, medium and small organizations as well as investigate an employer's expectations in order to secure an ideal job placement.
- To develop an appreciation of various cultures and global hospitality business practices and discuss the intricacies of particular regions of the world.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BBA degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### **Knowledge and Skills Areas:**

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	PSYC 101 and ECON 100
The Arts	as advised
US History and Civic Engagement	HIST 101 or HIST 102 or HIST 103
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised	
Critical Thinking and Reasoning	as advised	
(required)		

### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion. A minimum of 2.0 GPA required in all RRMT courses.

Code	Title	Credits
Major Field Requi	rements	
ACCT Accounting	as advised	3
BSAD 108	Business Law 1	3
BSAD 116	Business Organization & Mgmt	3
BSAD 112	Marketing	3
CITA 101	Principles Computer Apps	3
TOUR 106	Travel-Tourism/Hospitality	3
FSAD 257	Senior Seminar	1
CUL 101	Culinary Arts I	4
FSAD 259	Introduction To Catering	3
CUL 201	Advanced Culinary Arts	4
CUL 211	Culinary Restaurant	6
FSAD 201	Cooperative Summer Work	2
BSAD 221	Business Statistics	3
or MATH 141	Statistics	
BSAD 310	Human Resource Management	3
BSAD 449	Management Policy and Issues	3
RRMT 320	Legal Implications RR Industry	3
RRMT 399	Study of Wine and Spirits	3
RRMT 425	Training Design & Impl - Hosp	3
RRMT 440	Tech Applications for RR Mgt	4

RRMT 470	Capstone Exp. Orientation	2
RRMT 480	Internship RR Service Mgt	12
300-400 Level Ele	ctives in RRMT, BSAD, ENTR	6
Required SUNY G	eneral Education Coursework	
COMM 105	Research & Communication	3
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
MATH 102	Intermediate Algebra w Trig	3
or MATH 127	Mathematical Reasoning	
SUNY General Edu	ucation World Languages as Advised	3
PSYC 101	Introduction to Psychology	3
ECON 100	Introduction to Macroeconomics	3
HIST 101	United States History to 1800	3
or HIST 102	U.S. History 1800 to 1900	
or HIST 103	U.S. History from 1900-Present	
SUNY General Ed as Advised	ucation Natural Sciences (and Scientific Reasoning)	3
Additional SUNY	General Education Credits as advised	16
Total Credits		120

Course	Title	Credits
Year 1		
Fall		
COMM 105	Research & Communication	3
PSYC 101	Introduction to Psychology	3
MATH 102 or MATH 127	Intermediate Algebra w Trig or Mathematical Reasoning	3
CUL 101	Culinary Arts I	4
BSAD 112	Marketing	3
	Credits	16
Spring		
BSAD 116	Business Organization & Mgmt	3
FSAD 154	Equipment Selection & Layout	3
TOUR 106	Travel-Tourism/Hospitality	3
ECON 100	Introduction to Macroeconomics	3
SUNY General Education	Diversity: Equity, Inclusion, and Social Justice as Advised	3
	Credits	15
Year 2		
Fall		
FSAD 201	Cooperative Summer Work	2
FSAD 259	Introduction To Catering	3
CUL 201	Advanced Culinary Arts	4
ACCT 100 or ACCT 101	Accounting Info & Mgt Decision or Principles of Accounting I	3
HIST 101 or HIST 102 or HIST 103	United States History to 1800 or U.S. History 1800 to 1900 or U.S. History from 1900-Present	3
	Credits	15
Spring		
BSAD 108	Business Law 1	3
FSAD 257	Senior Seminar	1
CUL 211	Culinary Restaurant	6
CITA 101	Principles Computer Apps	3
SUNY General Education	n as advised	3
	Credits	16
Year 3 Fall		
RRMT 320	Legal Implications RR Industry	3

300-400 Level BBMT	Electives as advised	6
SUNY Conoral Education World Languages as Advised		3
SUNY General Educat	ion Notice Languages as Advised	3
SUNY General Educat	ion Natural Sciences (and Scientific Reasoning) as Advised	3
	Credits	15
Spring		
BSAD 310	Human Resource Management	3
BSAD 449	Management Policy and Issues	3
RRMT 425	Training Design & Impl - Hosp	3
RRMT 399	Study of Wine and Spirits	3
SUNY General Educat	ion Diversity: Equity, Inclusion, and Social Justice as Advised	3
300-400 Level RRMT	as advised	3
	Credits	18
Year 4		
Fall		
RRMT 440	Tech Applications for RR Mgt	4
RRMT 470	Capstone Exp. Orientation	2
BSAD 221	Business Statistics	3
or MATH 141	or Statistics	
300-400 Level Elective	e as advised	3
SUNY General Educat	ion as advised	3
	Credits	15
Spring		
RRMT 480	Internship RR Service Mgt	12
	Credits	12
	Total Credits	122

# **Human Services Certificate**

#### Major Code: 0949

The Human Services Certificate is a 21-credit program designed to provide education and training to individuals who are looking for a career helping others. And for those professionals already employed in the human services field, the certificate can assist in their career advancement goals. The seven 3-credit classes in the certificate can be completed at the convenience of the student; however, they can be finished in as few as two semesters. Students can take classes either online or on the Norwich campus. The certificate includes introductory human services and psychology classes as well as more advanced classes in crisis intervention, counseling and case management, human services administration and abnormal psychology. All of the classes are transferable to the Human Services AAS degree, and completion of the certificate leads to advanced standing status that allows students to complete the AAS degree in one calendar year.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Integrate and apply knowledge, skills and attitudes necessary to help people help themselves.
- Demonstrate effective oral and written communication skills with colleagues, clients and communities. These skills will be assessed through the use of assignments that include, but are not limited to, class presentations, role plays and video-taped experiential learning exercises.
- Use critical thinking skills to analyze client needs, problems and strengths to plan, document and assess effective interventions.
- Assess, plan and provide services that are respective of diversity and are culturally competent.
- Identify and conduct themselves as human services professionals with the knowledge of ethical guidelines and professional standards.

#### **Curriculum Requirements**

Code	Title	Credits
HUMS 101	Introduction to Human Services	3
HUMS 200	Helping Proc./Crisis Inter.	3
HUMS 201	Counseling & Case Management	3
HUMS 202	Hum. Svcs. Mgt. & Admin.	3
COMP 101	Composition and Research	3
PSYC 101	Introduction to Psychology	3
PSYC 251	Abnormal Psychology	3
Total Credits		21

#### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
HUMS 101	Introduction to Human Services	3
	Credits	3
Spring		
COMP 101	Composition and Research	3
PSYC 101	Introduction to Psychology	3
	Credits	6
Year 2		
Fall		
HUMS 200	Helping Proc./Crisis Inter.	3
PSYC 251	Abnormal Psychology	3
	Credits	6
Spring		
HUMS 201	Counseling & Case Management	3
HUMS 202	Hum. Svcs. Mgt. & Admin.	3
	Credits	6
	Total Credits	21

# Human Services Leadership, B.P.S.

#### Major Code: 3165

The Human Services Leadership Bachelor of Professional Studies degree will prepare students for careers in organizational leadership or graduate studies in public or business administration, social work or nonprofit management. The degree can also give students the tools to design their own social entrepreneurial enterprises or charitable organizations.

The interdisciplinary program offers courses in human services and psychology, and business and entrepreneurship. Throughout the student's course of study, they will be offered a variety of opportunities to develop a professional portfolio, which will prepare them for employment or graduate study. This includes applied learning opportunities tailored to the student's professional interests through both coursework and a full semester internship experience.

Students will have the opportunity to devote their last semester of study to a full-time 12-credit hour internship experience. Leadership opportunities will be available to them in nonprofits, governmental agencies, public service organizations and local businesses. Some students may take advantage of the opportunity to design their own internship experiences with the support and guidance of SUNY Morrisville's Human Services Institute. Students will be encouraged to take advantage of placement sites across the Central New York region. The distance learning option also supports placements for students living outside the region. Upon successful completion of the degree, students will be able to:

- Apply critical thinking skills to analyze and solve problems in professional practice.
- · Develop effective professional communication and relational skills.
- Utilize data to develop effective business plans around marketing, finance, management, program development and operations.
- Recognize and promote ethical and responsible business practices in nonprofit, government and private agencies.
- Utilize strategic planning in decision-making around program growth and development.
- Develop effective leadership and supervisory skills to impact, influence and inspire others.
- Comprehend social welfare policy and its impact on individuals, families, groups, and organizations.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BPS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105 and COMP 110
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 102
Natural Sciences (and Scientific Reasoning) (required)	BIOL 101
Humanities	COMP 102
Social Sciences	ECON 100, PSYC 101, PSYC 251, PSYC 384, SOCI 101, SOCI 201
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### Core Competencies:

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 124 credits is required for degree completion.

Code	Title	Credits
HUMS 101	Introduction to Human Services	3
HUMS 200	Helping Proc./Crisis Inter.	3
HUMS 201	Counseling & Case Management	3
HUMS 202	Hum. Svcs. Mgt. & Admin.	3
HUMS 302	Principles of Supervision	3

HUMS 398	Adv Topics in Human Services	3
HUMS 402	Soc Policy Govt Rel Nonprofits	3
HUMS 420	Grant Writing & Contract Mgmt	4
HUMS 449	Human Service Lead Intern Prep	2
HUMS 450	Human Service Lead Internship	12
ACCT 101	Principles of Accounting I	3
ACCT 102	Principles of Accounting II	3
BIOL 101	Introduction to Biology	4
BSAD 108	Business Law 1	3
BSAD 116	Business Organization & Mgmt	3
BSAD 300	Management Communications	3
BSAD 310	Human Resource Management	3
BSAD 320	Entrepreneurship	3
BSAD 325	Marketing Management	3
BSAD 350	Principles Corporate Finance	3
BSAD 408	Responsible Business Ownership	3
BSAD 411	Leadership in Organizations	3
BSAD 449	Management Policy and Issues	3
CITA 101	Principles Computer Apps	3
COMM 105	Research & Communication	3
COMP 102	Writing About Literature	3
COMP 110	Technical Communications	3
ECON 100	Introduction to Macroeconomics	3
ENTR 342	Innovation & Venture Creation	3
MATH 102	Intermediate Algebra w Trig	3
PSYC 101	Introduction to Psychology	3
PSYC 251	Abnormal Psychology	3
PSYC 384	Group Behavior	3
SOCI 101	Intro to Sociology	3
SOCI 201	Social Problems	3
SUNY General Ed Awareness, World	ucation (The Arts, World History & Global Ll anguages) as Advised	3
SUNY General Ed	ucation U.S. History & Civic Engagement as Advised	3
SUNY General Ed	ucation Diversity: Equity, Inclusion, and Social	3
Justice as Advise	d	Ŭ
Total Credits		124

Course	Title	Credits
Year 1		
Fall		
HUMS 101	Introduction to Human Services	3
ECON 100	Introduction to Macroeconomics	3
SOCI 101	Intro to Sociology	3
COMM 105	Research & Communication	3
CITA 101	Principles Computer Apps	3
	Credits	15
Spring		
HUMS 201	Counseling & Case Management	3
BSAD 116	Business Organization & Mgmt	3
PSYC 101	Introduction to Psychology	3
COMP 102	Writing About Literature	3
ACCT 101	Principles of Accounting I	3
SUNY General Educat	ion Diversity: Equity, Inclusion, and Social Justice as Advised	3
	Credits	18

#### Year 2

Fall		
HUMS 200	Helping Proc./Crisis Inter.	3
BSAD 108	Business Law 1	3
COMP 110	Technical Communications	3
SOCI 201	Social Problems	3
HIST Elective in American	History	3
ACCT 102	Principles of Accounting II	3
	Credits	18
Spring		
HUMS 202	Hum. Svcs. Mgt. & Admin.	3
PSYC 251	Abnormal Psychology	3
BIOL 101	Introduction to Biology	4
MATH 102	Intermediate Algebra w Trig	3
SUNY General Education O World Languages, US Hist	Courses as Advised (World History & Global Awareness, ory & Civic Engagement, Arts)	3
	Credits	16
Year 3		
Fall		
BSAD 320	Entrepreneurship	3
BSAD 350	Principles Corporate Finance	3
BSAD 408	Responsible Business Ownership	3
PSYC 384	Group Behavior	3
HUMS 398	Adv Topics in Human Services	3
	Credits	15
Spring		
ENTR 342	Innovation & Venture Creation	3
BSAD 300	Management Communications	3
BSAD 310	Human Resource Management	3
BSAD 325	Marketing Management	3
HUMS 302	Principles of Supervision	3
	Credits	15
Year 4		
Fall		
BSAD 411	Leadership in Organizations	3
BSAD 449	Management Policy and Issues	3
HUMS 402	Soc Policy Govt Rel Nonprofits	3
HUMS 420	Grant Writing & Contract Mgmt	4
HUMS 449	Human Service Lead Intern Prep	2
Casing	Credits	15
	as Loadorchin Internchin	10
	Credite	12
		12
	lotal Credits	124

## Human Services, A.A.S.

#### Major Code: 0604

Through the Associate of Applied Science (A.A.S.) degree program in human services offered at the Norwich Campus of SUNY Morrisville, students prepare to help individuals, families and communities through learning about and practicing a variety of support services, including crisis intervention, direct support, counseling, case management and human service administration. Students will learn how to offer assistance to those seeking support or guidance in many settings, including homes, schools, hospitals and nonprofit agencies. Students begin their studies by immediately immersing themselves in their first of three internships beginning in their first semester of study. By the time students finish their practicum in their last semester, they will have the education and skills to begin helping those in need. SUNY Morrisville Human Services Program graduates have attained employment as domestic violence advocates, substance abuse case managers, children's health home case managers, outpatient mental health intake workers, school-based counselors and direct support professionals for people with developmental disabilities. Those students who have completed the associates degree have transferred into bachelor's degree programs as juniors in social work, applied psychology, human development and human services.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Recount historical context and current trends of the human service profession (CSHSE Standard 11, 13)
- Evaluate skills and strategies that influence change (CSHSE Standard 13, 14)
- Integrate human service competency skills into the helping process (CSHSE Standard 12, 13)
- Analyze personal styles, attributes, values, ethics, biases, and prejudices (CSHSE Standard 20)
- Demonstrate understanding of interpersonal skills necessary to effect change (CSHSE Standard 17)
- Develop a plan of action and implementation techniques with the client (CSHSE Standard 14, 16)
- Monitor and assess the effectiveness of interventions (CSHSE Standard 14, 16)
- Exhibit professionalism in relationship to the values and ethics established by the Council for Standards in Human Service Education
- Recognize the impact on biological, psychological and social forces on human behavior and the impact these forces have on implementing change (CSHSE Standard 12)
- Demonstrate an understanding of diversity and cultural influences (CSHSE Standard 12)
- Illustrate skills associated with the collection and dissemination of information including issues of confidentiality (CSHSE Standard 15)
- Display recognition of organizational theories and administrative aspects of human service delivery (CSHSE Standard 18)

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 102 or 123
Natural Sciences (and Scientific Reasoning) (requried)	BIOL 105
Humanities	COMP 102
Social Sciences	PSYC 101, PSYC 251, PSYC 255, and SOCI 101
The Arts	as advised

US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### **Core Competencies:**

Information Literacy (required)HUMS 202Critical Thinking and ReasoningHUMS 200 and HUMS 201(required)

### **Curriculum Requirements**

A minimum of 64 credits is required for degree completion.

Code	Title	Credits
HUMS 100	Careers in Helping Professions	1
HUMS 101	Introduction to Human Services	3
HUMS 200	Helping Proc./Crisis Inter.	3
HUMS 201	Counseling & Case Management	3
HUMS 202	Hum. Svcs. Mgt. & Admin.	3
HUMS 141	Internship in Human Services I	1
HUMS 142	Internship Human Services II	1
HUMS 143	Internship Human Services III	1
HUMS 250	Human Service Practicum	3
CITA 101	Principles Computer Apps	3
COMM 105	Research & Communication	3
COMP 102	Writing About Literature	3
BIOL 105	Human Biology (with Lab)	4
MATH 102	Intermediate Algebra w Trig	3
MATH 123	Elementary Statistics	
HIST - As Advise	ed	3
PSYC 101	Introduction to Psychology	3
PSYC 251	Abnormal Psychology	3
PSYC 255	Psychology Personal Adjustment	3
SOCI 101	Intro to Sociology	3
PSYC/SOCI Electives as Advised		6
Additional Elect	ives as Advised	2
SUNY General Education Diversity: Equity, Inclusion, and Social		3
Justice as Advis	sed	
Total Credits		61

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
HUMS 101	Introduction to Human Services	3
HUMS 100	Careers in Helping Professions	1
HUMS 141	Internship in Human Services I	1
PSYC 101	Introduction to Psychology	3
COMM 105	Research & Communication	3
MATH 102	Intermediate Algebra w Trig	3
GNED 100	First Year Experience	2
	Credits	16
Spring		
HUMS 201	Counseling & Case Management	3
HUMS 142	Internship Human Services II	1

	Total Credits	64
	Credits	15
SOCI /PSYC - Electiv	e as Advised	3
PSYC 255	Psychology Personal Adjustment	3
Elective as Advised		3
HUMS 250	Human Service Practicum	3
HUMS 202	Hum. Svcs. Mgt. & Admin.	3
Spring		
	Credits	16
SOCI /PSYC - Electiv	e as Advised	3
CITA 101	Principles Computer Apps	3
BIOL 105	Human Biology (with Lab)	4
HIST - History as Adv	vised	3
HUMS 200	Helping Proc./Crisis Inter.	3
Fall		
Year 2		
	Credits	17
SUNY General Educa	ation Diversity: Equity, Inclusion, and Social Justice as Advised	3
SOCI 101	Intro to Sociology	3
COMP 102	Writing About Literature	3
PSYC 251	Abnormal Psychology	3
HUMS 143	Internship Human Services III	1

# Individual Studies, A.A.S.

#### Major Code: 0688

This program is also offered at the Norwich Campus.

The Individual Studies degree program provides flexible educational opportunities to students who are exploring their academic and career options or who have unique educational goals. Students are provided with academic advisement and career guidance that allows them to design an individualized plan of study. Students may take coursework in a variety of areas, including business, psychology, natural sciences, natural resources and renewable energy, criminal justice, computer information systems, agriculture, journalism, hospitality, the healthcare professions, and others.

#### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- · Communicate clearly and effectively, both orally and in writing.
- · Demonstrate critical thinking and reasoning skills.
- Identify, analyze, and evaluate arguments as they occur in their own or others' work.
- Develop well-reasoned and persuasive arguments.
- Demonstrate effective information management skills.
- · Perform the basic operations of personal computer use.
- Understand and use basic research techniques.
- Locate, evaluate, and synthesize information from a variety of sources.
- Demonstrate readiness to join the workforce or pursue further study through the effective application of skill in communication, critical thinking and reasoning, and information management.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	COMP 102
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised

# Curriculum Requirements

(required)

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
COMM 105	Research & Communication	3
COMP 102	Writing About Literature	3
SUNY General Education Natural Sciences (and Quantitative Reasoning) and/or or Mathematics as Advised		
SUNY General Education Courses in the Arts, Diversity, Equity, 9 Inclusion and Social Justice, Social Sciences, US History and Civic Engagement, World History and Global Awareness; or World Languages as Advised		9
Additional Elective Credits as Advised 37-39		37-39
Total Credits		58-62

### **Sample Course Sequence**

Course Sequences are individualized and built in consultation with each student's academic advisor.

# Individual Studies, A.S.

Major Code: 0688 This program is also offered at the Norwich Campus.

The Individual Studies degree program provides flexible educational opportunities to students who are exploring their academic and career options or who have unique educational goals. Students are provided with academic advisement and career guidance that allows them to design an individualized plan of study. Students may take coursework in a variety of areas, including business, psychology, natural sciences, natural resources and renewable energy, criminal justice, computer information systems, agriculture, journalism, hospitality, the healthcare professions, and others.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- · Communicate clearly and effectively, both orally and in writing.
- · Demonstrate critical thinking and reasoning skills.
- Identify, analyze, and evaluate arguments as they occur in their own or others' work.
- Develop well-reasoned and persuasive arguments.
- Demonstrate effective information management skills.
- · Perform the basic operations of personal computer use.
- · Understand and use basic research techniques.
- Locate, evaluate, and synthesize information from a variety of sources.
- Demonstrate readiness to join the workforce or pursue further study through the effective application of skill in communication, critical thinking and reasoning, and information management.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	COMP 102
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
COMM 105	Research & Communication	3
COMP 102	Writing About Literature	3
MATH as Advised		3
SUNY General Education Natural Sciences (and Scientific Reasoning) 3 as Advised		
SUNY General Education Natural Sciences (and Scientific Reasoning) 6-8 and/or MATH as Advised		
SUNY General Edu Justice as Advised	ucation Diversity, Equity, Inclusion and Social d	3
SUNY General Education courses in Social Sciences, The Arts, US       9         History & Civic Engagement, World History & Global Awareness or       World Languages as Advised		9
Additional Elective	e Credits	28-30
Total Credits		58-62

### **Sample Course Sequence**

Course Sequences are individualized and built in consultation with each student's academic advisor.

# Information Technology, B.TECH.

#### Major Code: 2045

The Bachelor of Technology (B.Tech.) in Information Technology program is designed to prepare students for exciting and lucrative careers in the fast-growing field of technology. In today's dynamic business environment, enterprises rely heavily on technology to create competitive advantages. Information technology (IT) professionals are essential to the success of businesses in virtually every industry, providing the tools and systems that enable organizations to operate efficiently and effectively.

The B.Tech. in Information Technology program builds on the foundation of computer information systems but has a broader scope. Students gain a deep understanding of how to use technology to facilitate business processes, as well as the technical skills necessary to develop and implement innovative solutions. The program emphasizes hands-on learning, providing students with practical experience using the latest network technologies in a top-notch academic lab environment.

Throughout the program, students receive in-depth training in a wide range of technology areas, including web development, programming, server administration, multimedia development, virtualization, cloud computing, and information security. They also can earn a minor in game programming and cybersecurity.

One of the key strengths of the B.Tech. in Information Technology program is its focus on the practical application of technology. Students learn not only how technology works, but also how to use it effectively in real-world settings. They develop strong problem-solving and criticalthinking skills, as well as a deep understanding of the people and processes behind the technology.

Graduates of the program are well-prepared to pursue a wide range of exciting career opportunities, including software developer, network administrator, information security specialist, database administrator, web developer, or technology consultant. They are also prepared to pursue advanced degrees in information technology or related fields.

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

#### Network and System Administration Concentration:

- · Manage enterprise network infrastructure.
- · Manage network and system operating systems.
- Configure computer system security, network security, access control, and physical security.
- · Design networked solutions to facilitate business processes.

#### App and Mobile Web Development Concentration:

- Demonstrate ability to develop, test, and deploy scalable mobile and web applications.
- Design dynamic database-driven mobile and web applications.
- Apply development and project management methodologies throughout the entire app and mobile web project lifecycle
- Apply version control software to manage and track changes to source code effectively

#### **Computer Support Services Concentration:**

- Understand computer hardware and software components, including operating systems, applications, and peripherals.
- Troubleshoot common hardware and software issues.
- Develop effective customer service skills, including active listening, empathy, and conflict resolution.
- Communicate technical concepts to end-users with different levels of technical knowledge.
- Manage your workload effectively to meet service level agreements (SLAs) and resolve technical issues promptly.
- Document technical issues, troubleshooting steps, and resolutions for future reference and knowledge sharing.
- Apply cybersecurity best practices, including password management, data protection, and privacy regulations. You will also learn how to follow compliance standards and protocols, including HIPAA and PCI DSS.
- Practice the techniques of effective support to end-users remotely using remote access tools and techniques.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105 and COMP 310
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised

Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

## **Curriculum Requirements**

A minimum of 120 credits is required for degree completion. Students must select a concentration in App & Mobile Web Development, Computer Support Services, or Network & System Administration (see below for curriculum information).

Code	Title	Credits	
Major Field Requirements			
CITA 110	Intro Information Technology	3	
CITA 120	Computer Concepts & Op Sys	3	
CITA 140	Introduction to Programming	3	
CITA 200	Data Communications Networking	3	
CITA 245	Intro to Database Concepts	3	
CITA 395	Internship Orientation Seminar	1	
CITA 405	Project Management	3	
CITA 460	Organizational & End User IS	3	
CITA 480	Internship Information Tech	12	
300-400 CITA Upp	er Division Electives as advised	3	
CITA Elective as a	dvised	3	
300-400 CITA, AC	CT, or BSAD Upper Division Electives as advised	9	
100-200 CITA, AC	CT, or BSAD Lower Division Electives as advised	6	
BSAD 116	Business Organization & Mgmt	3	
BSAD 300	Management Communications	3	
<b>Required Concent</b>	ration		
Select one of the	following concentrations:	15	
App and Mobile W	/eb Development		
CITA 155	Intro to Mobile Web Design		
CITA 255	App Development		
CITA 345	Advanced Database Concepts		
CITA 355 Advance	ed App and Mobile Web Development		
CITA 455 Cross-P	latform App and Mobile Web Development	3	
Computer Suppor	t Services		
CITA 190	Intro to LINUX/UNIX Systems		
CITA 220	Systems Analysis		
CITA 300	Computer System Support Mainte		
CITA 360	Oper Systems & Software Deploy		
CITA 440	Design Managing Org Training		
Network and Syst	em Administration		
CITA 190	Intro to LINUX/UNIX Systems		
CITA 230	Network Technology		

Total Credits		123
General Electives	as advised	14
Additional SUNY General Education or Liberal Arts & Sciences Electives as advised		
SUNY General Edu as Advised	ication Mathematics (and Quantitative Reasoning)	3
COMP 310	Advance Tech Communication	3
SUNY General Edu Justice as Advised	ication Diversity: Equity, Inclusion, and Social d	3
SUNY General Edu as Advised	ication Natural Sciences (and Scientific Reasoning)	3
COMM 105	Research & Communication	3
SUNY General Edu	cation & Liberal Arts and Sciences Coursework	
CITA 430	Comp Integration & Interop	
CITA 370	Network Design Concepts	
CITA 320	Network Administration	

Course	Title	Credits
Year 1		
Fall		
CITA 110	Intro Information Technology	3
CITA 140	Introduction to Programming	3
SUNY General Education N	Mathematics (and Quantitative Reasoning) as Advised	3
COMP 101	Composition and Research	3
CITA 100-200 Lower Divisi	on Elective as advised	3
GNED 100	First Year Experience	2
	Credits	17
Spring		
CITA 120	Computer Concepts & Op Sys	3
Required Concentration C	ourse as advised	3
BSAD 116	Business Organization & Mgmt	3
SUNY General Education a	as advised	6
	Credits	15
Year 2		
Fall		
CITA 200	Data Communications Networking	3
CITA 245	Intro to Database Concepts	3
SUNY General Education a	as advised	9
	Credits	15
Spring		
Required Concentration C	ourse as advised	3
COMP 310	Advance Tech Communication	3
100-200 CITA, ACCT, or BS	AD Lower Division Elective as advised	3
SUNY General Education a	as advised	6
	Credits	15
Year 3		
Fall		
Required Concentration C	ourse as advised	3
300-400 CITA, ACCT, or BS	AD Upper Division Elective as advised	3
BSAD 300	Management Communications	3
General Electives as advis	ed	6
	Credits	15
Spring		
Required Concentration C	ourse as advised	3
300-400 CITA, ACCT, or BS	AD Upper Division Elective as advised	9
General Elective as advise	d	4
	Credits	16

Year 4		
Fall		
CITA 395	Internship Orientation Seminar	1
Required Concentration Co	urse as advised	3
CITA 405	Project Management	3
CITA 460	Organizational & End User IS	3
General Electives as advise	ed	6
	Credits	16
Spring		
CITA 480	Internship Information Tech	12
	Credits	12

121

Total Credits

# Information Technology: Application Software, B.TECH.

#### Major Code: 1502

Current students majoring in this program are currently completing their course of study. Moving forward, content from this program has been transitioned to the closely associated Computer Support Services Concentration within our Information Technology B.Tech. program. Interested students are strongly encouraged to explore that option.

Enterprises need information to create competitive advantages in today's dynamic business environment. Business people require tools like the Internet, the World Wide Web, laptops, smart phones, cloud computing, wireless technology, multimedia, social media, and e-commerce. Typically, business people do not need to understand how the technology works; they simply want it to do the job for them. Information Technology (IT) builds on the foundation of Computer Information Systems, but it has a broader scope. IT seeks to facilitate the business processes of the organization. The information technologist not only knows how technology work but is equally interested in people and their applied use of technology to increase productivity.

Your educational experience will be supported by a robust information technology infrastructure that support the latest software applications for game development, gaming, graphics, animation, web development, databases, voice and data communications, programming, server administration, multimedia development, virtualization, cloud computing, and information security. Students receive practical hands-on experience in the design and development of computer systems and applications using relevant programming languages, tools, and methodologies in an excellent academic lab environment.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Implement scalable, multi-tier, object-oriented relational database driven application as member of a team.
- Utilize formal development methodologies to design and develop software applications.
- Utilize a formal project management methodology to plan and track development progress.
- · Analyze economic feasibility of an IT product.

### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion.

Code	litle C	redits
CITA 110	Intro Information Technology	3
CITA 120	Computer Concepts & Op Sys	3
CITA 140	Introduction to Programming	3
CITA 150	Data Management Techniques	3
CITA 200	Data Communications Networking	3
CITA 210	Visual Languages & Devel Tools	3
CITA 220	Systems Analysis	3
CITA 340	Data Base Concepts	3
CITA 350	Object-Oriented Systems	3
CITA 395	Internship Orientation Seminar	1
CITA 405	Project Management	3
CITA 450	Applied Database Manager	3
CITA 460	Organizational & End User IS	3
CITA 480	Internship Information Tech	12
CITA 100-200 Leve	el Electives as Advised	3
CITA 300-400 Leve	el Electives as Advised	3
BSAD 116	Business Organization & Mgmt	3
BSAD 300	Management Communications	3
CITA, ACCT, or BS/	AD 300-440 as advised	9
CITA, ACCT, or BS/	AD 100-200 as advised	6
GNED 100	First Year Experience	2
COMP 101	Composition and Research	3
COMP 310	Advance Tech Communication	3
SUNY General Edu	ucation Mathematics (and Quantitative Reasoning	) 3
as Advised		
Liberal Art & Scier	nce Electives as advised	21
General Electives	as advised	12
Total Credits		120

Course	Title	Credits	
Year 1			
Fall			
CITA 110	Intro Information Technology	3	
CITA 140	Introduction to Programming	3	
CITA Elective as advised		3	
COMP 101	Composition and Research	3	
SUNY General Education M	lathematics (and Quantitative Reasoning) as Advised	3	
GNED 100	First Year Experience	2	
	Credits	17	
Spring			
CITA 120	Computer Concepts & Op Sys	3	
CITA 150	Data Management Techniques	3	
BSAD 116	Business Organization & Mgmt	3	
Liberal Arts & Sciences Ele	ctives as advised	6	
	Credits	15	
Year 2			
Fall			
CITA 200	Data Communications Networking	3	
CITA 210	Visual Languages & Devel Tools	3	
CITA 220	Systems Analysis	3	
100-200 CITA, ACCT or BSAD Lower Division Elective as advised		3	
Liberal Arts & Sciences Ele	Liberal Arts & Sciences Elective as advised 3		
	Credits	15	

#### Spring

CITA 340	Data Base Concepts	3
100-200 CITA, ACC	T or BSAD Lower Division Elective as advised	3
COMP 310	Advance Tech Communication	3
Liberal Arts & Sciences Electives as advised		6
	Credits	15
Year 3		
Fall		
300-400 CITA Upper Division Elective as advised		2
300 400 CITA Oppe	er Division Elective as auviseu	5

	Credits	15
Liberal Arts & Sciences Electives as advised		6
300-400 ACCT, BSAD or Cl	TA Upper Division Elective as advised	3
BSAD 300	Management Communications	3

#### Spring

Spi CIT

CITA 350	Object-Oriented Systems	3
300-400 ACCT, BSAD or Cl	TA Upper Division Elective as advised	6
General Electives as advis	ed	6
	Credits	15
Year 4		
Fall		
CITA 395	Internship Orientation Seminar	1
CITA 405	Project Management	3
CITA 450	Applied Database Manager	3
CITA 460	Organizational & End User IS	3
General Electives as advised		6

ring		
A 480	Internship Information Tech	1:
	Credits	1:
	Total Credits	120

# Information Technology: End-User Support, B.TECH.

Credits

#### Major Code: 1504

Current students majoring in this program are currently completing their course of study. Moving forward, content from this program has been transitioned to the closely associated Computer Support Services Concentration within our Information Technology B. Tech. program. Interested students are strongly encouraged to explore that option.

Businesses and organizations need information to create competitive advantages in today's dynamic business world. As an End User Support specialist, you will be an integral part of a successful business operation.

Specialized software, intricate network designs, and mission critical hardware help to keep the pace of business moving. An End User Support specialist will provide appropriate level response and support for the end user. Often times an End User Support specialist is the first line of defense when customers face problems or defects with software, network or hardware infrastructure. As an End User Support specialist, you will need to have good judgment, clear communication skills and the ability to solve complex problems.

Duties and tasks that are required of an End User Support specialist will include diagnosing computer hardware and networking devices, troubleshooting software programs accurately and quickly. The End User Support degree program here at SUNY Morrisville provides students with the skills to build troubleshoot and repair computer hardware, networking infrastructure and software programs. Students will develop a strong base in problem solving skills with live lab simulations and a hands-on approach to learning. You will gain a solid foundation in hardware components, operating systems, networked environments, and commonly used software packages. Your educational experience will be supported by a robust information technology infrastructure. Students receive practical hands-on experience in their field of study using client and server machines in a high-speed networked environment. These systems support the latest software packages for graphics, animation, web development, databases, voice and data communications, programming, server administration, multimedia development and information security.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Analyze needs and develop an appropriate and effective training program(s) for adult learners.
- Identify, assess, utilize and/or deploy the various tools of the trade relative to support professionals.
- · Demonstrate computer software and hardware maintenance skills.

### **Curriculum Requirements**

16

A minimum of 120 credits is required for degree completion.

Code	Title	Credits
CITA 110	Intro Information Technology	3
CITA 120	Computer Concepts & Op Sys	3
CITA 140	Introduction to Programming	3
CITA 190	Intro to LINUX/UNIX Systems	3
CITA 200	Data Communications Networking	3
CITA 210	Visual Languages & Devel Tools	3
CITA 220	Systems Analysis	3
CITA 300	Computer System Support Mainte	3
CITA 360	Oper Systems & Software Deploy	3
CITA 395	Internship Orientation Seminar	1
CITA 405	Project Management	3
CITA 440	Design Managing Org Training	3
CITA 460	Organizational & End User IS	3
CITA 480	Internship Information Tech	12
BSAD 116	Business Organization & Mgmt	3
BSAD 300	Management Communications	3
CITA 100-200 Low	er Division Electives as advised	3
CITA 300-400 Upp	er Divisionl Electives as advised	3
100-200 CITA, ACC	CT, or BSAD Lower Division Electives as advised	6
300-400 CITA, ACC	CT, or BSAD Upper Division Electives as advised	9
GNED 100	First Year Experience	1
COMP 101	Composition and Research	3
COMP 310	Advance Tech Communication	3
SUNY General Edu as Advised	ucation Mathematics (and Quantitative Reasoning	g) 3
Liberal Arts & Scie	ence Electives as advised	21
General Electives	as advised	12
Total Credits		119

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
CITA 110	Intro Information Technology	3
CITA 140	Introduction to Programming	3
CITA Elective as advised		3
COMP 101	Composition and Research	3
SUNY General Education N	lathematics (and Quantitative Reasoning) as Advised	3
GNED 100	First Year Experience	2
	Credits	17
Spring		
CITA 120	Computer Concepts & Op Sys	3
CITA 190	Intro to LINUX/UNIX Systems	3
BSAD 116	Business Organization & Mgmt	3
Liberal Arts & Sciences Ele	ctives as advised	6
	Credits	15
Year 2		
Fall		
CITA 200	Data Communications Networking	3
CITA 210	Visual Languages & Devel Tools	3
General Electives as advis	ed	6
Liberal Arts & Sciences Ele	ctive as advised	3
	Credits	15
Spring		
CITA 220	Systems Analysis	3
100-200 CITA, ACCT or BS/	AD Lower Division Elective as advised	3
COMP 310	Advance Tech Communication	3
Liberal Arts & Sciences Ele	ctives as advised	6
	Credits	15
Year 3		
Fall		
CITA 300	Computer System Support Mainte	3
BSAD 300	Management Communications	3
300-400 ACCT, BSAD or Cl	TA Upper Division Elective as advised	3
Liberal Arts & Sciences Ele	ectives as advised	6
	Credits	15
Spring		
CITA 360	Oper Systems & Software Deploy	3
300-400 ACCT, BSAD or Cl	TA Upper Division Electives as advised	6
General Electives as advise	ed	6
	Credits	15
Year 4		
Fall		
CITA 395	Internship Orientation Seminar	1
CITA 405	Project Management	3
CITA 440	Design Managing Org Training	3
CITA 460	Organizational & End User IS	3
General Electives as advis	ed	6
	Credits	16
Spring		
CITA 480	Internship Information Tech	12
	Credits	12
	Total Credite	120

## Journalism & Communication for Online Media, B.S.

Major Code: 2017

This program has been deactivated and students will no longer be admitted to the major. Currently enrolled students will complete the degree in accordance with the approved teach-out plan.

SUNY Morrisville has a long history of excellence in journalism education. The field of public communication comprises journalism, marketing, advertising, corporate and public relations, publishing, broadcasting, photography, and related disciplines. Online communication relies heavily on a strong background in writing—for print and broadcast—adapted to meet the demands of today's communication technologies. It requires knowledge of elements of broadcasting and photojournalism, including audio and video editing.

This program endows students with a strong background in journalism, including advanced writing and reporting techniques. At the same time, it prepares them to work in digital video, audio, and still-photography production. It provides specialized technical instruction in the application of mass communication and journalism concepts to the World Wide Web. Graduates will be prepared to enter either Web or print communication and journalism. They will be well-prepared to provide content for print or online publications and to design and produce those publications.

Graduates of this program are fully prepared to work both in the world of journalism and beyond. News agencies—especially newspapers—have a continuing need for Web content providers who can write news content. Marketing and advertising firms also rely on writers who can create Web sites and update them on a regular basis while supplying the content as well. Large corporations maintain sophisticated intranet sites as part of their internal communications programs, relying increasingly on content providers who can transfer their writing to the Web quickly and maintain daily and weekly updates. Students may work in any of these areas or for magazines, television and other media.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Be familiar with, and prepared to work in, fields related to journalism and public communication in Web-based media
- Be able to gather information from diverse sources and summarize that information in straight-news or feature-news formats, or in formats related to public relations or marketing, in Web-based media
- Be able to read, write, understand, analyze, and discuss complex issues and topics and to contribute to small- and large-group activities and initiatives in a diverse workplace
- Understand the relationship between print and online journalism and broadcasting, desktop publishing, and photojournalism
- Demonstrate an understanding of the laws and ethics pertaining to various public communication professions

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral COMM 105 and COMP 310 (required)

Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	ad advised
Natural Sciences (and Scientific Reasoning)	as advised
Humanities	COMP 102 and PHIL 311
Social Sciences	PSYC 101 and SOCI 101
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### **Core Competencies:**

Information LIteracy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

## **Curriculum Requirements**

A minimum of 122 credits is required for degree completion.

Code	Title	Credits
JOUR 101	Intro to Mass Communication	3
JOUR 111	News Writing & Reporting	3
JOUR 112	News Writing II	3
JOUR 121	Principls of Press Photography	3
JOUR 185	Production Lab I	1
JOUR 186	Production Lab II	1
JOUR 214	Specialized Writing	3
JOUR 220	Mass Media and Society	3
JOUR 285	Production Laboratory III	1
JOUR 286	Production Laboratory IV	1
JOUR 315	Online Writing & Production	3
JOUR 401	Legal Ethical Issues Mass Comm	3
JOUR 409	Pre-Internship Seminar	1
JOUR 410	Internship in JCOM	12
JOUR 411	Capstone Course in JCOM	3
CITA 101	Principles Computer Apps	3
PHIL 311	Professional Ethics	3
COMP 310	Advance Tech Communication	3
COMM 300	Visual Communication	3
JOUR 270	Desktop Publishing	3
or JOUR 272	Public Relations Publicity Mgt	
Select two of the	following:	6
PSYC 304	Industrial/Org Psychology	
PSYC 384	Group Behavior	
PSYC 386	Social Psychology	
COMM 105	Research & Communication	3
COMP 102	Writing About Literature	3
SOCI 101	Intro to Sociology	3
PSYC 101	Introduction to Psychology	3

Total Credits 1	22
Liberal Arts & Science Credits as Advised	12
Upper Level Electives (300-499)	9
Additional SUNY General Education Courses	15
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised	3
SUNY General Education Natural Sciences (and Scientific Reasoning) as Advised	3
SUNY General Education Mathematics (and Quantitative Reasoning) as Advised	3

Course	Title	Credits
Year 1		
Fall		
COMM 105	Research & Communication	3
JOUR 111	News Writing & Reporting	3
JOUR 185	Production Lab I	1
SOCI 101	Intro to Sociology	3
MATH 102	Intermediate Algebra w Trig	3
PSYC 101	Introduction to Psychology	3
	Credits	16
Spring		
COMP 102	Writing About Literature	3
JOUR 112	News Writing II	3
JOUR 186	Production Lab II	1
CITA 101	Principles Computer Apps	3
Select one of the following	:	3
PSYC 304	Industrial/Org Psychology	
PSYC 384	Group Behavior	
PSYC 386	Social Psychology	
ART 110	Introduction to Visual Arts	3
	Credits	16
Year 2		
Fall		
JOUR 101	Intro to Mass Communication	3
JOUR 214	Specialized Writing	3
JOUR 285	Production Laboratory III	1
COMM 300	Visual Communication	3
COMP 310	Advance Tech Communication	3
SUNY General Education D	iversity Equity Inclusion and Social Justice as Advised	3
	Credite	16
Spring	Credits	10
SUNV Conoral Education of	auroes in LIS History & Civic Engagement or World	2
History & Global Awarenes	s as Advised	5
JOUR 121	Principle of Press Photography	3
JOUR 220	Mass Media and Society	3
JOUR 286	Production Laboratory IV	1
SUNY General Education W	Yorld Language as Advised	3
General Education as Advis	end Language ao Fanoca	3
	Credite	16
Vear 3	oreura	10
Fall		
CLINY Concred Education of	Nurses in US History & Civis Engagement or World	2
History & Global Awarenes	s as Advised	5
JOUR 315	Online Writing & Production	3
JOUR 270	Desktop Publishing	3
or JOUR 272	or Public Relations Publicity Mgt	Ū
SUNY General Education E	ectives as Advised	6
	Credits	15

#### Spring

	Total Credits	122
	Credits	12
JOUR 410	Internship in JCOM	12
Spring		
	Credits	15
Upper Division Libera	I Arts Electives	9
PSYC 386	Social Psychology	
PSYC 384	Group Behavior	
PSYC 304	Industrial/Org Psychology	
Select one of the follo	owing:	3
PHIL 311	Professional Ethics	3
Fall		
Year 4		
	Credits	16
Liberal Art Electives a	as Advised	6
SUNY General Educat	tion Natural Sciences (and Scientific Reasoning) as Advised	3
JOUR 411	Capstone Course in JCOM	3
JOUR 409	Pre-Internship Seminar	1
JOUR 401	Legal Ethical Issues Mass Comm	3

# Journalism Studies, A.A.

#### Major Code: 2092

This program has been deactivated and students will no longer be admitted to the major. Currently enrolled students will complete the degree in accordance with the approved teach-out plan.

The Journalism Studies program is designed for students to begin their education in many different fields related to public communication. The vast majority of graduates transfer to four-year programs, either at Morrisville in Journalism & Communication for Online Media (JCOM), or other institutions in programs of communication, journalism, advertising, broadcasting, public relations or other related fields.

This program places a strong emphasis on improving a student's skills as a writer. It is writing that is the cornerstone for success in any public communication field, and students will find their own styles as writers within a system that allows for use of complex concepts and ideas in terms an audience will understand.

At the same time, the associate of arts degree program in Journalism Studies allows students to explore many fields related to public communication. Production labs are designed to give hands-on experience in journalism, broadcasting, Web content production, desktop publishing, and digital still and video photography.

Opportunities to transfer to a bachelor degree program for preparation to enter careers as reporters, photographers, copywriters and editorial staff. Other careers include advertising, public relations, industrial publications, newspapers, commercial radio and television broadcast content production, Internet content production, and Internet broadcasting, technical writing, and graphic communications.

#### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

 Demonstrate the ability to gather a basic news story, write that story in appropriate Associated Press style on deadline, and when appropriate, collaborate with other members of a news team to prepare the story for publication or broadcast.

- Demonstrate an understanding of, and identify examples of agendasetting, gate-keeping, and message framing as tools in their use of mass media communication.
- Demonstrate the ability to analyze issues of public importance, identifying existing opinions or points of view and producing their own analysis and opinions in appropriate journalistic forms.
- Demonstrate the ability to identify credible news sources across mass media based on a thorough knowledge of accepted journalistic standards.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AA degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMP 101, as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	COMP 102
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

#### **Curriculum Requirements**

A minimum of 64 credits is required for degree completion.

Code	Title	Credits
JOUR 101	Intro to Mass Communication	3
JOUR 111	News Writing & Reporting	3
JOUR 112	News Writing II	3
or JOUR 126	Broadcast Writing & Editing	
JOUR 185	Production Lab I	1
JOUR 186	Production Lab II	1
JOUR 214	Specialized Writing	3
or JOUR 280	Broadcast Mgt, News, Promotion	
JOUR 285	Production Laboratory III	1
or JOUR 287	Production Lab WCVM Media III	
JOUR 286	Production Laboratory IV	1

#### Select one of the following:

Total Credits		64
Mathematics as Advised		3
Natural Sciences as Advised		3
Western Civilization as Advised		3
Other World Civilization as Advised		3
Social Sciences as Advised		3
American History as Advised		3
MATH/SCI - Math or Science (as advised)		3
Humanities/Social Science Electives		9
Liberal Arts Elect	ives (as advised)	9
COMP 102	Writing About Literature	3
COMP 101	Composition and Research	3
JOUR 280	Broadcast Mgt, News, Promotion	
JOUR 272	Public Relations Publicity Mgt	
JOUR 220	Mass Media and Society	
JOUR 121	Principls of Press Photography	

#### Sample Course Sequence

-	-	
Course	Title	Credits
Year 1		
Fall		
COMP 101	Composition and Research	3
JOUR 111	News Writing & Reporting	3
JOUR 185	Production Lab I	1
JOUR 101	Intro to Mass Communication	3
Select one of the following	g HIST - American History courses as Advised:	3
HIST 101	United States History to 1800	
HIST 102	U.S. History 1800 to 1900	
HIST 103	U.S. History from 1900-Present	
General Education in Soci	al Sciences	3
	Credits	16
Spring		
COMP 102	Writing About Literature	3
JOUR 112	News Writing II	3
or JOUR 126	or Broadcast Writing & Editing	
JOUR 186	Production Lab II	1
General Education in Othe	r World Civ	3
General Education in West	tern Civ	3
Liberal Arts Elective (as ad	dvised)	3
	Credits	16
Year 2		
Fall		
JOUR 214	Specialized Writing	3
JOUR 285	Production Laboratory III	1
or JOUR 287	or Production Lab WCVM Media III	
MATH - As advised		3
Liberal Arts Electives (as a	advised)	6
General Education in Natu	ral Sciences	3-4
	Credits	16-17
Spring		
JOUR 286	Production Laboratory IV	1
Select one of the following	g:	3
JOUR 121	Principls of Press Photography	
JOUR 220	Mass Media and Society	
JOUR 272	Public Relations Publicity Mgt	
JOUR 280	Broadcast Mgt, News, Promotion	
Math or Science (as advis	ed)	3

Total Credite	64-65
Credits	16
Humanities/Social Science Electives (as advised)	9

# Liberal Arts & Sciences: Humanities & Social Science, A.A.

Major Code: 1120

3

Effective December 31, 2024, this program has been deactivated and students will no longer be admitted to the major. Currently enrolled students will complete the degree in accordance with the approved teach-out plan.

This is a university-parallel program that gives the student a solid foundation in the Liberal Arts and Sciences similar to the first two years of the curriculum at a four-year liberal arts college or university. It provides a basis for further study leading to a bachelor degree in a variety of liberal arts areas, among them: psychology, sociology, anthropology, education, human services, English, history, philosophy, communication and the arts.

#### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- · Think critically and utilize information to support reasoning in writing.
- · Communicate ideas effectively orally.
- · Recognize a variety of literary and artistic forms of expression.
- · Develop a foundation of ethical awareness in academic life.
- Give concrete examples of a major theme across time and/or cultures.
- Differentiate institutions, social groups, and cultures and recognize how diversity and change in the human experience contributes to identities.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AA degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised

World History and Global	as advised
Awareness	
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised

# Critical Thinking and Reasoning as advised (required)

#### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
<b>Required Humanit</b>	ties Courses	
COMP 101	Composition and Research	3
or COMM 105	Research & Communication	
COMP 102	Writing About Literature	3
COMM 111	Introduction to Speech	3
SUNY General Edu	ucation World Languages or The Arts as Advised	3
Select one 200-Le	vel or Above Literature (LITR) Course as Advised	3
Select one 200-lev Arts, Basic Comm Humanities as Ad	vel or above in SUNY General Education: The nunication: Written and Oral, World Languages, or vised	3
<b>Required Social S</b>	cience Courses	
Select one 100-lev Civic Engagement	vel course in SUNY General Education US History t as Advised	·& 3
Select two 100-lev History & Global A	vel courses in SUNY General Education World Awareness	3
Select one 100-lev Sciences	vel course in SUNY General Education Social	3
Select two 200-lev US History & Civic Social Sciences a	vel or above courses in SUNY General Education: Engagement, World History & Global Awareness s Advised	6 , or
<b>Required Mathem</b>	atics & Natural Science	
SUNY General Edu with a Lab	ucation Natural Sciences (and Scientific Reasoni	ng) 3-4
SUNY General Edu as Advised	ucation Mathematics (and Quantitative Reasonir	ıg) 3
SUNY General Edu or Natural Science	ucation Mathematics (and Quantitative Reasonir es (and Scientific Reasoning) as Advised	ıg) 3
Other Required Co	burses	
SUNY General Edu Justice as Advise	ucation Diversity, Equity, Inclusion and Social d	3
General Elective C	Credits	14-15
Total Credits		59-61

### **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
COMP 101	Composition and Research	3
or COMM 105	or Research & Communication	
100-Level SUNY General E	ducation US History & Civic Engagement	3
100-Level SUNY General E	ducation Social Science	3
SUNY General Education M	Athematics (and Quantitative Reasoning) by Placement	3

General Elective Cr	edits	3
	Credits	15
Spring		
COMP 102	Writing About Literature	3
100-Level SUNY Ge	eneral Education World History & Global Awareness	3
100-Level SUNY Ge	eneral Education World History & Global Awareness	3
SUNY General Educ	cation Natural Sciences (and Scientific Reasoning) w/ Lab	3-4
SUNY General Educ	cation Arts or World Languages	3
	Credits	15-16
Year 2		
Fall		
COMM 111	Introduction to Speech	3
200-Level or Higher	r Literature (LITR)	3
200-Level or Higher	r General Education: US History & Civic Engagement, World	3
History & Global Av	vareness, or Social Science	
SUNY General Educ Science (and Scien	cation Mathematics (and Quantitative Reasoning) or Natural tific Reasoning)	3
General Elective Cr	edits	3
	Credits	15
Spring		
200-Level or Higher	r SUNY General Education: General Communication Written,	3
General Communic	ation Oral, Humanities, The Arts, or World Languages	
200-Level or Higher	r SUNY General Education: US History & Civic Engagement,	3
World History & Glo	bbal Awareness, or Social Sciences	
SUNY General Educ	cation Diversity, Equity, Inclusion and Social Justice as Advised	3
General Elective Cr	edits	6
	Credits	15
	Total Credits	60-61

# **Marketing Minor**

The Marketing minor will enhance a student's academic and career profile. The student will learn and apply the concepts of advertising, branding, consumer behavior, and market research. This minor will develop the student's marketing knowledge of price, product, promotion, and place while improving their written and oral communication, analytical thinking, and data-driven decision-making. This minor requires 15 credit hours, with 9 credit hours in upper division.

Upon successful completion of this minor students will be able to:

- Communicate effectively and purposefully, integrating technology into writing and presentations.
- Develop, acquire, and enhance customer relationships in the sales process.
- Identify various consumer behaviors, motivations and attitudes from both marketer and consumer perspectives.
- Describe the role of integrated marketing communications (IMC) by using various promotional activities that enhance the building and maintaining of consumer relationships and loyalty.

A minimum of 15 credits is required for completion of the minor. Students must be enrolled in a Bachelor's degree program in order to declare a minor.

Code	Title	Credits
Required Cours	sework	
BSAD 116	<b>Business Organization &amp; Mgmt</b>	3
BSAD 209	Professional Sales	3
BSAD 325	Marketing Management	3
BSAD 327	Advertising Management	3

Tatal Cradita		15	,
BSAD 329	Consumer Behavior	3	i

# Massage Therapy, A.A.S.

#### Major Code: 1342

This program has been deactivated and students will no longer be admitted to the major. Currently enrolled students will complete the degree in accordance with the approved teach-out plan.

This program is specifically designed to meet the New York State Licensure requirements for massage therapy training, including a minimum of 150 hours in a clinical setting. Massage therapy technique classes are hands on experiences that offer students the experience to work with various populations and pathologies. These experiences allow students to enter the massage therapy profession with the skills and confidence necessary to succeed. Students also receive instruction in general studies, sciences and massage history. To progress through the program a student must achieve a minimum grade of C in all massage therapy and biology courses. The associate in applied science degree in Massage Therapy is designed to prepare students for the practice of the profession of Massage Therapy. Licensed massage therapists are independent health care professionals who provide services through the skilled manipulation of the soft structures of the body focusing on both prevention and treatment.

Massage therapists may be self-employed or employed in a variety of settings including the offices of chiropractors and physical therapists, destination and day spas, wellness centers, hospitals, hospice programs, long-term care facilities, corporations, cruise ships, professional athletic teams and performing arts companies.

Students completing the A.A.S. degree will be academically prepared to meet the licensure requirements as specified by the New York State Education Department.

Graduates seeking licensure in New York State must apply for and pay an examination fee. Licensure is based upon the successful completion of the massage therapy exam and the ability to answer questions to establish "good moral character." Anyone who has been convicted of and/or charged with a felony or misdemeanor in any state or country, surrendered a license or been found guilty or charged with professional misconduct, unprofessional conduct, incompetence or negligence, will be subject to a review by an investigator for the Office of Professional Discipline and may experience problems or delays with the licensing process. Inquiries should be directed to the Division of Professional Licensing Services, Office of the Professions, New York State Education Department.

The New York State Department of Education allows the transfer of 250 hours of previously completed massage therapy course work. A transfer student will be expected to submit comprehensive course descriptions and transcripts from his/her previous massage school(s) to be evaluated.

### **Program Requirements**

Students accepted into the program must submit a complete physical examination and proof of immunizations as required by the Public Health Law due to affiliations with area health care facilities. Students are to adhere to the same requirements as employees. Students must demonstrate the strength, mobility and manual dexterity to perform in all laboratory/clinical settings in order to maintain the safety of clients and meet performance standards. All students must be covered by a health

insurance policy in order to participate in the laboratory/clinical portion of the program. If a student does not have valid health insurance, the college provides information about procuring health insurance.

Each student must provide documentation of having one western and one eastern bodywork session prior (massage) to enrolling in the program-failure to do so will result in massage therapy courses being removed from the students schedule prior to the start of classes. This will delay enrollment in the massage therapy classes for a year.

Students will not be eligible for admission or continuation in the massage therapy program if they repeat any of the following courses twice without earning a grade of C or higher, including dropping/withdrawal or failing, at this institution or another college:

Code	Title	Credits
All MAST courses		
BIOL 150	Human Anatomy + Physiology I	4
BIOL 151	Human Anatomy + Physiology II	4
BIOL 135	Myology I	3
BIOL 136	Myology II	3
BIOL 137	Neurology	4

#### **Program Outcomes**

- The pass rate for graduates will meet or exceed the NYS pass rate (+ or -5%) for those taking the examination for the first time.
- 75% of those students progressing to the second semester will complete the program within the time identified on the sample study plan.
- Students completing the A.A.S. degree will be academically prepared to meet the licensure requirements as specified by the New York State Education Department.
- Graduation Requirements: All AAS programs require a minimum of 60 credit hours including 20 credit hours from Liberal Arts and Science courses. These requirements are fulfilled in the curriculum list of courses for this program. A grade of C or higher is required for all BIOL and MAST courses that are used as prerequisite courses in the MAST program.

#### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Demonstrate effective and safe delivery of therapeutic massage utilizing a variety of techniques
- · Identify and analyze pathologies
- · Develop appropriate treatment plans based on client assessment
- Communicate in a professional and effective manner with clients and the general public
- Demonstrate professional and ethical behaviors related to massage therapy
- Document massage therapy sessions accurately and professionally utilizing accepted formats and terminology
- · Demonstrate the ability to adapt to various practice settings
- Develop a treatment plan

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	BIOL 135, BIOL 136, BIOL 137, BIOL 150, and BIOL 151
Humanities	as advised
Social Sciences	PSYC 101
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

#### Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

A grade of C or higher is required for all BIOL and MAST courses that are used as prerequisite courses in the MAST program.

Code	Title	Credits
MAST 100	CPR for Healthcare Providers	1
MAST 101	Eastern Anatomy & Physiology	3
MAST 102	Western Massage I	4
MAST 103	Western Massage II	2
MAST 104	Eastern Massage	2
MAST 201	Western Medical Massage	4
MAST 202	Eastern Medical Massage	4
MAST 203	Professional Issues	1
MAST 204	Massage Clinical Experience	5
MAST 205	Senior Seminar	3
MAST 206	Professional Practice Issues	2
BIOL 135	Myology I	3
BIOL 136	Myology II	3
BIOL 137	Neurology	4
BIOL 150	Human Anatomy + Physiology I	4
BIOL 151	Human Anatomy + Physiology II	4
COMM 105	Research & Communication	3
PSYC 101	Introduction to Psychology	3
Additional Genera	l Elective Credits	5
Total Credits		60

# Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
MAST 101	Eastern Anatomy & Physiology	3
MAST 102	Western Massage I	4
BIOL 150	Human Anatomy + Physiology I	4
COMM 105	Research & Communication	3
BIOL 135	Myology I	3
	Credits	17
Spring		
MAST 102	Western Massage I	4
MAST 104	Eastern Massage	2
BIOL 151	Human Anatomy + Physiology II	4
BIOL 136	Myology II	3
PSYC 101	Introduction to Psychology	3
	Credits	16
Year 2		
Fall		
MAST 201	Western Medical Massage	4
MAST 202	Eastern Medical Massage	4
BIOL 137	Neurology	4
General Elective as advised	1	2
	Credits	14
Spring		
MAST 204	Massage Clinical Experience	5
MAST 205	Senior Seminar	3
MAST 206	Professional Practice Issues	2
MAST 100	CPR for Healthcare Providers	1
MAST 203	Professional Issues	1
General Electives as advise	2	3
	Credits	15
	Tatal Gradita	60

## Mechanical Engineering Technology, A.A.S.

#### Major Code: 0493

Mechanical Engineering Technology applies almost universally to industry and engineering technology. It is oriented to production and is concerned with such areas as product design, manufacturing technology, product and material testing, and quality control.

The curriculum emphasizes three technical streams: technical graphics communication, manufacturing processes, and mechanical design. It is a laboratory-oriented program that provides a wide selection of courses in CAD, machining, mechanical design and manufacturing processes. A hands-on equipment philosophy applies from drafting to machining to hydraulics. Theory and practical work are coordinated to give a thorough but broad understanding of the skills required by industry.

### **Career Opportunities**

The Mechanical Engineering Technology program prepares students to enter manufacturing or allied industries as an engineering technician, quality and production control technician, a laboratory technician in plant operation, mechanical design, metal working, and foundry industries, or as a CAD drafter/designer, product designer under the direction of design chiefs or project engineers in the areas of product development and detailing, manufacturing design, and product design. The Mechanical Engineering Technology program prepares students for careers in design and drafting, engineering aide, laboratory technician, quality and production control, plant engineering technician, mechanical design, metal working, and foundry industries.

### **Transfer Options**

Most Mechanical Engineering Technology graduates pursue a fouryear degree in Mechanical Engineering Technology, Manufacturing Engineering Technology, or Computer-Integrated Manufacturing Technology. It's recommended to take MATH 151 for easier transfer into junior year in related 4-year programs in the SUNY system as part of SUNY Transfer Path (Seamless Transfer) program.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities;
- Apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge;
- Conduct standard tests and measurements, and to conduct. Analyze, and interpret experiments;
- · Function effectively as a member of a technical team;
- Identify, analyze, and solve narrowly defined engineering technology problems;
- Apply written, oral, and graphical communication in both technical and non-technical environment; and an ability to identify and use appropriate technical literature;
- Understand the need to engage in self-directed continuing professional development;
- Show a commitment to address professional and ethical responsibilities, including a respect for diversity; and
- Show a commitment to quality, timeliness, and continuous improvement.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 103
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised

World History and Global Awareness	as advised
World Languages	as advised

#### Core Competencies:

(

nformation Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
required)	

#### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
CAD 184	CAD for Mechanical Design	2
CAD 186	3-D Parametric Solid Modeling	2
DRFT 151	Engineering Drawing I	2
DRFT 252	Geometric Dimension Tolerance	2
MFG 110	Dimensional Metrology	2
MFG 206	CNC Machining	3
MFG 207	Quality Control	2
MFG 208	CAM - Mastercam	2
MFG 221	Manufacturing Processes 1	3
MFG 240	Design/Manufacture Capstone	3
MECH 101	Machine Tools	3
MECH 120	Engineering Materials	3
MECH 211	Analytical Mechanics (Statics)	3
MECH 212	Mechanical Design	4
MECH 213	Strength of Materials	4
MECH 233	Fluid Power and Control	4
PHYS 107	Introductory Physics I	4
COMM 105	Research & Communication	3
MATH 103	College Algebra w/ Trig	3
COMP 110	Technical Communications	3
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised as advised		

**Total Credits** 

### Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
COMM 105	Research & Communication	3
MATH 103	College Algebra w/ Trig	3
PHYS 107	Introductory Physics I	4
DRFT 151	Engineering Drawing I	2
MECH 120	Engineering Materials	3
CAD 184	CAD for Mechanical Design	2
	Credits	17
Spring		
COMP 110	Technical Communications	3
MFG 110	Dimensional Metrology	2
MECH 211	Analytical Mechanics (Statics)	3
MECH 101	Machine Tools	3
CAD 186	3-D Parametric Solid Modeling	2

60

SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised
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	Credits	16
Year 2		
Fall		
MECH 213	Strength of Materials	4
MFG 221	Manufacturing Processes 1	3
MFG 206	CNC Machining	3
DRFT 252	Geometric Dimension Tolerance	2
SUNY General Edu	cation Elective as Advised	3
	Credits	15
Spring		
MECH 212	Mechanical Design	4
MFG 240	Design/Manufacture Capstone	3
MECH 233	Fluid Power and Control	4
MFG 207	Quality Control	2
MFG 208	CAM - Mastercam	2
	Credits	15
	Total Credits	63

# Natural Resources Conservation, A.A.S.

#### Major Code: 0617

The Natural Resources Conservation curriculum provides fundamental training in ecology, fish and wildlife, forestry, outdoor recreation, tree care, and related subjects. Students receive a broad-based education with an emphasis on practical, hands-on experience. College, state and county properties provide a wide assortment of opportunities for field experiences such as fish surveys, trail building, wildlife habitat improvement and forest surveys and management.

#### **Career Opportunities**

Parks, forestry, arboriculture, fisheries and wildlife management, soil conservation service, conservation officer, forestry technician, forest ranger, environmental consultant, and water and wastewater treatment plant operator.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Describe the state of the natural resources profession and potential career opportunities.
- Conduct himself/herself in a manner consistent with an embodied sense of conservation stewardship.
- Deal professionally and ethically with clients, the public, and agency personnel.
- Utilize oral and computer communication skills necessary to interact in the profession.
- Demonstrate advanced knowledge and competency in taxonomy and natural history.
- Demonstrate hands-on experience in natural resource sampling, inventory, and measurement techniques.
- Demonstrate competency in utilizing geospatial technologies (Global Positioning System – GPS, Geographic Information System – GIS, and remote sensing).
- Apply critical thinking and problem-solving skills in natural resource conservation.

- Utilize existing technology, products, and services to maximize work efficiency and success.
- Practice a collaborative spirit in team-efforts and project coordination.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

3

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

#### **Core Competencies:**

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

#### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

#### Curriculum

Code	Title	Credits		
Major Field Requi	Major Field Requirements			
NATR 100	Intro to Forestry and NR	3		
NATR 101	General Ecology	3		
NATR 103	Natural Resources Equipment Op	2		
NATR 110	Natural Resources Measurements	3		
NATR 113	Intro toGlobal Positioning Sys	1		
NATR 115	Forest Ecology	3		
NATR 120	Intro To Recreation Area Mgmnt	3		
NATR 142	Plane Surveying I	3		
NATR 144	Seminar/Environmental Resc I	1		
NATR 145	Intro Environmental Technology	3		
NATR 210	Dendrology	3		
NATR 213	Basics Geospatial Technology	2		
NATR 250	Aquatic Ecology	3		

BIOL 102	Botany-Form Function Seed Plt	3
AGRO 110	GRO 110 Soil Science	
Required SUNY G	eneral Education Coursework	
SUNY General Edu	ucation Communication Written and Oral as Advised	6
SUNY General Edu as Advised	ucation Mathematics (and Quantitative Reasoning)	3
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
Technical Elective BIOL, BSAD, CHEN	es as advised selected from AGBS, AGEN, AGSC, /I, CJUS, ENSC, ENRM, HORT, NATR, RENG	2-3
Core Specialization	n	
Select three of the	e following:	9
NATR 211	Forest Protection	
NATR 215	Practices Of Silviculture	
NATR 221	Invasive Species Management	
NATR 232	Wildlife Ecology & Management	
NATR 252	Fish Ecology and Management	
Total Credits	62	2-63

#### Society of American Foresters Accredited Forest Technology Concentration

Students wishing to specialize in forestry and silviculture can enroll in the Forest Technology Concentration and will take:

Code	Title	Credits
Capstone Electiv	es	
NATR 211	Forest Protection	3
NATR 215	Practices Of Silviculture	3
NATR 232	Wildlife Ecology & Management	3
<b>Technical Electiv</b>	e	
BSAD 116	Business Organization & Mgmt	3
Internship		
Minimum one cre internship site:	edit intermship at an approved forest industry	1
NATR 246	Internship Natural Resources	
Total Credits		13

#### Arboriculture and Urban Forestry Concentration

Students wishing to specialize in tree care, arboriculture, and urban forestry can enroll in the Arboriculture and Urban Forestry Concentration. They will take:

Code	Title	Credits
NATR 160	Principles of Arboriculture <sup>1</sup>	2
NATR 161	Practices of Arboriculture <sup>1</sup>	1
NATR 310	Urban Forest Management	3
NATR 211	Forest Protection	3
or HORT 241	Plant Protection	
One additional N	ATR Capstone Elective	3
Total Credits		12

1

Take in place of NATR 250 Aquatic Ecology

### Sample Course Sequence

Course	■ Title	Credits
Year 1		
Fall		
BIOL 102	Botany-Form Function Seed Plt	3
SUNY General Education (	Communication Written and Oral as Advised	3
SUNY General Education	Mathematics (and Quantitative Reasoning) as Advised	3
NATR 100	Intro to Forestry and NR	3
NATR 144	Seminar/Environmental Resc I	1
NATR 113	Intro toGlobal Positioning Sys	1
NATR 145	Intro Environmental Technology	3
	Credits	17
Spring		
NATR 101	General Ecology	3
NATR 103	Natural Resources Equipment Op	2
NATR 110	Natural Resources Measurements	3
NATR 115	Forest Ecology	3
NATR 213	Basics Geospatial Technology	2
SUNY General Education (	Communication or other General Education credits as	3
advised		
Or, SUNY General Educ Technical Elective as a	cation Diversity, Equity, Inclusion & Social Justice or advised	
Note: Students plannir	ng on matriculating into the Environmental & Natural	
Resource Managemen	it, B.Tech. program should take an additional GenEd	
elective from a differen	nt GenEd category.	
	Credits	16
Year 2		
Fall		
NATR 120	Intro To Recreation Area Mgmnt	3
NATR 142	Plane Surveying I	3
NATR 210	Dendrology	3
NATR 250	Aquatic Ecology	3
SUNY General Education Communication or other General Education credits as 3 ordivised		
Or, SUNY General Educ	cation Diversity, Equity, Inclusion & Social Justice or	
Technical Elective as a	advised	
	Credits	15
Spring		
AGRO 110	Soil Science	3
SUNY General Education (	Communication or other General Education credits as	2-3
advised		
Or, SUNY General Educ Technical Elective as a	ation Diversity, Equity, Inclusion & Social Justice or advised	
Select three of the following	ng Capstone Courses:	9
NATR 211	Forest Protection	
NATR 215	Practices Of Silviculture	
NATR 221	Invasive Species Management	
NATR 232	Wildlife Ecology & Management	
NATR 252	Fish Ecology and Management	
	Credits	14-15
	Total Credits	62-63

# **Network Administration, B.TECH.**

#### Major Code: 3047

This program has been deactivated and students will no longer be admitted to the major. Currently enrolled students will complete the degree in accordance with the approved teach-out plan.

Enterprises need information to create competitive advantages in today's dynamic business environment. Business people require tools like the Internet, the World Wide Web, laptops, smart phones, cloud computing,

wireless technology, multimedia, social media, and e-commerce. Typically, business people do not need to understand how the technology works; they simply want it to do the job for them. Information Technology (IT) builds on the foundation of Computer Information Systems, but it has a broader scope. IT seeks to facilitate the business processes of the organization. The information technologist not only knows how technology work but is equally interested in people and their applied use of technology to increase productivity. Your educational experience will be supported by a robust information technology infrastructure. Students receive practical hands-on experience in their field of study using the latest network technologies in a top-notch academic lab environment. These systems support the latest software applications for gaming, graphics, animation, web development, video production, databases, voice and data communications, programming, server administration, multimedia development, virtualization, cloud computing, and information security.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- · Manage, maintain, troubleshoot, install, and configure enterprise network infrastructure.
- · Manage, maintain, troubleshoot, install, and configure network operating systems.
- · Configure computer system security, network security, access control, and physical security.
- · Design networked solutions to facilitate business processes.

#### **Curriculum Requirements**

Code	Title	Credits
CITA 110	Intro Information Technology	3
CITA 120	Computer Concepts & Op Sys	3
CITA 140	Introduction to Programming	3
CITA 190	Intro to LINUX/UNIX Systems	3
CITA 200	Data Communications Networking	3
CITA 210	Visual Languages & Devel Tools	3
CITA 230	Network Technology	3
CITA 320	Network Administration	3
CITA 370	Network Design Concepts	3
CITA 395	Internship Orientation Seminar	1
CITA 405	Project Management	3
CITA 430	Comp Integration & Interop	3
CITA 460	Organizational & End User IS	3
CITA 480	Internship Information Tech	12
BSAD 116	Business Organization & Mgmt	3
BSAD 300	Management Communications	3
CITA 100 - 200 Level Electives as Advised		
CITA 300-400 Leve	el Electives as Advised	3
CITA, ACCT, or BS/	AD 100-200 as advised	6
CITA, ACCT, or BS/	AD 300-400 as advised	9
COMP 101	Composition and Research	3
COMP 310	Advance Tech Communication	3
MATH as Advised 3		
Liberal Art & Science Electives as Advised 21		

General Electives as	Advised	14
Total Credits		120
Sample Cou	Irse Sequence	
Course Year 1	Title	Credits
Fall	later la ferma etica. Te alca alcana	
	Intro Information Technology	3
CITA elective (as advised)	introduction to Programming	3
COMP 101	Composition and Besearch	3
MATH as Advised		3
GNED 100	First Year Experience	2
	Credits	17
Spring		
CITA 120	Computer Concepts & Op Sys	3
CITA 190	Intro to LINUX/UNIX Systems	3
BSAD 116	Business Organization & Mgmt	3
Liberal Art & Science Elect	ive (as advised)	3
Liberal Art & Science Elect	ive (as advised)	3
	Credits	15
Year 2 Fall		
CITA 200	Data Communications Networking	3
CITA 210	Visual Languages & Devel Tools	3
General Electives (as advis	sed)	3
General Electives (as advis	sed)	3
Liberal Art & Science Elect	ive (as advised)	3
	Credits	15
Spring		
CITA 230	Network Technology	3
CITA, ACCT or BSAD-Lower	Level	3
Liberal Art & Science Elect	Advance Tech Communication	3
Liberal Art & Science Elect	ive (as advised)	3
	Credits	15
Year 3		
CITA 320	Network Administration	3
BSAD 300	Management Communications	3
ACCT, BSAD or CITA-Upper	Level	3
Liberal Art & Science Elect	ive (as advised)	3
Liberal Art & Science Elective (as advised)		
Spring	Credits	15
CITA 370	Network Design Concents	3
ACCT BSAD or CITA-Upper	l evel	3
ACCT. BSAD or CITA-Upper	Level	3
General Electives (as advis	sed)	3
General Electives (as advis	sed)	3
	Credits	15
Year 4 Fall		
CITA 395	Internship Orientation Seminar	1
CITA 405	Project Management	3
CITA 430	Comp Integration & Interop	3
CITA 460	Organizational & End User IS	3
General Electives (as advis	sed)	3
General Electives (as advised) 3		
	Credits	16

Credits

Spring		
CITA 480	Internship Information Tech	12
	Credits	12
	Total Credits	120

# Nursing, A.A.S.

#### Major Code: 0622

The mission of the SUNY Morrisville Department of Nursing is to foster the development of the intentional learner who is prepared to transition to practice as a member of the interdisciplinary health care team. The nursing program will provide educational opportunities that promote student learning across the lifespan, cultures, and the health/wellness continuum. The nursing faculty are committed, collaborative partners with students and healthcare agencies, supporting nursing workforce needs and interests in our communities while striving to meet its continual and changing health care needs. The focus of the program is mastery of graduate level competencies reflecting the knowledge, skills, and attitudes required for the delivery of safe, quality care. Upon completion of the program students receive the A.A.S. degree and are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

The program is accredited by:

The Accreditation Commission for Education in Nursing 3390 Peachtree Road NE, Suite 1400 Atlanta, Georgia 30326

(404-975-5000), www.acenursing.org (http://www.acenursing.org)

The State Education Department Division of Professional Education 89 Washington Avenue, 2nd Floor West Wing, Albany, NY 12234

(518)-486-2967, OPPROGS@nysed.gov

#### **Career Opportunities**

The Nursing program prepares the graduates for careers in a variety of settings such as: acute care hospitals, long term care facilities, home care, community-based agencies, and rehabilitative facilities. Candidates for licensure must meet all requirements as determined by the State Education Department. In addition to meeting the educational requirements for the NCLEX-RN; applicants must also answer questions establishing "good moral character". Anyone who has been convicted of/ and or charged with:

- felony
- · misdemeanor professional misconduct
- · unprofessional conduct and/or
- negligence, in any state or country, may experience problems or delays with the licensing process

Inquiries should be directed to the Division of Professional Licensing Services, Offices of the Professions, New York State Education Department (www.nysed.gov/nurse.htm (http://www.nysed.gov/ nurse.htm)).

The application fees for licensure, due at the time of application (NURS 250 Multiple Common Complex Probs) are approximately a total of \$375 payable to the testing vendor and State Education Department.

### **Transfer and Non-Traditional Students**

Transcripts will be evaluated on an individual basis. Transfer students are required to complete 30 credit hours at SUNY Morrisville for degree completion per college policy.

Any student who has repeated two nursing courses or repeated the same nursing course twice (dropping/withdrawal or failing grade) at another college/nursing program will not be eligible for admission to the associate degree nursing program.

Prior to admission, students who have been enrolled in nursing courses at another institution must submit a letter of reference from the Dean or Associate Dean or Chairperson of that program to Director of Nursing at SUNY Morrisville in order to determine the applicant's past performance and potential. There are established enrollment numbers for each course.

Students enrolled in the nursing program may repeat one required core nursing course once (1 time) only for the entire curriculum. Repeats include instances of dropping/withdrawing/failing. When a student fails to complete any/all course(s) required to progress to the next semester, they will not be scheduled for the nursing sequence until documentation of completion has been received and approved. Following approval, scheduling will occur on a space available basis. This may delay the student's time to degree completion.

Readmission to the program is on a "space available" basis. In some instances a student seeking readmission will be required to meet with the Director of Nursing to describe remedial actions undertaken and to address the factors that will enhance their success. It is the responsibility of the student to prove their behaviors have changed in a substantive fashion.

#### **Program Entrance Requirements**

- · Minimum Regents score 75 in Biology
- · Minimum HS average B (80) in Biology
- · Minimum GPA: 2.75 for transfer students
- Completion of MAGN 101 Elementary Algebra or MAGN 107 Mathematical Literacy with a grade of C or better or placement testing in MATH 102 Intermediate Algebra w Trig
- TEAS test with a minimum composite score of 62 (maximum 2 attempts)

Students who do not meet the admission requirements for the Nursing program may be admitted to the Individual Studies curriculum. A minimum cumulative average of 2.75 is required for admission to Nursing.

#### **Health Requirements**

All health clearance requirements must be on file at the Student Health Center three weeks prior to the start of the semester.

- · Annual physical examination
- · Annual Tuberculin Skin Test (TST) or follow up X-Ray
- Annual Influenza vaccination
- 2 MMR's or Titers
- Rubella Titer
- Chicken Pox (documented history of disease, vaccination and or a varicella titer)
- · Hepatitis B Vaccine or signed waiver

- Meningitis Vaccine or signed waiver
- Tetanus/diphtheria
- Current certification in CPR Basic Life Support (BLS) for Health Care Providers through the American Heart Association is required and must be maintained for the clinical components of all nursing courses. Certification must be obtained prior to enrollment in any clinical course.
- · Proof of health insurance

Nursing students are to adhere to the same public health laws and facility regulations as employees. Students must meet the facility health requirements and have the ability to meet clinical outcomes with or without reasonable accommodations. Students must demonstrate:

- The strength and manual dexterity to perform in all laboratory and clinical settings and to maintain the safety of clients without posing a threat to himself/herself.
- The visual, hearing and speech skills requisite to client assessment and professional performance including reading, recording client information, performing auscultatory exams, and performing any and all other diagnostic and therapeutic procedures.

Students with a suspected or documented allergy/latex hypersensitivity are responsible for being tested prior to entering the program. The test results and a written plan of accommodation/treatment signed by a licensed health care provider must accompany the annual physical examination.

### **Background Checks**

Students enrolled in the nursing program must conform to the rules, policies, and procedures of the clinical affiliates in order to participate in practical experiences, which may include background checks. The cost of the background check will be the responsibility of the student. Failure to consent to and submit the appropriate background screening findings will prohibit the student from continuing in the nursing program.

### **Additional Expenses**

The following are approximate additional expenses: uniforms/special equipment

- Laboratory fees range from \$16-60 per semester.
- Lab Kits: Required for NURS 120 Fundamentals of Nursing and NURS 150 Care of Common Health Problems. Approximate total \$300.
- Achievement tests approximately \$275/ semester (this includes the cost for NCLEX-RN review materials).
- · Course fees are approximately \$120 per semester.

### **Program Outcomes**

- Eighty percent (80%) of the graduates of the first time test takers and repeaters will meet or exceed the National Council Licensure Exam (NCLEX-RN).
- Ninety percent (90%) of the program graduates will be employed in nursing and/or will be enrolled in a baccalaureate program within six (6) months of graduation.
- Fifty percent (50%) of students will complete the program on time within two (2) years of matriculation into the nursing programs.

### **Graduation Requirements**

All AAS programs require a minimum of 60 credit hours including 20 credit hours from Liberal Arts and Science courses. To fulfill these requirements along with the required courses for this program, 64 credits are required for this program. These requirements are fulfilled in the curriculum list of courses for this program.

**GPA:** Overall GPA of 2.00 or higher. A student must maintain a 2.0 grade point average to remain in good standing. To progress to the next sequential nursing course, a student must achieve a minimum grade of C+ in each nursing course, a minimum of a C+ in the anatomy and physiology courses, and a minimum of a C- in the microbiology course. A mathematics course may be required dependent upon placement test scoring, however, all nursing courses (through NURS 250 Multiple Common Complex Probs) require that each student pass mandatory medication mathematics proficiency exams. Demonstrated Proficiency through MAGN 101 Elementary Algebra is required.

### **Program Learning Outcomes**

The curriculum is compatible with the philosophy and conceptual framework of the Division of Nursing and provides educational experiences that prepare a graduate to:

- Advocate for the patient and their families to promote a partnership in providing compassionate and coordinated care based on respect for patient's preferences, values, and needs.
- Conduct self in a way that reflects integrity, responsibility, and ethical practices necessary to function effectively within nursing and interdisciplinary teams, fostering open communication, mutual respect and shared decision-making to achieve safe and quality patient care.
- Use their clinical reasoning ability to integrate nursing science in the provision of safe and quality care necessary to minimize risk of harm to patients, family, and providers.
- Integrate best current evidence with clinical expertise based on the patient and family's values and preferences for delivery of optimal healthcare.
- Examine the evidence that supports clinical practice and question underlying assumptions necessary to improve the quality and safety of health care systems.
- Make judgements in practice based on information and technology to communicate, manage knowledge, mitigate error, and support decision-making.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral	COMM 105
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 127

Natural Sciences (and Scientific Reasoning) (required)	BIOL 150, BIOL 151, and BIOL 285
Humanities	as advised
Social Sciences	PSYC 101 and PSYC 211
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

#### **Curriculum Requirements**

A minimum of 64 credits is required for degree completion.

Code	Title	Credits
NURS 120	Fundamentals of Nursing	7
NURS 150	Care of Common Health Problems	10
NURS 152	Pharmacology I	1
NURS 210	Care - Complex Health Problems	8
NURS 212	Pharmacology II	1
NURS 250	Multiple Common Complex Probs	8
NURS 251	Transition into Practice	1
NURS 252	Pharmacology III	1
BIOL 150	Human Anatomy + Physiology I	4
BIOL 151	Human Anatomy + Physiology II	4
BIOL 285	General Microbiology	4
COMM 105	Research & Communication	3
MATH 127	Mathematical Reasoning (or Math as Advised)	3
PSYC 101	Introduction to Psychology	3
PSYC 211	Lifespan Development	3
SUNY General Ed	ucation Diversity, Equity, Inclusion and Social	3
Justice as Advise	ed	
Total Credits		64

**Total Credits** 

## **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
NURS 120	Fundamentals of Nursing	7
BIOL 150	Human Anatomy + Physiology I	4
PSYC 101	Introduction to Psychology	3
MATH 127	Mathematical Reasoning	3
	Credits	17
Spring		
NURS 150	Care of Common Health Problems	10
NURS 152	Pharmacology I	1
BIOL 151	Human Anatomy + Physiology II	4
PSYC 211	Lifesnan Develonment	3
	Encopuli Development	0

	Total Credits	64
	Credits	13
SUNY General Educa	ation Diversity, Equity, Inclusion and Social Justice as Advised	3
NURS 252	Pharmacology III	1
NURS 251	Transition into Practice	1
NURS 250	Multiple Common Complex Probs	8
Spring		
	Credits	16
COMM 105	Research & Communication	3
BIOL 285	General Microbiology	4
NURS 212	Pharmacology II	1
NURS 210	Care - Complex Health Problems	8
Fall		
Year 2		

# Nursing, B.S.

#### Major Code: 0291

The nursing baccalaureate program provides RN's the opportunity to enhance their nursing practice in five core concepts: Patient-Centered Care, Evidence-based Practice, Nursing Informatics, Leadership and Professionalism. Courses Emphasize: public, family and community nursing, advanced health assessment, health promotion, nursing theory, ethics, organizational communications, systems theory, leadership and management. Students engage in a required service learning activity in selected non-clinical nursing courses to combine formal learning with reflection to strengthen a community.

This program can be completed 100% online. All nursing courses in this program are offered in the online format only while other required courses are available in an online, hybrid, and/or face-to-face format. See the Suggested Course Sequence below for modality designation.

To enroll in the SUNY Morrisville Nursing program, applicants must have successfully completed an accredited AAS Nursing Program. Graduates from the SUNY Morrisville AAS Nursing Program can seamlessly transfer into this RN-BS program. Students must be successful on the NCLEX exam before their second semester in the program.

In addition to increasing career opportunities and meeting the expectations of many healthcare areas, graduates of the BS Nursing program will be able to transfer to masters' level programs in nursing to specialize as a clinical nurse specialist, nurse anesthetist, nurse midwife, nurse practitioner, administrator or nurse educator. BS nurses are also sought for graduate programs in informatics and business, and healthcare administration.

The program is accredited by:

The Accreditation Commission for Education in Nursing 3390 Peachtree Road, NE Suite 1400 Atlanta, GA 30326

(404-975-5000), www.acenursing.org (http://www.acenursing.org/)

The State Education Department Division of Professional Education 89 Washington Avenue, 2nd Floor West Wing, Albany, NY 12234

(518)-486-2967, OPPROGS@nysed.gov

### **Background Checks**

Students enrolled in the nursing program must conform to the rules, policies, and procedures of the clinical affiliates in order to participate in practical experiences, which may include background checks. The cost of the background check will be the responsibility of the student. Failure to consent to and submit the appropriate background screening findings will prohibit the student from continuing in the nursing program.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Incorporate theories and concepts from the arts, humanities, and sciences into the professional nursing role.
- · Assess leadership principles in the provision of quality nursing care.
- Integrate evidence-based practice to guide care in a variety of health settings.
- Discuss the role of information technology systems in delivery of safe patient care.
- · Analyze the implications of policy on healthcare disparities.
- Analyze methods to improve health outcomes for populations.
- Analyze dimensions of communication related to health care environments.
- Promote population-focused interventions based on identified gaps in a healthcare setting.
- Extend professional identity to practice in a multicultural environment.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMP 310
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 123
Natural Sciences (and Scientific Reasoning) (required)	BIOL 301 and BIOL 302
Humanities	PHIL 311
Social Sciences	PSYC 304 and PSYC 386
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised

**Core Competencies:** 

Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion. A minimum of 60 credits of lower division (100-200 level) coursework are earned via completion of the Associate Degree Nursing program and are applicable towards the total credit requirement for the Bachelor's degree program.

Code	Title	Credits
NURS 305	Nursing Informatics	3
NURS 310	Conceptual Foundations for Professional Pract	ice 3
NURS 330	Health Assessment Across the Life Span	3
NURS 361	Health Promotion Across the Life Span	3
NURS 381	Leadership & Management for Professional Practice	3
NURS 430	Nursing Research & Evidence-based Practice	3
NURS 431	Healthcare Policy, Issues & Trends	3
NURS 450	Public, Community and Family Health Nursing <sup>1</sup>	<sup>, 2</sup> 5
NURS 481	Seminar in Professional Nursing <sup>1, 3</sup>	4
COMP 310	Advance Tech Communication	3
MATH 123	Elementary Statistics (or equivalent statistics course) <sup>4</sup>	3
BIOL 301	Pathophysiology	3
BIOL 302	Epidemiology	3
PSYC 386	Social Psychology	3
PSYC 304	Industrial/Org Psychology	3
PHIL 311	Professional Ethics	3
Foreign Language as Advised		
Additional SUNY (	General Education	6
Total Credits		60

1

Practical Experiences are required in NURS 450 Public, Community and Family Health Nursing (67.5 clinical hours) and NURS 481 Seminar in Professional Nursing (90 hours).

Clinical experiences are required in NURS 450 Public, Community and Family Health Nursing (67.5 clinical hours).

#### 3

2

Clinical experiences are required in NURS 481 Seminar in Professional Nursing (90 clinical hours).

#### 4

Or equivalent statistics course as advised. MAGN 101 Elementary Algebra (or equivalent) with a grade of C or better is required prior to MATH 123 Elementary Statistics. Applicants may contact the Mathematics Department Chairperson for information.

ourse	Title	Credits
'ear 1		
all		
IURS 305	Nursing Informatics (online)	3
IURS 310	Conceptual Foundations for Professional Practice (online)	3

	Total Credits	60
	Credits	13
General Education as	s Advised	3
PHIL 311	Professional Ethics (hybrid, face-to-face)	3
NURS 481	Seminar in Professional Nursing (online and practical experience)	4
NURS 431	Healthcare Policy, Issues & Trends (online)	3
Caring	Credits	17
Foreign Language as	s Advised	3
COMP 310	Advance Tech Communication (online, face-to-face)	3
PSYC 304	Industrial/Org Psychology (online)	3
NURS 450	Public, Community and Family Health Nursing (online and practical experience)	5
NURS 430	Nursing Research & Evidence-based Practice (online)	3
Fall		
Year 2		
	Credits	15
General Education C	redits as Advised	3
PSYC 386	Social Psychology (online, face-to-face)	3
BIOL 302	Epidemiology (online)	3
NURS 381	Leadership & Management for Professional Practice (online)	3
NURS 361	Health Promotion Across the Life Span (online)	3
Spring	Credits	15
MATH 123	Elementary Statistics (online, hybrid, face-to-face)	3
BIOL 301	Pathophysiology (online)	3
NURS 330	Health Assessment Across the Life Span (online)	3

# **Psychology Minor**

The psychology minor is for students in a bachelor's degree program who also want to gain an understanding of the scientific study of human thought and behavior. The minor provides enough structure for students to learn about the breadth and depth of the field while also allowing students to select from a variety of courses to focus on specific areas of interest.

### **Program Learning Outcomes**

Upon successful completion of the minor, students will be able to:

- Explain how psychologists evaluate and use evidence to support theories.
- Identify current major theories and findings in various areas of psychology.

### **Curriculum Requirements**

A minimum of 15 credits is required for completion of the minor. Students must be enrolled in a Bachelor's degree program in order to declare a minor.

Code	Title	Credits
Required Courses	vork	
PSYC 101	Introduction to Psychology	3
PSYC 251	Abnormal Psychology	3
Select one of the	following:	3
PSYC 211	Lifespan Development	
PSYC 221	Biological Psychology	
PSYC 241	Child Development	

То	tal Credits	1	5-17
	PSYC 386	Social Psychology	
	PSYC 384	Group Behavior	
	PSYC 381	Personality	
	PSYC 325	Motivation and Behavior	
	PSYC 304	Industrial/Org Psychology	
	PSYC 300	Sports & Exercise Psychology	
Se	elect two of the f	following:	6-8
	or MATH 14	Statistics	
	MATH 123	Elementary Statistics	
	PSYC 291	Human Diversity Social Context	
	PSYC 284	Psychology of Gender	
	PSYC 255	Psychology Personal Adjustment	
	PSYC 242	Adolescent Development	

# **Renewable Energy Technology, A.A.S.**

Major Code: 2098

The Renewable Energy Technology Associate in Applied Science (RET A.A.S.) degree provides students with a broad and comprehensive technical education in the rapidly growing field of renewable energy. The RET A.A.S. program focuses on developing skilled technicians who are prepared to enter the job market as entry-level installers, operators, or maintenance technicians for renewable energy technologies including grid-tied solar photovoltaic, solar thermal, wind, heat pump, micro hydroelectric and bioenergy systems. The degree program has the flexibility to train students directly out of high school, as well as displaced workers who already possess a mechanical or electrical technical background.

The Renewable Energy Technology A.A.S. is a demanding curriculum for incoming students as there are strong math, biology, chemistry, physics, and electrical components to the program. Graduates from the RET A.A.S. are successfully employed as entry-level installers or maintenance technicians for renewable energy technologies including grid-tied solar photovoltaic, wind, heat pump/geothermal, and bioenergy systems. Graduates are currently working in several states across the country and abroad within their chosen renewable energy field.

Required tools/equipment: Laptop, Klein Tool Kit (available through the bookstore), clipboard, safety glasses, work gloves, work boots (steel/ safety toe), waterproof rubber boots (recommended), rain gear (coat and pants/ bibs), and cold weather gear (insulated clothing).

## **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Describe basic social, political and economic driving forces impacting renewable energy resources and systems regionally, nationally and abroad
- Interpret system schematics and designs to safely connect renewable energy mechanical and electrical components
- Install, maintain, and troubleshoot renewable energy systems by developing problem-solving skills through critical thinking in both hands-on and written technical environments
- · Work safely and responsibly in diverse groups

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised

### **Curriculum Requirements**

(required)

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
Major Field Requi	rements	
RENG 101	Basic Elec Renewable Energy	4
RENG 102	Renewable Energy Resources	3
RENG 103	Renewable Energy Seminar	1
RENG 150	Analysis Techniques for Renewable Energy	3
NATR 113	Intro toGlobal Positioning Sys	1
RENG 310	Biomass Energy Resources	3
RENG 221	Introduction to Wind Systems	3
RENG 231	Solar Photovoltaic Installation	3
RESC 125	Residential Electrification	3
NATR 213	Basics Geospatial Technology	1
or CAD 181	Intro To Computer-Aided Drftng	
CITA 101	Principles Computer Apps	3
Technical Electives as advised 13-14		
Required SUNY General Education Coursework		
SUNY General Edu as Advised	ucation Mathematics (and Quantitative Reasonir	ng) 3
SUNY General Education Natural Sciences (and Scientific Reasoning) 8 as Advised		
SUNY General Education Communication Written and Oral as Advised 3-6		
SUNY General Education Diversity: Equity, Inclusion, and Social 3 Justice as Advised		

Total Credits 6	1-65
Awareness, World Languages	
The Arts, US History & Civic Engagement, World History & Global	
Select from the following categories: Humanities, Social Science,	
Additional SUNY General Education credits as advised	3

#### **Recommended Technical Electives**

Code	Title	Credits
AGRO 110	Soil Science	3
AGRO 210	Field Crops	3
AUTO 102	Metals (welding)	3
AGEN 131	Fundamentals of Hydraulics	3
AGEN 161	Basic Hydraulics	3
BSAD 116	Business Organization & Mgmt	3
CAD 181	Intro To Computer-Aided Drftng	1
CITA 120	Computer Concepts & Op Sys	3
CITA 140	Introduction to Programming	3
CITA 200	Data Communications Networking	3
DTEC 150	Diesel Systems	3
DTEC 225	Diesel Electronics	4
ENSC 101	Agricultural Science	3
ENSC 106	Pesticide Use and Handling	2
ENSC 107	Integrated Pest Management	1
MECH 211	Analytical Mechanics (Statics)	3
NATR 103	Natural Resources Equipment Op	2
NATR 213	Basics Geospatial Technology	2
RENG 225	Tower Climbing and Rescue	2
RENG 240	Introduction to Heat Pumps	3
RESC 130	Light Framing	3
RESC 221	Plumbing	3
RESC 260	Heating And Energy Systems	3

Course	Title	Credits
Year 1		
Fall		
RENG 101	Basic Elec Renewable Energy	4
RENG 102	Renewable Energy Resources	3
RENG 103	Renewable Energy Seminar	1
SUNY General Education M	lathematics (and Quantitative Reasoning) as Advised	3
SUNY General Education C COMM 105)	communication Written and Oral as Advised (ex.	3
NATR 113	Intro toGlobal Positioning Sys	1
	Credits	15
Spring		
RENG 150	Analysis Techniques for Renewable Energy	3
NATR 213	Basics Geospatial Technology	2
RESC 125	Residential Electrification	3
SUNY General Education N (ex. BIOL 101)	latural Sciences (and Scientific Reasoning) as Advised	4
CITA 101	Principles Computer Apps	3
SUNY General Education a	s advised	3
	Credits	18
Year 2		
Fall		
RENG 231	Solar Photovoltaic Installation	3

RENG 310	Biomass Energy Resources	3
PHYS 107	Introductory Physics I	4
SUNY General Educ (ex. ENSC 261)	ation Diversity: Equity, Inclusion, and Social Justice as Advised	3
100-200 Lower Divi	sion Elective as advised (ex. RESC 221)	3
	Credits	16
Spring		
CAD 181	Intro To Computer-Aided Drftng	1
RENG 221	Introduction to Wind Systems	3
100-200 Lower Division Elective as advised (ex. AUTO 102)		3
100-200 Lower Division Elective as advised (ex. RESC 260)		3
100-200 Lower Divi	sion Elective as advised (ex. RESC 221)	3
Credits		13
	Total Credits	

# Renewable Energy, B.TECH.

#### Major Code: 2398

The Renewable Energy Bachelor of Technology (RE B.Tech.) degree provides students with advanced technical education in the rapidly growing field of renewable energy. The RE B.Tech. program focuses on developing skilled graduates who are prepared to enter the job market as system designers, project managers, installation crew leaders, and operations and maintenance technicians for renewable energy systems including grid-tied solar photovoltaic, solar thermal, wind, heat pump, micro hydroelectric and bioenergy systems.

Students have a well-guided program that covers a wide range of important skills including installation and maintenance of energy systems, electrical and mechanical system design with contemporary software packages, and project management and permitting. Our installation classes focus strongly on real-world systems in state-ofthe-art facilities. Graduates are prepared to climb career ladders quickly within a focus area of their choosing.

An internship is a recommended program option (3-15 credit hours) that places students in a supervised work environment with a cooperating employer. This provides students with opportunities to gain valuable experience, make professional contacts and build their resumes in preparation for future employment and career decisions. Many placement sites are available in New York State, but students who wish to travel can find opportunities in other parts of the country or abroad. Successful internships have included experiences in solar and wind energy, cellular communications, geothermal/HVAC, bioethanol production, and bioenergy systems.

Graduates from the RE B.Tech. have been successfully employed as system designers, installation and maintenance technicians, quality control supervisors, and project managers. Graduates are currently working within their chosen renewable energy field in several states across the country and abroad.

Required tools/equipment: Laptop, Klein Tool Kit (available through the bookstore), clipboard, safety glasses, work gloves, work boots (steel/ safety toe), waterproof rubber boots (recommended), rain gear (coat and pants/bibs), and cold weather gear (insulated clothing).

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Describe basic social, political, economic and ecological factors impacting renewable energy resources and systems regionally, nationally and abroad.
- Demonstrate problem-solving skills and critical thinking in both hands-on and written technical environments.
- Assess renewable energy resources for residential, commercial, and industrial renewable energy systems in wind, solar PV, solar thermal, heat pumps, geothermal, micro hydroelectricity and/or bioenergy for a wide range of sites and client objectives.
- Design mechanical and electrical components of renewable energy systems based on thorough resource assessment and client requirements.
- Install, maintain, and troubleshoot renewable energy systems. Perform an energy site assessment and develop a comprehensive energy system proposal for a prospective client and defend the proposal rationale in written and verbal discussion.
- · Work safely and responsibility with live systems in diverse groups.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 123 or MATH 141
Natural Sciences (and Scientific Reasoning) (required)	RENG 102
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required)	as advised
Critical Thinking and Reasoning	as advised
(required)	

#### **Curriculum Requirements**

A minimum of 120 credits is required for degree completion.

Code	Title	Credits
Major Field Requ	uirements	
RENG 101	Basic Elec Renewable Energy	4
RENG 102	Renewable Energy Resources	3
RENG 103	Renewable Energy Seminar	1

RENG 150	Analysis Techniques for Renewable Energy	3
RENG 221	Introduction to Wind Systems	3
RENG 231	Solar Photovoltaic Installation	3
RENG 310	Biomass Energy Resources	3
RENG 460	Systems Integration	3
RESC 125	Residential Electrification	3
NATR 113	Intro toGlobal Positioning Sys	1
NATR 213	Basics Geospatial Technology	1-2
or CAD 181	Intro To Computer-Aided Drftng	
CITA 101	Principles Computer Apps	3
Upper-Division M	ajor Electives	
Select 24 credits	of the following:	24
DTEC 325	Electrical Power Generation	
RENG 306	Alternative Fuel Vehicles	
RENG 311	Biofuels	
<b>RENG 321</b>	Intro to Micro Hyro Systems	
RENG 331	Solar Thermal Systems	
RENG 332	Passive Solar Energy Systems	3
RENG 335	Solar Photovoltaic System Design	
<b>RENG 340</b>	Renewable Energy Heat & Cool	
RENG 350	Energy Economics & Financing	
RENG 355	Renewable Energy Law & Policy	
RENG 420	Wind Energy Development & Analytics	
<b>RENG 435</b>	Solar Development Engineering	
RENG 450	Advanced Grid Technologies	
RENG 480	Renewable Energy Internship Pr	
RENG 490	Renewable Energy Internship	
Required SUNY G	eneral Education & Liberal Arts and Sciences	
Coursework		
SUNY General Edu as Advised	ucation Natural Sciences (and Scientific Reasoning)	12
SUNY General Edu	ucation Communication Written and Oral as Advised	3-6
SUNY General Edu Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
MATH 123	Elementary Statistics	3
or MATH 141	Statistics	
Additional Genera	l Education as advised	6-9
Recommended Te	chnical Electives	
Select 36-37 credi subjects: AGBS, A CITA, DTEC, ENSC	its of Technical Electives from the following 3 GRO, AGEN, AGSC, AUTO, BIOL, BSAD, CAD, CHEM, , ENROM, MECH, NATR, PHYS, RENG, RESC	5-37
Total Credits	121-	129

## **Sample Course Sequence**

```
Title
                                                                                 Credits
Course
Year 1
Fall
RENG 101
                        Basic Elec Renewable Energy
                                                                                      4
RENG 102
                        Renewable Energy Resources
                                                                                      3
RENG 103
                        Renewable Energy Seminar
                                                                                      1
                                                                                      3
MATH 123
                        Elementary Statistics (or as advised)
SUNY General Education Communication Written and Oral as Advised (ex.
                                                                                      3
COMP 101)
```

NATR 113	Intro toGlobal Positioning Sys	1
	Credits	15
Spring	An chuic Tachainne fan Den swehle Franse	0
RENG 150	Analysis Techniques for Renewable Energy	3
NATR 213	Basics Geospatial Technology	2
SUNV Coporal Educ	Residential Electrification	3
(ex. BIOL 101)	autor matural sciences (and scientific neasoning) as Auvised	4
CITA 101	Principles Computer Apps	3
SUNY General Educ COMM 111)	cation Communication Written and Oral as Advised (ex.	3
	Credits	18
Year 2		
Fall		
RENG 231	Solar Photovoltaic Installation	3
RENG 310	Biomass Energy Resources	3
SUNY General Educ (ex. PHYS 107)	cation Natural Sciences (and Scientific Reasoning) as Advised	4
SUNY General Educ (ex. ENSC 261)	cation Diversity: Equity, Inclusion, and Social Justice as Advised	3
100-200 Lower Divi	sion Elective as advised (ex. NATR 103)	2
	Credits	15
Spring		
CAD 181	Intro To Computer-Aided Drftng	1
RENG 221	Introduction to Wind Systems	3
SUNY General Educ	cation Natural Sciences (and Scientific Reasoning) as Advised	4
(ex. CHEM 101)		
SUNY General Educ	cation as advised (ex. World History & Global Awareness)	3
100-200 Lower Divi	sion Elective as advised (ex. RENG 240)	3
100-200 Lower Divi	sion Elective as advised (ex. RESC 260)	3
	Credits	17
Year 3		
	Disfusia	2
RENG 311	Solar Distavalteis System Design	3
RENG 355		3
DTEC 325	Electrical Power Generation	3
SUNY General Educ	cation as advised (ex. Humanities)	3
	Credits	15
Spring		
RENG 331	Solar Thermal Systems	3
RENG 340	Renewable Energy Heat & Cool	3
RENG 350	Energy Economics & Financing	3
RENG 420	Wind Energy Development & Analytics	3
RENG 435	Solar Development Engineering	3
	Credits	15
Year 4		
Fall		
RENG 450	Advanced Grid Technologies	3
RENG 460	Systems Integration	3
RENG 480	Renewable Energy Internship Pr	1
SUNY General Educ	cation as advised (ex. The Arts or World Languages)	3
300-400 Upper Divi	sion Elective as advised (ex. CITA 405)	3
100-200 Lower Divi RENG 225)	sion or 300-400 Upper Division Elective as advised (ex.	3
	Credits	16
Spring		
Select one of the fo	ollowing options:	12
Option 1:		
RENG 490	Renewable Energy Internship	
Option 2:		

Elective as advised (ENRM 303)

	Total Credits	123
	Credits	12
Ele	ective as advised (ex. BSAD 400)	
Ele	ective as advised (ex. AUTO 102)	
30	00-400 Upper Division Elective as advised (ex. ENRM 332)	

# **Residential Construction, A.O.S.**

#### Major Code: 0463

The Residential Construction curriculum is designed for students that wish to develop skills and knowledge in the residential construction industry. Students in the program will develop technical skill sets through coursework and experiential learning laboratories. Students will engage in a broad range of construction disciplines, including masonry, carpentry, plumbing, HVAC, electrical, design, planning, estimating, and worksite management.

In addition to technical courses, students will take business, accounting, and composition courses. These courses allow students develop communication and soft skills that are required in the field and accelerate advancement in the construction industry.

### **Career Opportunities**

Employment opportunities are as numerous as the various segments of the home-building industry. Employment directly related to residential construction could include entrepreneurship, materials purchasing, or working with a contractor as an estimator, foreman, or project manager.

Graduates with a comprehensive knowledge of construction and business are well-suited for careers in sales. These careers might include real estate, development, retail and wholesale building materials sales and management, and product manufactures representatives.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Develop estimates, construction contracts, and material lists for typical residential structures.
- Design and build masonry systems including foundations, concrete and masonry unit structures for residential applications.
- Estimate, plan schedule and complete building projects with minimal supervision for residential construction.
- Demonstrate best practices and safety while constructing wood framing for residential structures.
- Apply a working knowledge of a rough-in and devise installation for utilities for residential dwellings.
- Interpret and interpolate working drawings used for construction of residential commercial structures.
- Estimate the major material components and standards of workmanship for the home building industry.

#### **Curriculum Requirements**

A minimum of 60 credits is required for degree completion.

Code	Title	Credits
RESC 106	Graphic Communications	3
RESC 130	Light Framing	3
RESC 160	Intro Bldg Materials & Estimat	3
RESC 201	Estimating And Planning	3

RESC 211	Masonry And Foundations	3
RESC 221	Plumbing	3
RESC 260	Heating And Energy Systems	3
RESC 270	Construction Planning & Mgt	4
CAD 181	Intro To Computer-Aided Drftng	1
WOOD 101	Wood Products and Processes	3
RESC 180	OSHA 30 Hour Construction Indu	3
RESC 125	Residential Electrification	3
AGEN 135	Construction Surveying	3
BSAD 108	Business Law 1	3
BSAD Business El	ective as advised	3
ACCT Accounting	Elective as advised	3
SUNY General Edu	cation Communication Written and Oral as Advised	6
Additional Genera	l Elective Credits as advised	8
Total Credits		61

### **Sample Course Sequence**

	Total Credits	61
	Credits	16
General Elective as advise	d (ex. RENG 221)	3
RESC 180	OSHA 30 Hour Construction Indu	3
RESC 260	Heating And Energy Systems	3
BSAD 108	Business Law 1	3
RESC 270	Construction Planning & Mgt	4
Spring	orcurs	14
		14
General Elective as adviso	d (ex BENG 231)	2
BESC 201	Estimating And Planning	3
BESC 211	Masonry And Foundations	3
AGEN 135	Construction Surveying	3
BESC 221	Plumbing	3
Fall		
Vear 2	Greats	15
General Elective as advise	Cradita	3
ACCT TOU	Accounting into & Mgt Decision	3
SUNY General Education C	Communication Written and Oral as Advised	3
RESC 125	Residential Electrification	3
RESC 160	Intro Bldg Materials & Estimat	3
Spring		
	Credits	16
BSAD Business Elective as	advised (ex. BSAD 117)	3
CAD 181	Intro To Computer-Aided Drftng	1
RESC 106	Graphic Communications	3
WOOD 101	Wood Products and Processes	3
SUNY General Education C	communication Written and Oral as Advised	3
RESC 130	Light Framing	3
Fall		
Year 1		
Course	Title	Credits

# Social Media Influencing & Development Microcredential

#### Major Code: MSMI

The Social Media Influencing and Development microcredential is a 12credit program that will support students' career-ready skills in content curation, social media engagement, analytics, branding, and profitability. Students enrolled in this program will become proficient in those areas making them ready for the workforce upon completion. No course fees or pre-requisites required.

### **Program Learning Outcomes**

Upon successful completion of this microcredential students will be able to:

- · Produce content across social media platforms.
- · Demonstrate the ability to create and format text, digital audio, digital video and graphic content across mobile and web-based platforms.
- · Apply working knowledge of the planning and production of Web sites, with the ability to supply content and to manipulate that content with current Web software, multimedia software, and layout techniques.
- Explore and identify examples of metric tools, return on investment, and integrated social media tactics.
- · Create content strategies, strategic plans, and perform various analyses of social media data from reliable sources.
- · Demonstrate in their work an understanding of legal and ethical standards pertaining to various social media professions.

### **Curriculum Requirements**

A total of 12 credits is required for completion of the microcredential. Students will receive a digital badge upon completion.

Code	Title	Credits
SOCM 100	Social Media Content Curation	3
SOCM 101	Social Media Community Mgmnt	3
SOCM 102	Social Media Analytics & Engmt	3
SOCM 103	Social Media Branding & Profit	3
Total Credits		12

Total Credits

# **Sociology Minor**

The sociology minor is for students in a bachelor's degree program who want to develop an understanding of the scientific study of group behavior and society. The minor provides enough structure for students to learn about the breadth and depth of the field while also allowing students to select from a variety of courses which focus on specific areas of interest.

## **Program Learning Outcomes**

Upon successful completion of the minor, students will be able to:

- · Describe the major perspectives of sociological insight, including structural, conflict, and interaction perspectives.
- · Demonstrate an understanding of sociological methods and how they can be applied to the study of social problems.
- · Demonstrate the ability to describe the relationship between modern society and sociological ideas.
- Apply sociological concepts to the analysis of social groups, class, gender, race and ethnicity, and deviance.

## **Curriculum Requirements**

A minimum of 15 credits is required for completion of the minor. It requires at least 6 of the credit hours to be lower division courses

(including SOCI 101 Intro to Sociology) and at least 6 credit hours to be upper division courses. It requires at least 12 of the credits to come from courses with a SOCI prefix. Students must be enrolled in a Bachelor's degree program in order to declare a minor.

Code	Title	Credits
<b>Required Coursev</b>	vork	
Lower Division Co	ourses	
Select at least 6 c	redit hours of the following:	
SOCI 101	Intro to Sociology (required)	3
Select Additional	Courses from the following:	3
SOCI 201	Social Problems	
SOCI 221	Death and Dying	
SOCI 250	Social Gerontology	
SOCI 261	Environmental Justice	
SOCI 270	Drugs, Society & Behavior	
PSYC 291	Human Diversity Social Context	
STS 101	Values of Science & Technology	
ANTH 101	Introduction to Anthropology	
GEOG 101	Intro World Regional Geography	
HIST 225	Women in the United States	
Upper Division Co	ourses	
Select at least 6 c	redit hours of the following:	6
SOCI 360	Social Mvt & Community Change	
SOCI 390	Urban Sociology	
PSYC 384	Group Behavior	
PSYC 386	Social Psychology	
STS 316	Investigating Cyberculture	
Additional Course	2	
Select one addition	onal course from either Lower Division or Upper	3
Division courses		
Total Credits		15

## Specialty Crops & Cannabis **Production Certificate**

Major Code: 3094 Program Description

The Specialty Crops and Cannabis Production Certificate provides foundational applied training to NY's emerging cannabis industry; as well as NY's specialty crop industry: fruits and vegetables, tree nuts, dried fruits, horticulture and nursery crops, including floriculture. Curriculum design ensures that students will have both a strong skill set for workforce readiness and potential transferability to associate or bachelor programs.

### **Career Opportunities**

This certificate would provide students with the opportunity to secure entry-level positions in specialty crop and cannabis businesses. To list just a couple of examples, the employment opportunities for graduates are to be found in retail and wholesale nursery/greenhouse businesses and cannabis and food crop production firms.

### **Graduation Credit Requirements**

The certificate is 27 total credits and can be completed in two semesters.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be workforceready and will be able to:

- · Explore and examine the necessary career orientation toward the fruit, vegetable, tree nut, dried fruit, horticulture, nursery, floriculture, and cannabis industries.
- Apply problem-solving skills in greenhouse, nursery, and field operations, and fruit, vegetable, tree nut, dried fruit, horticulture, nursery, floriculture, and cannabis production and processing.
- · Employ plant science concepts and technologies to maximize efficiencies of product development in the fruit, vegetable, tree nut, dried fruit, horticulture, nursery, floriculture, and cannabis industries.

### **Curriculum Requirements**

Code	Title	Credits
AGRO 110	Soil Science	3
BIOL 102	Botany-Form Function Seed Plt	3
CANA 101	Introductory Cannabis	3
ENSC 106	Pesticide Use and Handling (or as advised)	2
ENSC 107	Integrated Pest Management	1
HORT 150	Fruit & Vegetable Production	3
HORT 200	Greenhouse Management	3
Electives as Adv	ised	9
Total Credits		27

## **Sample Course Sequence**

Course	Title	Credits
Year 1		
Fall		
ENSC 107	Integrated Pest Management	1
CANA 101	Introductory Cannabis	3
BIOL 102	Botany-Form Function Seed Plt	3
HORT 200	Greenhouse Management	3
Electives as Advised		3
	Credits	13
Spring		
AGRO 110	Soil Science	3
ENSC 106	Pesticide Use and Handling (or as advised)	2
HORT 150	Fruit & Vegetable Production	3
Electives as Advised		6
	Credits	14
	Total Credits	27

**Total Credits** 

### Sustainable Resource Management, B.S.

#### Major Code: 3167

The Bachelor of Science in Sustainable Resource Management (SRM) degree provides students with a comprehensive curriculum in resource planning and adaptive management while comprehending the regulatory policy envelope which directs the actions of agricultural and natural resource planners in the 21st century. Built around a core curriculum of foundational sciences and resource conservation and management

practice, students may specialize their SRM BS by selecting offered electives in agriculture and natural/renewable resources disciplines.

This program requires a full-semester internship that places students in supervised work with a cooperating agricultural or environmental agency. This provides students with opportunities to gain valuable experience, make professional contacts, and build their resumes in preparation for future employment and career decisions. Most internships are paid. Opportunities exist nationwide in both the public and private sectors. Many placement sites are available in New York State, but students who wish to travel can find opportunities in other parts of the country. Successful internships may include experiences in agricultural resource planning, ecosystem and resource sustainability, soil and water conservation, forestry, outdoor recreation management, GIS (geographic information system) mapping, wetlands delineation, and management, or fish and wildlife management.

Admission to the SRM BS requires a minimum 2.5 grade point average with the NYS Regents Diploma, with the Advanced NYS Regents Diploma preferred. A student who does not meet this requirement may be admitted on a conditional basis.

Career Opportunities: The B.S. in Sustainable Resource Management is designed to prepare students for graduate-level studies in resource sustainability or for entry into public- and private-sector careers at the planning, supervisory, and management levels where technical, business, and communication skills are necessary. Students completing the Sustainable Resource Management B.S. can pursue jobs in agricultural and natural resource planning and management, soil and water conservation, ecological restoration, agroecology, and conservation biology. This degree program offers a unique opportunity to blend agriculture and natural resource fields with a blend of technical electives. Furthermore, this allows the students to seek employment in the fields that bridge the gap between agriculture and natural resource management, such as Soil and Water Conservation Districts (SWCD) and the Natural Resource Conservation Service (NRCS).

Graduation Requirements: Students in the Sustainable Resource Management major must complete ALL the requirements listed below. A minimum of 120 credit hours of coursework is required.

MATH 103 or higher is required for completion of this program. All bachelor's degree students must complete the State University of New York Board of Trustees mandated general education requirements (see catalog section titled Academic Information: SUNY General Education Requirements).

### **Program Learning Outcomes**

Upon completion of the program, and according to the specialization of this major, a successful graduate will be able to:

- · Display critical thinking through the ability to recognize issues in resource sustainability.
- · Interpret sustainability problems and opportunities across spatial scales from local to global.
- · Correspond professionally and ethically with clients, the public, and agency personnel.
- · Integrate the input and perspectives of diverse stakeholders regarding sustainable resource allocation issues.
- · Interpret laws and policies in agricultural, natural, and renewable resource conservation and management.

- Apply critical thinking and problem-solving skills in evaluating alternative solutions to complex problems in sustainable resource management.
- Produce actionable management plans in accordance with current best management practices and in line with adaptive resource management theory.
- Defend a proposed management plan in terms of best management practice alternatives.
- Develop a comprehensive knowledge of their field of expertise and utilize that knowledge in pursuing potential career opportunities.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BS degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	COMP 101, COMP 102, COMM 111, COMP 310
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	MATH 103, MATH 123
Natural Sciences (and Scientific Reasoning) (required)	CHEM 121, CHEM 122
Humanities	PHIL 311
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	HIST 171
World Languages	as advised
Core Competencies:	

#### **Core Competencies:**

Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

#### Curriculum

A minimum of 120 credits is required for degree completion.

Code	Title	Credits		
Major Requirements				
AGBS 225	Environmental Economics	3		
AGRO 110	Soil Science	3		
BIOL 102	Botany-Form Function Seed Plt	3		
BSAD 300	Management Communications	3		
NATR 101	General Ecology	3		
NATR 113	Intro toGlobal Positioning Sys	1		
NATR 142	Plane Surveying I	3		
NATR 144	Seminar/Environmental Resc I	1		
NATR 145	Intro Environmental Technology	3		

RENG 102	Renewable Energy Resources	3		
RENG 310	Biomass Energy Resources	3		
ENRM 305	Environment Law Policy Justice	3		
ENRM 332	Environment Planning & NR Mgt	3		
ENRM 412	Ecosystem Adaptive Management	3		
ENRM 450	Environmental & Natural Resource Management Internship Orientation	1		
NATR 213	Basics Geospatial Technology	2		
or AGSC 132	Introduction to Precision Farming			
ENRM 303	Fundamentals Geospatial System	3-4		
or AGBS 450	Ag Policy & Development			
ENRM 470	Internship in Environmental & Natural Resource Management	15		
or AGBS 470	Internship in Ag Business Dev			
Technical Elective CANA, CHEM, DA	es in AGBS, AGEN, AGRO, AGSC, ANSC, BIOL, BSAD, SC, ENRM, ENSC, ENVT, HORT, NATR, or RENG	19		
Required SUNY G	eneral Education Coursework			
CHEM 121	General College Chemistry I	4		
CHEM 122	General College Chemistry II	4		
COMM 111	Introduction to Speech	3		
COMP 101	Composition and Research	3		
COMP 102	Writing About Literature	3		
COMP 310	Advance Tech Communication	3		
HIST 171	Environmental History	3		
MATH 103	College Algebra w/ Trig	3		
MATH 123	Elementary Statistics	3		
PHIL 311	Professional Ethics	3		
Select one of the	following:	4		
BIOL 121	General Biology II			
BIOL 260	Principles of Zoology			
CHEM 241	Organic Chemistry I			
PHYS 107	Introductory Physics I			
SUNY General Education Diversity: Equity, Inclusion, and Social 3 Justice as Advised				
Must also complete General Education (p. 31) 3				
Total Credits	120	)-121		
_				

Course	Title	Credits
Year 1		
Fall		
BIOL 102	Botany-Form Function Seed Plt	3
COMP 101	Composition and Research	3
MATH 103	College Algebra w/ Trig	3
NATR 113	Intro toGlobal Positioning Sys	1
NATR 144	Seminar/Environmental Resc I	1
NATR 145	Intro Environmental Technology	3
	Credits	14
Spring		
AGRO 110	Soil Science	3
COMM 111	Introduction to Speech	3
COMP 102	Writing About Literature	3
RENG 102	Renewable Energy Resources	3
Must also complete	e General Education (p. 31)	3
	Credits	15
Year	2	
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Fall		
MATH 123	Elementary Statistics	3
CHEM 121	General College Chemistry I	4
HIST 171	Environmental History	3
AGBS 225	Environmental Economics	3
NATR 142	Plane Surveying I	3
	Credits	16
Spring		
CHEM 122	General College Chemistry II	4
SUNY General Education	Diversity: Equity, Inclusion, and Social Justice as Advised	3
NATR 101	General Ecology	3
Technical Sequence Elect	ive as Advised	2
NATR 213	Basics Geospatial Technology	2
or AGSC 132	or Introduction to Precision Farming	
	Credits	14
Year 3		
Fall		
PHIL 311	Professional Ethics	3
COMP 310	Advance Tech Communication	3
RENG 310	Biomass Energy Resources	3
Technical Sequence Elect	ive as Advised	2
Select one of the followin	g:	4
BIOL 120	General Biology I	
BIOL 260	Principles of Zoology	
CHEM 241	Organic Chemistry I	
PHYS 107	Introductory Physics I	
	Credits	15
Spring		
ENRM 305	Environment Law Policy Justice	3
ENRM 332	Environment Planning & NR Mgt	3
ENRM 450	Environmental & Natural Resource Management	1
	Internship Orientation	
Technical Sequence Elect	ive as Advised	6
ENRM 303	Fundamentals Geospatial System	3-4
or AGBS 450	or Ag Policy & Development	
	Credits	16-17
Year 4		
Fall		
BSAD 300	Management Communications	3
ENRM 412	Ecosystem Adaptive Management	3
Technical Sequence Elect	ives as Advised	9
	Credits	15
Spring		
ENRM 470	Internship in Environmental & Natural Resource	12-15
or AGBS 470	Management	
	or Internship in Ag Business Dev	
	Credits	12-15
	Total Credits	117-121

# Technology Management, B.TECH.

#### Major Code: 1318

The Technology Management degree program allows graduates in specialized A.A.S. program areas to combine their technical expertise with a firm understanding of fundamental business functions. By combining business education with enhanced technical skill sets, graduates will be prepared to assume the role of supervisor or management trainee in a contemporary, technology- driven environment.

This program provides students with technical and business expertise through classroom and hands-on field experiences. These features align with the college's mission of offering baccalaureate degrees with a business nature and a strong emphasis on technology and lifelong learning. While maintaining course flexibility, the program prepares professionals who identify and implement effective approaches to solving business problems and improve specialized business operation processes.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- · Communicate effectively both in writing and in presentation.
- · Evaluate strategies for solving business problems.
- · Recognize and promote ethical and responsible business practices.
- Utilize quantitative analysis to evaluate current and future market segment opportunities
- · Apply quantitative analysis to evaluate business profitability
- · Assess and evaluate the impact of developing technologies
- Identify technology and workforce strategies to enhance overall productivity
- Prepare a competitive industry analysis in support of strategic decision making

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville BTech degree programs require completion of at least 30 credits of SUNY GE, a minimum of seven (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	ECON 100 or ECON 140
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	

Information Literacy (required) as advised Critical Thinking and Reasoning as advised (required)

### **Curriculum Requirements**

A minimum of 121 credits is required for degree completion. This is a junior level degree program and students must complete 60 credits of coursework at the Associate degree level before transferring into the Technology Management, B.Tech. program. Students are required to demonstrate proficiency through MATH 102 as part of the degree program.

Code	Title	Credits	
Major Field Requirements			
Lower Division Re	equirements:		
ACCT 100	Accounting Info & Mgt Decision	3	
or ACCT 101	Principles of Accounting I		
BSAD 116	Business Organization & Mgmt	3	
BSAD 221	Business Statistics	3	
ECON 140	Introduction to Microeconomics	3	
or ECON 100	Introduction to Macroeconomics		
CITA 101	Principles Computer Apps	3	
Upper Division Re	equirements:		
BSAD 300	Management Communications	3	
BSAD 408	Responsible Business Ownership	3	
Business/Techno	logy Electives	6	
Select two of t	he following:		
BSAD 310	Human Resource Management		
BSAD 320	Entrepreneurship		
BSAD 325	Marketing Management		
BSAD 400	Production & Operation Mgt		
Select one of the	following:	1	
CITA 395	Internship Orientation Seminar		
AUTO 420	Auto Industry Internship Orien		
TECH 480	Internship in Tech Management	15	
300-400 Upper Di	vision Electives as advised	6	
Required Option:			
Select 12 credits	from one of the following options:	12	
General Manag	gement Option		
Diesel Technol	ogy Option		
Marketing Mar	nagement Option		
Healthcare Off	ice Coordinator Option		
Renewable Ene	ergy Option		
Sports Manage	ement Option		
Total Credits		61	

### **Required Options**

### Diesel Technology Option

Code	Title	Credits
AUTO 360	Auto Shop Mgt & Supervision	3
AUTO 380	Auto Parts Management	3
AUTO 400	Automotive Fleet Management	3
DTEC 300	Diesel Equip Tech Internship 2	4
DTEC 325	Electrical Power Generation	3
DTEC 350	Advanced Diesel Fuel Systems	3

### **General Management Option**

Code	Title	Credits
BSAD 310	Human Resource Management	3
BSAD 320	Entrepreneurship	3
BSAD 325	Marketing Management	3
BSAD 327	Advertising Management	3
BSAD 329	Consumer Behavior	3

BSAD 350	Principles Corporate Finance	3
BSAD 375	Management Information Systems	3
BSAD 380	International Business	3
BSAD 400	Production & Operation Mgt	3
BSAD 411	Leadership in Organizations	3
BSAD 449	Management Policy and Issues	3
CITA 405	Project Management	3
Healthcare Offic	e Coordinator Option	
Code	Title	Credits
BSAD 325	Marketing Management	3
BSAD 411	Leadership in Organizations	3
COMP 310	Advance Tech Communication	3
OFFT 301	Advanced Medical Coding	3
OFFT 335	Advanced Medical Transcription	3
PSYC 304	Industrial/Org Psychology	3
PSYC 384	Group Behavior	3
PSYC 386	Social Psychology	3
Marketing Mana	gement Ontion	
Code	Title	Credits
BSAD 325	Marketing Management	3
BSAD 327	Advertising Management	3
BSAD 329	Consumer Behavior	3
PSYC 304	Industrial/Org Psychology	3
or PSYC 386	Social Psychology	
Renewable Fner	av Option	
Code	Title	Credits
<b>RENG 306</b>	Alternative Fuel Vehicles	2
RENG 310	Biomass Energy Resources	3
RENG 420	Wind Energy Development & Analytics	3
RENG 460	Systems Integration	3
Sports Manager	nent Ontion	
Code	Title	Credits
BSAD 343	Intro to Sport Management	3
BSAD 353	Sport Marketing - Strategic Ap	3
BSAD 418	Sport Law	3
BSAD 443	Strategic Sports Business	3
Comple Co		

# Sample Course Sequence

Course	Title	Credits
Year 1		
Fall		
ACCT 100	Accounting Info & Mgt Decision	3
BSAD 116	Business Organization & Mgmt	3
CITA 101	Principles Computer Apps	3
BSAD 300	Management Communications	3
ECON 140	Introduction to Microeconomics	3
	Credits	15
Spring		
BSAD 221	Business Statistics	3
300-400 Business/Techno	logy Electives as advised	6
300-400 Required Option E	Electives as advised	6
	Credits	15

	Total Credits	61
	Credits	15
TECH 480	Internship in Tech Management	15
Spring		
	Credits	16
300-400 Upper Divi	ision Electives as advised	6
AUTO 420	Auto Industry Internship Orien	
CITA 395	Internship Orientation Seminar	1
300-400 Required 0	Option Electives as advised	6
BSAD 408	Responsible Business Ownership	3
Fall		
Year 2		

# Wood Products Technology, A.A.S.

#### Major Code: 0618

This program has been deactivated and students will no longer be admitted to the major. Currently enrolled students will complete the degree in accordance with the approved teach-out plan.

Wood Products Technology is a one-of-a-kind program in the State of New York, designed to train students for employment in finish carpentry, cabinet-making and furniture production, while using cutting edge technology like computer numerical controlled machinery to enter wood manufacturing industries.

The major begins with a survey of the industry and an introduction to the use of commercial cabinet-making equipment. Students learn wood properties and identification, manufacturing and grading at the sawmill and apply this knowledge to the seasoning or kiln drying of lumber. Students also learn both in theory and practice about adhesives, finishes and wood laminates.

Students can choose either the Finish Carpentry option which includes the electrical, plumbing or light framing trades, or the Furniture Production and Business option that concentrates on the business aspects where the students learn accounting, marketing and human resource management. Students following the Finish Carpentry option take all of the wood courses while an introduction to electrical, plumbing and light framing is gained to allow the student to enter the building trades. Students following the Furniture Production and Business option also take all of the traditional wood courses with a concentration of business classes for the student interested in starting their own business or working for a large furniture manufacturer.

The facility is a 14,000 square foot fully-equipped wood center where the students can start with a log and use the same wood to complete a finished project. The technologically advanced equipment includes a WoodMizer LT300 sawmill, SII Dry Kiln with state-of-the-art drying software, a Weinig Profimat #26 five head molder with knife grinding equipment, a modern woodshop with four planers, Sawstop table saws, a Kreg Face frame clamping table and a General 5 hp. Shaper with selffeed.

### **Career Opportunities**

The Wood Products Technology program prepares students for supervision and self-employment in the lumber, furniture, cabinet making, and finish carpentry industry. This includes fields like kitchen and bath construction and re-modeling and architectural millwork. Sales and services of related machinery and supplies is another option.

### **Program Requirements**

There is a laboratory fee of \$100 for WOOD 101 Wood Products and Processes and WOOD 241 Secondary Wood Processing courses. For each of these course the students will complete a wood furniture project that they can keep.

### **Program Learning Outcomes**

Upon successful completion of this program, students will be able to:

- Dry any species of lumber with minimal defects.
- · Identify defects that will cause degrade during drying.
- Collect data, create and present a professional laboratory report.
- · Demonstrate current safety precautions in a manufacturing setting.
- · Operate technological advanced manufacturing equipment.
- · Describe the finishing procedure that best fits the application.
- Inspect lumber according to NHLA grading rules and determine best use.

SUNY General Education Requirements: (https://system.suny.edu/ academic-affairs/acaproplan/general-education/suny-ge/) All SUNY Morrisville AAS degree programs require completion of at least 20 credits of SUNY GE, a minimum of four (out of ten) knowledge and skills areas (including the four required knowledge and skills areas as indicated below), and completion of the two core competencies. The specific courses required within each knowledge and skills area/core competency for this degree program are outlined below.

#### Knowledge and Skills Areas:

Communication Written & Oral (required)	as advised
Diversity: Equity, Inclusion, and Social Justice (required)	as advised
Mathematics (and Quantitative Reasoning) (required)	as advised
Natural Sciences (and Scientific Reasoning) (required)	as advised
Humanities	as advised
Social Sciences	as advised
The Arts	as advised
US History and Civic Engagement	as advised
World History and Global Awareness	as advised
World Languages	as advised
Core Competencies:	
Information Literacy (required)	as advised
Critical Thinking and Reasoning (required)	as advised

### **Curriculum Requirements**

A minimum of 60 credits (Furniture Production and Business Option) or 61 credits (Finish Carpentry Option) is required for degree completion.

### **Finish Carpentry Option**

The Finish Carpentry option provides students with wood working skills and construction skills including electrification, plumbing and light framing. A minimum of 61 credits is required for degree completion.

Code	Title	Credits
WOOD 101	Wood Products and Processes	3
WOOD 160	Wood Technology	3
WOOD 170	Lumber Manufacturing & Grading	3
WOOD 180	Furniture Design Construction	3
WOOD 211	Wood Industry Field Trip	1
WOOD 221	Wood Glues,Laminating&Finishes	3
WOOD 231	Wood Seasoning & Preservation	3
WOOD 241	Secondary Wood Processing	4
WOOD 271	Cabinet Design/Manufacturing	3
RESC 130	Light Framing	3
RESC 106	Graphic Communications	3
RESC 221	Plumbing	3
DRFT 151	Engineering Drawing I	2
CAD 181	Intro To Computer-Aided Drftng	1
RESC 125	Residential Electrification	3
Required SUNY G	eneral Education Coursework	
SUNY General Ed	ucation Communication Written and Oral as Advi	sed 3
SUNY General Ed as Advised	ucation Mathematics (and Quantitative Reasonin	ig) 3
SUNY General Ed as Advised	ucation Natural Sciences (and Scientific Reasoni	ng) 3-4
SUNY General Ed Justice as Advise	ucation Diversity: Equity, Inclusion, and Social d	3
Additional SUNY	General Education credits as advised	7-8
Total Credits		60-62

### **Furniture Production and Business Option**

The furniture production and business option prepares students to work in furniture manufacturing and cabinet shops and gives them skills in business including accounting, marketing and human resources. Students that choose this option could operate a small business in wood products. A minimum of 60 credits is required for degree completion.

Code	Title	Credits
WOOD 101	Wood Products and Processes	3
WOOD 160	Wood Technology	3
WOOD 170	Lumber Manufacturing & Grading	3
WOOD 180	Furniture Design Construction	3
WOOD 211	Wood Industry Field Trip	1
WOOD 221	Wood Glues,Laminating&Finishes	3
WOOD 231	Wood Seasoning & Preservation	3
WOOD 241	Secondary Wood Processing	4
RESC 180	OSHA 30 Hour Construction Indu	3
WOOD 271	Cabinet Design/Manufacturing	3
BSAD 112	Marketing	3
BSAD Elective as	advised	3
DRFT 151	Engineering Drawing I	2
CAD 181	Intro To Computer-Aided Drftng	1
ACCT Elective as	advised	3

Total Credits 60-6	62
Additional SUNY General Education credits as advised 7	<i>'</i> -8
SUNY General Education Diversity: Equity, Inclusion, and Social Justice as Advised	3
SUNY General Education Natural Sciences (and Scientific Reasoning) 3 as Advised	}-4
SUNY General Education Mathematics (and Quantitative Reasoning) as Advised	3
SUNY General Education Communication Written and Oral as Advised	3

### **Sample Course Sequence Finish Carpentry Option**

Course	Title	Credits
Year 1		
Fall		
WOOD 101	Wood Products and Processes	3
DRFT 151	Engineering Drawing I	2
RESC 130	Light Framing	3
RESC 106	Graphic Communications	3
CAD 181	Intro To Computer-Aided Drftng	1
SUNY General Education a	s advised	3
	Credits	15
Spring		
RESC 125	Residential Electrification	3
WOOD 160	Wood Technology	3
WOOD 170	Lumber Manufacturing & Grading	3
WOOD 180	Furniture Design Construction	3
SUNY General Education D	iversity: Equity, Inclusion, and Social Justice as Advised	3
	Credits	15
Year 2		
Fall		
RESC 221	Plumbing	3
WOOD 221	Wood Glues,Laminating&Finishes	3
WOOD 231	Wood Seasoning & Preservation	3
WOOD 241	Secondary Wood Processing	4
SUNY General Education a	s advised	3
	Credits	16
Spring		
WOOD 211	Wood Industry Field Trip	1
WOOD 271	Cabinet Design/Manufacturing	3
SUNY General Education C	communication Written and Oral as Advised	3
SUNY General Education M	lathematics (and Quantitative Reasoning) as Advised	3
SUNY General Education Natural Sciences (and Scientific Reasoning) as Advised		3-4
Additional SUNY General E	ducation credits as advised	2
	Credits	15-16
	Total Credits	61-62

### **Furniture Production & Business Option**

Course	Title	Credits
Year 1		
Fall		
WOOD 101	Wood Products and Processes	3
DRFT 151	Engineering Drawing I	2
BSAD 112	Marketing	3
ACCT 100	Accounting Info & Mgt Decision	3
CAD 181	Intro To Computer-Aided Drftng	1
SUNY General Education	as advised	3
	Credits	15

#### Spring

	Total Credits	61-62
	Credits	16
SUNY General Education	as advised	3
SUNY General Education	Communication Written and Oral as Advised	3
SUNY General Education	Mathematics (and Quantitative Reasoning) as Advised	3
WOOD 271	Cabinet Design/Manufacturing	3
RESC 180	OSHA 30 Hour Construction Indu	3
WOOD 211	Wood Industry Field Trip	1
Spring	Credits	15
SUNY General Education	as advised	2
BSAD Elective as advise	d	3
WOOD 241	Secondary Wood Processing	4
WOOD 231	Wood Seasoning & Preservation	3
WOOD 221	Wood Glues,Laminating&Finishes	3
Fall		
Voor 2	Credits	15-16
SUNY General Education	Diversity: Equity, Inclusion, and Social Justice as Advised	3
SUNY General Education	Natural Sciences (and Scientific Reasoning) as Advised	3-4
WOOD 180	Furniture Design Construction	3
WOOD 170	Lumber Manufacturing & Grading	3
WOOD 160	Wood Technology	3

# **COURSE LISTINGS**

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- Accounting (ACCT) (p. 150)
- Ag Engineering (AGEN) (p. 151)
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- Agriculture & Natural Resource (AGNR) (p. 155)
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# Accounting (ACCT)

#### ACCT 100. Accounting Info & Mgt Decision. (3 Credits)

This course, recommended for non-business majors, is an accounting approach to measuring and reporting upon the economic activity, resources, and obligations of a business. Also discussed is the accounting approach to the application of accounting information to performance evaluation and the decision making process. Basic accounting processes, evaluation of financial position earnings, measurement in retailing and manufacturing, basic cost ac-counting and budgeting are discussed. This course is not available to accounting, business administration or computer information systems majors. 3 credits (3 lecture hours), fall or spring semester.

#### ACCT 101. Principles of Accounting I. (3 Credits)

An introduction to accounting theory and principles as applied to a business enterprise is covered in Principles of Accounting I. Principles and procedures as applied to the accumulation, processing and reporting of financial information resulting from business transactions are discussed. Students are exposed to manual and electronic media for the preparation of journals, ledgers, financial statements. Inventories, receivables, payables, plant assets and payroll accounting are also covered. Pre-requisite: MAGN 101. 3 credits (3 lecture hours), fall or spring semester.

#### ACCT 102. Principles of Accounting II. (3 Credits)

This course covers the methods of accounting for corporate organization and operation including equity-related transactions, corporate income statement, and statement of cash flows. Financial statement analysis is also covered. Managerial accounting is also included and covers such topics as product costing, short-run decision making, budgeting, and CVP analysis. Pre-requisite: ACCT 101, minimum grade of C. 3 credits (3 lecture hours), fall or spring semester.

#### ACCT 103. Computerized Accounting. (3 Credits)

Introduces students to the advanced automated accounting system used in today's business environment. Teaches skills to convert accounting data into a format that can be processed through contemporary accounting software packages. Exposure to advanced accounting problems incorporates knowledge from the Financial and Managerial Accounting courses. Students will work with spreadsheets, databases, Internet, presentation software, and general ledger programs. Prerequisite: ACCT 102, minimum grade of C. 3 credits (3 lecture hours).

#### ACCT 105. Managerial Accounting. (3 Credits)

This course continues the presentation of managerial accounting topics from Principles of Accounting II. Emphasizes use of accounting data within an organization by its managers. The purpose of this course is to define the information needed, identify sources of information and explain how managers use the information in planning, control, and making decisions. A sampling of relevant articles from recent professional publications will focus on new management techniques necessary in today's changing business environment. Pre-requisite: ACCT 102, minimum grade C. 3 credits (3 lecture hours), spring semester.

#### ACCT 201. Intermediate Accounting I. (3 Credits)

This course covers advanced accounting principles, practices of corporations, and current trends using publications of the leading accounting organizations such as the Financial Accounting Standards Board and AICPA. Topics include financial statements, current assets, investments, plant assets and current liabilities. Pre-requisite: ACCT 102, minimum grade of C. 3 credits (3 lecture hours), spring semester.

#### ACCT 205. Cost Accounting. (3 Credits)

Topics covered include elements of production cost, material, labor and overhead. Also covered are the job cost system, process cost system, standard cost system, and other miscellaneous cost accounting topics. Pre-requisite: ACCT 102, minimum grade of C. 3 credits (3 lecture hours), spring semester.

#### ACCT 212. Federal Income Tax Accounting. (3 Credits)

Basic principles of federal income taxation are covered. Topics include: federal and state income taxation for the individual including filing requirements exemptions, deductions, determination of taxable income, computation of tax, tax credits and tax payments. A project is required. Pre-requisite: ACCT 100 or ACCT 101. 3 credits (3 lecture hours), fall semester.

#### ACCT 301. Intermediate Financial Acct I. (3 Credits)

An extension of financial accounting to include advanced topics related to revenue recognition and measuring and reporting of assets that include cash, investments, receivables, inventories, plant, property, and equipment, and intangible assets. The course will emphasize both accounting theory and practice and the development of professional judgment and critical thinking skills. Designed to help achieve an indepth understanding of financial accounting sufficient to practice the profession of accounting and to solve problems at the level tested on the Uniform CPA Examination, by the end of the semester, students are expected to understand the principles, assumptions, and constraints that guide financial reporting (as outlined in the FASB's conceptual framework), and to apply US GAAP in several settings. The International Financial Reporting Standards (IFRS) will be emphasized as there is an in- creasing convergence between US GAAP and IFRS. Pre-requisite: Enrolled in the Business Administration, BBA program, have completed 18 credit hours in 300 level or above business or business related course work, ACCT 101 with a grade of C or above or permission of instructor. 3 credits (3 lecture hours), fall semester.

#### ACCT 302. Intermediate Financial Acct II. (3 Credits)

Continuation of ACCT 301. Liabilities and equities, accounting for income taxes, pensions, leases, revenue recognition and statement of cash flows. Pre-requisite: Enrolled in the Business Administration, BBA program, ACCT 301 with a grade of C or better, BSAD 350 with a grade of C or better or permission of instructor. 3 credits (3 lecture hours), fall or spring semester.

#### ACCT 303. Cost Accounting. (3 Credits)

Introduction to managerial accounting and methods used to report information to decision makers internal to the firm. Course topics include cost concepts and behavior, cost estimation, activity-based costing, job-order costing, process costing, joint product costing, budgeting, performance measures, transfer pricing, CVP analysis, customer profitability analysis, and linear programming. Pre-requisite: ACCT 102 with a grade of C or better or permission of the instructor. 3 credits (3 lecture hours), fall or spring semester.

#### ACCT 401. Auditing. (3 Credits)

Study of audit standards and techniques in the conduct of an audit examination. Theory and practice of auditing is studied from both internal and external audit points of view. Pre-requisites: ACCT 302 with a grade of C or better and BSAD 375 with a grade of C or better or permission of instructor. 3 credits (3 lecture hours), fall or spring semester.

# Ag Engineering (AGEN)

#### AGEN 100. Equipment Care & Maintenance. (3 Credits)

Care, adjustments and overall maintenance of gasoline and diesel power applications. Servicing, fuel systems, lubrication, cooling, exhaust systems, clutch and brake adjustments and hydraulic systems will be covered. Principles of safety as applied to mobile machinery are emphasized. The course is designed for basic competency skills in care and maintenance. 3 credits (2 lecture hours, 2 laboratory hours)

#### AGEN 102. Agricultural Equip Operation. (2 Credits)

Familiarize students with the safe and proper methods of operating, performing maintenance, managing and selecting equipment in an economically viable way. Equipment that will be covered includes stationary and mobile machines such as feed mixers, equipment normally found on dairy farm, and forestry and construction industries. Lectures highlight management considerations whereas laboratories emphasize proper machine operation. 2 credits (1 lecture hour, 3 laboratory hours), fall semester

#### AGEN 104. Estate & Sm Farm Equip Opera. (2 Credits)

This course will familiarize the student with safe and proper methods of operating, performing maintenance, managing and selecting equipment in an economically viable way. Equipment covered will include stationary and mobile machines such as auxiliary power units and equipment found on small farms and horticultural applications. It does not include the indepth study into any specific machine, but covers the basics. 2 credits (1 lecture hour, 3 laboratory hours), fall semester

#### AGEN 105. Principles of Farm Machinery. (2 Credits)

Care, adjustment, operation and repair of tillage, planting and harvesting field machinery common to New York state farms with special attention to adjustment and maintenance in the laboratory are covered in this course. Efficient machinery selection and use is also investigated. 2 credits (1 lecture hour, 2 laboratory hours), fall semester

#### AGEN 110. Small Power Equipment. (2 Credits)

Principles of operation, service and repair of 2 and 4 cycle small engines and the equipment which they operate such as lawn and garden equipment, chain saws, small power generators and outboard motors. Laboratory practice in testing, servicing and rebuilding the equipment. 2 credits (1 lecture hour, 2 laboratory hours), fall semester Non-majors only

#### AGEN 115. Ag Engr Industry Overview. (1 Credit)

This course will expose the student to the many and varied opportunities that exist for graduates in Agricultural Engineering Technology and Agricultural Mechanics. The course will present a broad spectrum of speakers to describe their careers and the linkages that exist to their educational background. 1 credit (1.5 lecture hours), first 10 weeks of fall semester

#### AGEN 120. Water Supply & Sanitation. (2 Credits)

Development of sources of water. Selection, servicing, installation of pumping equipment, and treatment of water. Designing and installing supply plumbing and sanitary disposal systems. 2 credits (1 lecture hour, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement.

#### AGEN 131. Fundamentals of Hydraulics. (3 Credits)

Students will develop a foundation of hydraulic principles and system operation as found on mobile hydraulic systems. Topics studied will include the principles of flow and pressure and how force can be multiplied within a mobile hydraulic system. The student will be introduced to components used in hydraulic systems: pumps (gear, vane and piston), valves, cylinders and accumulators. Students will also develop an understanding of how an open center hydraulic system functions. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### AGEN 135. Construction Surveying. (3 Credits)

Basic concepts of construction surveying as it specifically relates to agriculture and conservation applications, including field work in land drainage, pipeline stakeout, building stakeout and road construction. Survey planning and associated survey computations. Emphasis is on the operation of modern land measurement equipment including dumpy, laser and automatic levels, theodolite and EDM. 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### AGEN 145. Agriculture Building Systems. (3 Credits)

The design of agricultural production facilities as an integration of unique structural, environmental, and waste management systems is studied along with the principles of design and construction of the structure and associated environmental systems with emphasis on coordination of various systems. Laboratory exercises include construction of an exemplary structure on site. 3 credits (2 lecture hours, 3 laboratory hours), spring semester

#### AGEN 151. Applied Hydraulics Hydropower. (3 Credits)

This course covers the basic concepts of water hydraulics as applied to hydropower generation. The course is introductory in nature and is intended to provide basic review of fluid static and hydrodynamic conditions as applied to micro- and mini-hydro power generation systems. Focus will be on the utilization of the conservation of energy principle to establishing the conditions that will impact the selection of a hydropower generation system along with the assessment of how to harness energy from flowing fluids (water). Prerequisites: MATH 102 3 credit (2 lecture hour, 2 laboratory hours), spring semester

#### AGEN 161. Basic Hydraulics. (3 Credits)

This course will present the fundamental principles of hydraulic and pneumatic systems as used on mobile agricultural, construction and on-highway machinery. Disassembly and inspection of the various components in hydraulic systems will be completed throughout the course. Introduction to ISO graphic symbols and how they are represented in actual systems will be stressed. Additionally, diagnostics and testing of equipment will be discussed. Pre- or co-requisite: AGEN 131 or MAGN 101, or permission of instructor. 3 credits (2 lecture hours, 2 laboratory hours), spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### AGEN 210. Advanced Small Power Equipment. (3 Credits)

Students will learn technical and business aspects of operating a small engine repair business and technical theory covering design characteristics of different types of compact power units for lawn and garden, recreational vehicle, and commercial and industrial applications. Laboratory classes simulate repair shop conditions. Students are responsible for scheduling, servicing, performing repairs of equipment for the college community. A basic set of tools is required. Prerequisite: AGEN 100 or AGEN 110 3 credits (2 lecture hours, 3 laboratory hours), spring semester

#### AGEN 220. Main, Rep, Perf Tune Artic Cat. (4 Credits)

This course will cover the maintenance, repair, and performance tuning of Arctic Cat Snowmobiles and All-Terrain Vehicles. The concepts taught will be common to many other sport equipment manufacturers' products. The systems studied will include; Suspension, EFI, Drivetrain, Electrical, Fuel, and 2 and 4 stroke engines. The course will include mandatory testing that will allow the student to be certified at the basic level of Arctic Cat CatMaster Technician Certification. Prerequisite: AGEN 210 and successful completion of EETC 4-Stroke Cycle Test 4 credits (2 lecture hours, 4 laboratory hours), spring semester

#### AGEN 240. Advanced Welding. (2 Credits)

Bonding and fusion of metals including alloy steels and nonferrous metals. Metallurgical changes which ac-company welding and the fabrication of metals, TIG, MIG, Flux-cored and plasma-arc processes are stressed. This course has an additional lab fee. Prerequisite: AGEN 140 or AUTO 102 2 credits (1 recitation, 2 laboratory hours), fall or spring semester

#### AGEN 261. Advanced Hydraulics. (4 Credits)

This course will be an application of previously mastered principles of hydraulic systems to both farm and light industrial equipment. Inspection, testing and servicing hydraulic circuits, systems and components, such as pumps, lift systems, hydraulic transmissions and motors will be emphasized. Appropriate testing procedures and equipment will be used. System difficulties and common service problems will be diagnosed. Prerequisite: AGEN 131, AGEN 161, MAGN 101 or permission of instructor. 4 credits (2 lecture hours, 1 recitation hour, 2 laboratory hours), fall semester

#### AGEN 270. Tractor Overhaul and Repair. (5 Credits)

In this course, students study principles, overhaul and repair of multicylinder internal combustion engines and various types of engines used in farm and light industrial power applications. Design and construction of engine components and systems and fundamentals and principles of systems of power transmission are covered. There is a laboratory practice in which students may use their own machines. Prerequisites: AGEN 100, AGEN 261, DTEC 150, or permission of instructor, agricultural engineering majors only 5 credits (2 lecture hours, 4 laboratory hours), spring semester

#### AGEN 300. Intern Agricultural Engineerng. (4 Credits)

Students work in an approved job in the agricultural engineering industry. Comprehensive written report required at the end of the work period. Employer and staff evaluation are due upon completion of internship. Prerequisite: Completion of one semester in Agricultural Engineering and permission of staff, overall GPA of 2.0. 4 credits (12-Week, 480-hour minimum), fall or spring semester

# Ag Science (AGSC)

#### AGSC 115. Agricultural Science & Context. (1 Credit)

An introductory course in Agricultural Science intended for majors and students in related disciplines. This course will introduce students to the variety of industries and career paths within the agricultural science discipline as well as to the common skills necessary within these industries. Topics covered will include agricultural research from literature review through disseminating research results, computer literacy in agricultural science, and New York agriculture in context as compared to the North East, the United States as a whole, and the world. 1 credit (1 lecture hour), fall semester

#### AGSC 120. Domestic Animal Behavior. (3 Credits)

This course is designed to provide the student with an introduction to, and a general understanding of domestic animal behavior. The evolutionary aspects of behavior, learning theory, normal and abnormal behaviors will be studied. Material will be presented concerning dogs, cats, sheep, goats, hogs, cattle and horses with an emphasis on cattle and horses. 3 credits (3 lecture hours), spring semester

#### AGSC 132. Introduction to Precision Farming. (2 Credits)

Course introduces the student to site-specific crop management and precision farming. It involves the application of selective computer software and hardware in site-specific crop management. In addition, it focuses on providing the student with an overview of the basics of global positioning system (GPS), an introduction to geographic information systems (GIS), and an introduction to remote sensing. 2 credits (1 lecture hour, 2 laboratory hours) fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### AGSC 135. Computers in Ag Research. (1 Credit)

Application of computer software in agricultural research including: statistical packages which include ANOVA, Duncan Multiple range test, correlation, etc. 1 credit, spring semester

#### AGSC 137. Agricultural Statistics. (3 Credits)

This course involves the application of procedures and techniques for collecting, analyzing, and interpreting agricultural data. The course encompasses an introduction to statistical methods using examples and applications. The course also focuses on basic statistical analysis using the MS Excel spreadsheet program and other pertinent computer tools. Emphasis is placed on providing the student with problemsolving skills and the ability to interpret the results of basic agricultural statistical analysis. Prerequisite: MAGN 101 or equivalent 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics and Quantitative Reasoning

#### AGSC 246. Internship Agricultural Sci. (4 Credits)

This internship involves students working in an approved job in agriculture. A journal, written report, and employer and faculty evaluation are required upon completion of the internship. 4 credits (12 weeks, 480 hours minimum), fall semester

#### AGSC 250. Application in Ag Science. (3 Credits)

A capstone course in Agricultural Science intended for majors and students in related disciplines. Students completing the Agricultural science, AAS degree and are either moving into a Bachelor's degree program or entering the workforce will put the skills they've acquired over the preceding semesters into practice. Each semester a new issue facing agricultural production will be selected and students will develop proposals for how they would proceed to address the issue. This course will be conducted in a seminar style with associated lab. 3 credits (2 hours seminar, 2 hours lab), spring

#### AGSC 320. Contemporary Issues in Agricul. (3 Credits)

Explores the history of agriculture and its impact on civilization, investigates current topics impacting the agricultural industry and discusses different viewpoints in a debate setting. How food is produced in the United States informs many political discussions and debates. This course brings students with diverse backgrounds together to discuss modern agriculture and food production and its impact on society and the environment, and involves a critical evaluation of the aspects of modern agricultural production, and its impact on society and the environment. This course is cross-listed as PHIL 320. Prerequisite: C or better in COMP 101 or COMM 105 This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education requirements for Humanities and Diversity, Equity, Inclusion and Social Justice 3 credits (seminar), fall or spring semester

#### AGSC 350. Animal Genetics. (3 Credits)

This course provides an application of the principles of genetic selection for the improvement of dairy cattle and horses. The basic concepts of inheritance from both mathematical and biological perspectives are emphasized. Progeny and performance testing programs, pedigree analysis, mating systems and their application to selection and production of genetically superior animals are discussed. Prerequisites: DANS 110 or ESCI 305 and DANS 120 or ESCI 110 with a C or better (prerequisite or co-requisite) 3 credits (3 lecture hours), spring semester for equine or fall semester for dairy students, alternate years, even years

#### AGSC 460. Agricultural Science Capstone. (3 Credits)

As students prepare for their full semester internship, this course will help students conceptualize the knowledge and skills that they have developed over their bachelor degree program. Capstone projects will be specific to the students selected area of interest, and examples include a unit curriculum, useable management plan, relevant agricultural science experiment, or general research report. This project will require students to apply previously learned knowledge, gather new information from professionals and research, and present a capstone project as a written report and oral presentation. Co-requisite: ENRM 450 3 credits (3 lecture hours)

#### AGSC 480. Internship Agricultural Scienc. (12-15 Credits)

In this course, students will be placed at a business, not-for-profit or government organization focused on agronomy, agricultural education, animal agriculture, or other agricultural science related field for supervised real-world career training. Students carry out a planned program of educational experiences under direct supervision of an owner, manager, or supervisor of the organization. Each intern will be advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report and an oral presentation. Every 40 hours is equal to 1 credit with the expectation that this internship will fulfill 480-600 hours (12-15 credits) over approximately 15 weeks. Prerequisites: ENRM 450, completion of degree coursework or permission of instructor 12-15 credits

# **Agricultural Business (AGBS)**

#### AGBS 100. Agricultural Economics. (3 Credits)

In this course, fundamental economic principles keyed to agriculture are discussed. Emphasis is placed on specialization and exchange, the commercial banking system, monetary and fiscal policy, and supply and demand. Units on gross national product and the consumer price index, Global international trade, United States and New York state economics are also discussed. 3 credits (3 lecture hours), fall and spring semester

#### AGBS 110. Intro to Food and Agribusiness. (3 Credits)

This is an introduction to food and agriculture business course. Students will learn and apply the basic principles of agricultural business. Students will learn about forms of business organizations, agriculture markets and food marketing, sales, as well as consolidated and diversified agriculture business opportunities. Students will also gain exposure to financial management and the decision making process of owning and operating an agriculture and food business; including completing financial calculations using Excel. Students will have the opportunity to gain valuable career planning skills through job shadowing experiences, resume writing and conducting interviews with business owners within the food and agricultural industry. This course is offered in class, online, or for dual credit in the spring/fall semesters. 3 credits (3 lecture hours), spring semester

#### AGBS 200. Marketing Agricultural Prodcts. (3 Credits)

Supply and demand analysis, elasticity of demand, commodity futures exchange with emphasis on individual projects in futures trading are included in this course. Market structure, marketing orders, pricing, advertising, and approaches to studying marketing problems are also covered as well as units on cooperatives and marketing alternatives. 3 credits (3 lecture hours), spring semester

#### AGBS 225. Environmental Economics. (3 Credits)

This course covers application of basic economic principles to environmental problems, pareto optimality, efficiency, price theory, perfect competition, market intervention and failure, and how the neoclassical theory affects policy decisions regarding the environment. Economic concepts are presented in an environmental context. 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### AGBS 240. Farm Management and Finance. (4 Credits)

This course is designed to give students a broad understanding of the management skills required to be successful in 21st century agriculture. Students will study organizational behavior, human resource management and financial decision making as they relate to agricultural businesses with a particular emphasis on: dairy, equine, vegetable and fruit production. Major emphasis is on the fundamental principles underlying sound farm organizational and op-rational decision making. The principles and techniques developed are general enough to have validity through time, in any geographic area under any conditions. On the other hand, they are specific enough to be applied to an individual farm at a given time. This course requires a 15 page research paper (APA format) applying sound theoretical and practical research to an agricultural business of choice. Prerequisite: ABGS 100 or permission of the instructor 4 credits (4 lecture hours), fall semester

#### AGBS 250. Decision Making for Ag Manager. (3 Credits)

Using economic models and managerial decision making processes, students will be responsible for completing weekly analysis of farm operations, identifying and solving problems and/or creating opportunities for improving farm operations. Students will be actively involved in the process of gathering, organizing, and analyzing financial, production, and labor efficiency data. Upon completion of data analysis, evaluation of alternatives and making final recommendations to management, students will be actively involved in the implementation and monitoring processes. Each semester, students will complete a comprehensive case study analysis. 3 credits, (2 lecture hours, 2 laboratory hours), spring semester

#### AGBS 305. Ag Financial Decision Making. (3 Credits)

This course involves case work and on-farm consulting with the Farm Credit System. All lectures will be taught at Morrisville State College. Most laboratory assignments will be completed at First Pioneer Farm Credit (the largest agricultural lender in the United States) in Sangerfield, NY, or at selected farms in which students will act as agricultural leaders. Prerequisites: ACCT 101, AGBS 240 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### AGBS 350. Ag Business Development. (3 Credits)

This course provides basic economic theories to help students understand issues related to agribusiness development. Following the study of economic theories, empirical issues will be discussed including agricultural tourism, pollution and environment, the green revolution and the new trends in alternative energy focusing on the economic impact of utilizing bio diesel and ethanol. Students will learn how to look at issues related to agribusiness development from an economic perspective, and will learn how to apply the basic tools of economic analysis to a wide range of issues relating to renewable and non-renewable natural resource use. Prerequisites: AGBS 240 or permission of the instructor 3 credits (3 lecture hours), spring semester

#### AGBS 400. Distribution/Mkt Ag Products. (4 Credits)

Through a series of six modules--cooperatives in agriculture; agriculture commodity purchasing and selling; food processing; product distribution; consumer retail relations; and financial feasibility --students will gain valuable experience and insight into the rapidly developing value added sector of the agriculture industry. Students are required to take a field trip to New York City and numerous other consumer markets to meet course requirements. All laboratory exercises will be conducted at either Nelson Farms, the Agribusiness Dairy Processing facility or established off-campus collaborating businesses. Students will rotate through each module. Prerequisites: AGBS 100 Agricultural Economics or ECON 100 Introduction to Macroeconomics or ECON 140 Introduction to Microeconomics, AGBS 240 4 credits (1 lecture hour, 6 laboratory hours), fall or spring semester

#### AGBS 405. Farm & Rural Mngt Capstone. (3 Credits)

Students will be introduced to successful rural entrepreneurs. They will work in teams and act as consultants to evaluate farm and rural agriculturally based businesses financial, human resources, and strategic management practices. Students interested in food and agricultural entrepreneurship will evaluate food processing techniques, packaging and food safety procedures. Upon identifying key problems, students will present their finding to both class and entrepreneur. All lectures will be taught at SUNY Morrisville. Most of the laboratory assignments will be completed at the farm or rural business in which the students will be serving as consultants. Prerequisites: AGBS 100, AGBS 240, 305, ACCT 100 or ACCT 101 3 credits (2 lecture hours, 2 laboratory hours), fall and spring semester

#### AGBS 410. Ag Human Resource Management. (3 Credits)

This course is the study of applied Human Resource Management as faced by firms which operate in production agriculture. Emphasis is placed on the unique aspects of labor laws, labor management, compensation, productivity, performance, recruitment and training, developing and terminating employees with regard to a multicultural workforce. Course includes application through the use of case studies. Prerequisites: BSAD 116 or AGBS 100 or AGBS 110 of Junior level stand AND permission of the instruction whey only Junior level standing is met. 3 credits (3 lecture hours), spring semester

#### AGBS 440. Ag Business Intern Orientation. (1 Credit)

This course is designed to prepare students for an internship and to assist them with the process of employment and career development. It prepares students for internship requirements such as goal definition, placement site identification, job application, performance evaluation and report writing. AGBS 440 formalizes internship planning and preparation to insure that internships are procured, conducted in a professional manner, follow course guidelines, and satisfy the goals and objectives of students, faculty advisors and cooperating placement sites. 1 credit (1 lecture hour), spring semester

#### AGBS 450. Ag Policy & Development. (3 Credits)

This course will provide students with a foundation in the principles and practices of agricultural policy and the policy process. Students will develop an understanding for the policy process as it relates to agriculture, its interaction with other institutional arrangements, and an awareness of policy analysis. Specific emphasis will be placed on the National Farm Bill, New York State Agriculture Policy and its impact on the rural economy as well as the individual producer. Students are required to participate in field trips to the National Agriculture Outlook Conference in Arlington, Virginia, and Agriculture Awareness day in Albany, New York. Prerequisites: AGBS 100 Agricultural Economics or ECON 100 Introduction to Macroeconomics or ECON 140 Introduction to Microeconomics 3 credits (3 lecture hours), fall semester

#### AGBS 460. International Ag Marketing. (3 Credits)

The globalization of markets for food and agricultural products makes it essential to understand how international food and agricultural markets function and how they influence the options and choices of food and agribusiness firms. This course examines emerging globalization issues, the global food and agribusiness environment, potential markets, global agribusiness strategy, and global agribusiness operations. The course will also examine the impact of our changing social demographics on domestic product sales. Students will be required to prepare and present an analysis of barriers to international trade and opportunities for emerging national and international markets, as well as develop an international marketing plan for a product of their choice. Prerequisites: AGBS 100 3 credits (3 lecture hours), spring semester

#### AGBS 470. Internship in Ag Business Dev. (15 Credits)

In this course, students will participate in supervised fieldwork in a selected agriculture business or agriculture service organization. Students carry out a planned program of educational experiences under direct supervision of an owner, manager, or supervisor of the agriculture business/organization. Each intern will be advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report and an oral presentation. 15 credits

#### AGBS 480. Retailing Agriculture Products. (3 Credits)

This course provides students with a comprehensive view of retailing and direct marketing of agriculture products. Students will study and analyze current multi-channel retail strategies among box stores, roadside/farms stands, farmer's markets, grocery stores and ecommerce activities. Students will be required to research and track the life of a value added product from the farm to the table, prepare and present a plan to market a value added agriculture product to a box store of their choice, as well as obtain experience working in a retail setting. Prerequisites: AGBS 240 3 credits (3 lecture hours), spring semester

# Agriculture & Natural Resource (AGNR)

#### AGNR 200. Job Prep Skills & Resources. (1 Credit)

This course investigates career opportunities in the field of agriculture. Students learn how to prepare for a job interview in their specific field. They will prepare resumes, cover letters, and practice various types of interview skills. Prerequisite: Senior Standing 1 credit (2 hours lecture/ seminar)

#### AGNR 399. Research and Mgmt in Agr. (4 Credits)

Research and Management in Agriculture, Sustainability and Natural Resources A mentored independent study that allows a student the opportunity to conduct research, collect and analyze data and/or develop management plans or recommendations for management in Agricultural, Sustainability or Natural Resources projects. Upon conclusion of this class, the student will complete a comprehensive database, write a comprehensive report, conduct analytical research, develop a management plan, develop a poster presentation, and/or write or participate in the writing of a journal article. Projects are planned in coordination with a professor. Prerequisite: Junior or Senior Standing 1-4 credits (as arranged with the Professor), fall or spring semester

#### AGNR 400. Instructional Assistance Exp. (4 Credits)

Designed to concentrate students' knowledge in an Agriculture Science or Natural Resource discipline to the extent that they can convey that knowledge to associate degree level students. As part of their course work they will re-search class topics, lead discussions for 100 or 200 level course work, demonstrate practical applications during laboratory sessions, and assist the professor with class and lab preparation. Student is expected to meet regularly with a discussion or laboratory section, to gain instructional experience, and to regularly discuss course objectives, techniques, and subject matter with the Lead Faculty member. Prerequisite: "B" or better in the required course or by permission of the Instructor. 1-4 credits (as arranged with the Professor) fall or Spring Semester

# Agronomy (AGRO)

#### AGRO 110. Soil Science. (3 Credits)

This course covers the fundamentals of soil science, origin, nature and formation of soils, physical and chemical properties and soil management practices. This course has an additional laboratory fee. 3 credits (2 lecture hours, 2 laboratory hours), fall and spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### AGRO 115. Principles of Compost Mgmt. (3 Credits)

In this course students will learn the science behind compost production. They will implement the food waste compost program on campus from source material collection through final product production. New ideas of organic source material will be tested to continually improve and expand upon the composting program. This course will be conducted in a seminar style with associated lab. 3 credits (2 seminar hours, 2 laboratory hours), fall and spring semester

#### AGRO 210. Field Crops. (3 Credits)

Production of field crops, their importance, adaptation, varieties and cultural practices are covered in this course. Prerequisite: AGRO 110 or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### AGRO 215. Soil Fertility & Fertilizers. (3 Credits)

Principles involved in supplying essential elements for growing plants. Soil and tissue analysis, nutrient deficiency symptoms. Factors in manufacture, applications and economics of fertilizers, amendments and organic materials. Prerequisite: AGRO 110 3 credits (2 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### AGRO 305. Adv Soil & Water Conservation. (3 Credits)

Principles of soil and water conservation will be covered in this course, building on the foundation provided in soil science. Focus will be on practical applications through land use, runoff and erosion control, and soil and water management. Emphasis will also be placed on assessing the impact of conservation practices on the environment including pollution remediation strategies. Two common computer models used in the field will be taught, introducing students to the tools professionals use to manage the complex, multifaceted problems related to soil and water conservation. Prerequisite: AGRO 110 3 credits (2 lecture hours, 2 lab hours)

#### AGRO 310. Pasture Mgt and Forages Prod. (3 Credits)

Fundamentals of pasture management and forages production for maximum yield, quality, and longevity. Prerequisite: AGRO 110 or ENSC 101 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### AGRO 320. Urban Agriculture and Food Production. (3 Credits)

As the global population grows, and land resources become scarce, it will be necessary to efficiently and effectively use all available space for food production. This course will cover urban food production from the small scale community gardens to the large scale intensive farms and much in between including animal agriculture in urban settings. We will investigate food deserts and what is being done in urban settings to address this resource concern. Field trips to urban farms in the CNY region will be used to complement coursework. Prerequisite: Junior standing (60 credits completed) in ABT School majors or permission by instructor. 3 credits (3 lecture hours)

# America Sign Language (AMSL)

#### AMSL 101. American Sign Language I. (3 Credits)

American Sign Language may be used to satisfy the SUNY General Education requirement for Foreign Language only by students in programs leading to certification in elementary and secondary education and in programs leading to careers where there is likely to be significant contact with the hearing impaired. This is an introductory course for students in American Sign Language with basic vocabulary, structure, syntax and grammar. Conversational skills will be emphasized from an expressive and receptive perspective, as well as the manual alphabet, numbers, colors and facial grammar. Exposure to Deaf Culture and culturally appropriate behaviors will be included in the course. 3 credits (3 lecture hours); fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language and World Languages.

#### AMSL 102. American Sign Language II. (3 Credits)

A continuation of AMSL I involves the study of advanced ASL vocabulary, linguistic structures, and Deaf culture. Students will develop advanced levels of receptive and expressive conversational skills. Prerequisite: AMSL 101 or permission of instructor 3 credits (3 lecture hours); fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language and World Languages.

# **Animal Science (ANSC)**

#### ANSC 100. Animal Science and Industry. (3 Credits)

This is a concurrent enrollment course with designated high schools to acquaint high school students with animal science and industry. It offers an introduction to farm and companion animal production and its affiliated industries with emphasis on the biological nature of animals, infrastructures and economic uniqueness of affiliated industries, animal products and services, and the management of animal enterprises. 3 credits (minimum of 45 lecture hours), spring semester

#### ANSC 101. Intro to Animal Science. (3 Credits)

An introductory course in Animal Sciences for students interested in a career path in the animal industries. This course will introduce students to the various animal industries, including both agricultural and companion animals. Topics covered will include housing, handling, reproduction, health, genetics and breeding, as well as current topics on welfare and sustainability. 3 credits (2 lecture, 2 lab)

#### ANSC 110. Livestock Production Mgmt/Tech. (3 Credits)

Livestock Production Management and Techniques will provide an overview of animal agriculture with a focus on management practices related to health, husbandry, feeing, breeding, and marketing of beef cattle, small ruminants, swine, poultry, and alternative agricultural species. This will be accomplished through lectures and hands-on experiences during laboratory sessions. Live animals will be used during laboratories in accordance with federal regulations, and all laboratories will be conducted with respect for the animals. 3 Credits (2 lecture hours, 2 laboratory hours)

#### ANSC 150. Live Animal Evaluation. (2 Credits)

Live Animal Evaluation is a hands-on two credit hour lecture/laboratory course concentrating on the science and art of live animal evaluation. The lectures will cover all aspects of improving the selection of meat animals and the efficiency of meat animal production. Laboratory activities will include the evaluation of market animals and the evaluation and selection of breeding animals of all meat animal species. Worksheets on calculating carcass grades and performance data will be given to complement in class activities. This course is an excellent introduction for all livestock production courses and will provide a baseline of information for students interested in intercollegiate livestock judging. 2 credits (1 lecture hour, 2 laboratory hours).

#### ANSC 200. Sheep Industry/Prodcution Syst. (3 Credits)

This course will teach the principles of modern sheep production including all aspects of sheep production management systems and the U.S./Global Sheep Industry. The course will incorporate genetics, nutrition, reproduction, disease control, management and marketing of sheep. Concentrating on the U.S. Sheep market, the course will include the international perspective of the industry. Students will gain an understanding of the world's sheep industry and how it affects the U.S market. From flock management to marketing strategies, students will leave ANSC 200 with a well round knowledge of the entire sheep industry. Prerequisite: ANSC 110 3 credits (2 Lecture Hours, 2 Laboratory Hours).

# Anthropology (ANTH)

#### ANTH 101. Introduction to Anthropology. (3 Credits)

An introduction to the study of human beings, ranging across the four fields of biological and cultural anthropology, archaeology and linguistics. Focus is placed on human evolution and origins, development of human culture, and description and comparison of differing ways of life around the world. Emphasis on basic anthropological concepts of evolution, culture, kinship, institutions, globalization and socio-historical change. 3 credits, fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness.

# **Aquaculture Micro Credential (M-AQ)**

#### M-AQ 001. Intro to Aquaculture. (0 Credits)

Introduction to Aquaculture Aquaculture is the farming of aquatic animals and is an extremely important industry for food production, recreational fishing, and conservation. This course covers the theory and practice of aquaculture techniques used in growing different aquatic animal species in a variety of systems. The course focuses on the basics of aquatic animal husbandry, a diversity of aquaculture systems, and the state of the aquaculture industry. Topics include the need for the industry as compared to fisheries, species of importance in aquaculture, system development, and sustainability. Non-credit Bearing Micro-Credential

# Architectural Studies & Design (ARCH)

#### ARCH 102. Introduction to Architecture. (2 Credits)

This course seeks to examine the questions, "What is an architect?" "What does an architect do?" and "What is architecture?" Addressed will be the development of the architectural education system in the United States, including an introduction to the architectural experience program, licensure and registration, and professional practice. Particular focus will be given to the wide range of tasks that architects are required to perform. Also studied through the exploration of the social, environmental, behavioral, aesthetic, technological and political influences, will be the place of architects in society and architecture in culture. Pre or Co-requisite: COMP 100 (minimum) or permission of instructor 2 credits (2 lecture hours), fall semester This course fulfills the Liberal Arts and Sciences requirement

#### ARCH 141. Architectural Design I. (4 Credits)

This course is the first of a four course sequence addressing the fundamental issues of architectural design. The study of threedimensional architectural design principles will be introduced. This will be tackled through the exploration of design processes, the vocabulary of design, rationale and meaning of design, elements of form and space, as well as organizational and compositional strategies. Students will explore and express solutions to multiple design problems through different architectural media. The semester will culminate in a final project in which students will be expected to demonstrate their understanding of basic architectural design. This course is for Architectural Studies and Design majors. Non majors by permission of instructor only. Pre-or Corequisites: ARCH 101 or ARCH 182, MATH 102 (minimum) or permission of instructor 4 credits (2 lecture hours, 4 laboratory hours), fall semester This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

#### ARCH 142. Architectural Design II. (4 Credits)

This course (the second in a series of four) is the sequential course to Architectural Design I. The principles of three dimensional design explored in Architectural Design I will be applied to problems and analyses dealing with order and definition through the creation and manifestation of spatial volumes. In working through these problems, students are expected to develop and demonstrate a design logic that accounts for composition, precedent, organization, and context. Ultimately the studio will conclude with a comprehensive final project. This course is for Architectural Studies and Design majors. Non majors by permission of instructor only. Prerequisite: ARCH 141 Pre- or Corequisite MATH 102 (minimum) or permission of instructor 4 credits (2 lecture hours, 4 laboratory hours), spring semester This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

#### ARCH 151. Arch Pre History to 1800. (3 Credits)

This survey of architecture is an overview of the history of architecture from pre-history to the nineteenth century. The major architects and cultural forces shaping each era will be given primary focus. In addition, the social, environmental, behavioral, aesthetic, technological and political forces that influence and affect architectural forms, ideas and urban patterns will be studied. Pre- or Co-requisite: COMP 101 (minimum) or permission of instructor 3 credits (3 lecture hours), Spring semester This course fulfills the Liberal Arts and Sciences requirement.

#### ARCH 182. Architectural Graphic Comm.. (2 Credits)

This is a drawing course designed to teach students interested in architecture to recognize and graphically depict forms and textures in the natural and built environment. Instruction will be given in freehand and hardline drafting/ drawing; basic pencil, color and rendering techniques; orthographic projection, as well as the principles of pictorial (oblique, axonometric and perspective) drawing. These drawing techniques, methods and principles will aid students in the development of their architectural presentation, drawing, and rendering skills. The course will culminate in the execution and composition of a comprehensive architectural drawing presentation. This course is for Architectural Studies and Design majors. Non majors by permission of instructor only. Pre- or Co requisites: ARCH 141, MATH 102 (minimum) or permission of instructor 2 credits (1 lecture hour, 2 laboratory hours), fall semester This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

#### ARCH 243. Architectural Design III. (4 Credits)

This course (the third in a series of four) is the sequential course to Architectural Design II. It emphasizes the study of the relationship between facade, plan, and section as two-dimensional constructs, describing three-dimensional reality. This will be explored through a series of analysis and design problems. Throughout the semester, each student will develop an architectural portfolio emphasizing their creative design process and documenting work from this course and other courses. The presentation of creative work in this portfolio will be approached as a design problem. The portfolio will be created in a digital format. This course is for Architectural Studies and Design majors. Non majors by permission of instructor only. Prerequisites: ARCH 142 Pre- or Co- requisite MATH 103 (minimum) or permission of instructor 4 credits (2 lecture hours, 4 laboratory hours), fall semester This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

#### ARCH 244. Architectural Design IV. (4 Credits)

This course (the fourth in a series of four) is the sequential to Architectural Design III. (It is the final course in the four-course sequence). A series of architectural projects will be explored in response to the natural and built environment. Principles of design developed in the previous architectural design courses and other courses will be synthesized. With the use of analyses, research, design presentations and critiques, students will follow structured programs and employ independent design processes to the design projects. Projects will vary depending on the progress and approach to architectural design as deemed appropriate by the faculty member. This course is for Architectural Studies and Design majors. Non majors by permission of instructor only. Prerequisite: ARCH 243 Pre- or Co- requisite MATH 103 (minimum) or permission of instructor 4 credits (2 lecture hours, 4 laboratory hours), spring semester This course fulfills the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for the Arts

#### ARCH 252. Architecture: 1800 to Present. (3 Credits)

This survey of the western tradition in architecture is an overview of the history of architecture from the nineteenth century through today. Major architects and cultural forces shaping each era will be given primary focus. The social, environmental, behavioral, aesthetic, technological and political forces that influence and affect architectural forms, ideas and urban patterns will be explored through analytical study. Prerequisite: ARCH 151, COMP 101 (minimum) or permission of instructor 3 credits (3 lecture hours), spring semester This course fulfills the Liberal Arts and Sciences requirement

#### ARCH 271. Architectural Technology I. (3 Credits)

This course is an introduction to building construction and materials with an emphasis on the various enclosure systems developed for wood. Students will explore floor, wall and roof assemblies including joists, rafters, studs, windows, doors and advanced pre-engineered products. Students will be expected to design appropriate solutions for specific loading configurations as determined through calculations and material criteria. Building code use and construction document creation will be integrated throughout the course. This course is for Architectural Studies and Design majors. Non majors by permission of instructor only. Prerequisite: ARCH 101 or ARCH 182, CAD 181 or permission of instructor Pre- or Co-requisite: CAD 183 or ARCH 283, MATH 103 (minimum) or permission of instructor 3 credits (1 lecture hour, 4 laboratory hours), fall semester

#### ARCH 272. Architectural Technology II. (3 Credits)

Building upon knowledge developed in ARCH 271, students will investigate various interior and exterior enclosure and framing systems, with an emphasis on materials such as concrete and steel. Students will study the principles of these materials from individual structural characteristics to industry uses. This course will investigate in detail sitecast and precast concrete systems, concrete reinforcing and detailing, and steel framing systems and detailing. Also included will be site planning (interpolation and grading), traditional and innovative roofing systems, building accessibility and construction documentation (drawings, project manuals/specifications). This course is for Architectural Studies and Design majors. Non majors by permission of instructor only. Prerequisites: ARCH 271, CAD 183 or ARCH 283, MATH 103 (minimum) or permission of instructor 3 credits (1 lecture hour, 4 laboratory hours), spring semester

#### ARCH 283. Arch CAD Drafting & Design. (2 Credits)

This course will introduce computer-aided drafting and design (CAD) software designed for the utilization in the field of architecture. By using CAD software, students will learn to generate professional quality two-dimensional drawings and details. Ultimately by using multiple software packages, students will explore three-dimensional modeling, culminating in the creation of realistic color renderings of buildings and furnishings. This course is for Architectural Studies and Design majors. Non majors by permission of instructor only. Prerequisite: CAD 181 Pre- or Co-requisite: ARCH 271, MATH 103 (minimum) or permission of instructor 2 credits (1 lecture hour, two laboratory hours), fall semester

# Art (ART)

#### ART 101. Basic Art. (2 Credits)

Students will study visual perception through the use of drawing and painting media, stressing both technical skills and individual expression; and exploring both form and content. Students are assigned projects and critiques that are based on drawings from still life, interiors and the imagination. 2 credits (4 laboratory hours), fall or spring semester

#### ART 110. Introduction to Visual Arts. (3 Credits)

This course introduces students to the world of visual arts, including how to look at, interpret, analyze, and understand a variety of art forms, such as drawing, printmaking, painting, sculpture, architecture, design, and the camera arts. We study art from around the world and from the beginning of human civilization as a way of understanding the social, political, and cultural attitudes that influence how art is produced, viewed, and critiqued. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### ART 120. Introduction to Drawing. (2 Credits)

This course introduces students to drawing as artistic expression and communication, studio work in a variety of drawing media, emphasizing principles of line, shape, value and the fundamentals of perspective. 2 credits\* (4 lab/lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### ART 121. Introduction to Painting. (2 Credits)

An introduction to painting using various techniques and materials. Basic vocabulary of painting skills in value, color and composition with an emphasis on style and expression. Prerequisite: ART 120 or ART 101 2 credits\* (4 lab/lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### ART 131. Introduction to Photography. (3 Credits)

An introduction to photography and the photographic processes, with an emphasis on the fundamentals of lighting, exposure, processing, printing and the composition of photographic prints. 3 credits (2 lecture hours, 2 laboratory hours) fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

# Astronomy (ASTR)

#### ASTR 101. Solar Astronomy. (3 Credits)

The study of planetary systems is covered in this course. Topics include the history of understanding the solar system and the celestial sphere, principles of telescope design, the nature of the solar system, sun, terrestrial and Jovian planets, Pluto, the various moons, comets, asteroids, and extra solar planets. Prerequisite: Math at the level of MAGN 101. 3 credits (2 lecture hours, 2 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### ASTR 110. Stellar Astronomy. (3 Credits)

This course introduces basic notions about stars, galaxies, and cosmology. It covers constellations, the motions of the night sky, earth- and space-based optical and radio telescopes, the classification, structure and evolution of stars and galaxies via Hertzsprung–Russell diagrams, the large-scale structure of the universe, cosmology, and extraterrestrial life. Prerequisite: Math at the level of MAGN 101. 3 credits (2 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

### Automotive Technology (AUTO)

#### AUTO 102. Metals. (3 Credits)

Characteristics and properties of metals, metallurgy, fabrication, oxyacetylene and arc welding. TIG and MIG welding and other industrial processes. The course has an additional lab fee. 3 credits (1 lecture hour, 2 laboratory hours, 1 hour recitation)

#### AUTO 103. Internal Combustion Engines I. (3 Credits)

Operating principles and nomenclature of internal combustion engines used as automotive power plants. Laboratory emphasis is on technician level analysis and repair of mechanical components. 3 credits (2 lecture hours, 3 laboratory hours)

#### AUTO 104. Basic Auto Electrical Systems. (3 Credits)

Direct and alternating current circuits, magnetism, inductance, electrochemical action, and semiconductors. Introduction to automotive wiring diagrams, using voltage, amperage, and resistance measurements to troubleshoot opens, shorts, and excess resistance problems in basic DC circuits. Introduction to automotive cranking and charging systems. 3 credits (2 lecture hours, 3 laboratory hours)

#### AUTO 105. Car/Light Truck Diesel. (2 Credits)

This course explores the operation and service of modern car and light truck diesel engines. Principles and theories are studied by running, testing, dissembling, and reassembling components, systems and engines. 2 credits (2 lecture hours, 2 laboratory hours), fall or spring semester (elective only offered if sufficient interest) meets for 10 weeks.

#### AUTO 109. Chassis Analysis I. (4 Credits)

Construction, operation and repair of modern chassis components. Including: Brakes (disc, drum, diagonal, quick take-up, and anti-lock); Suspensions (coil, leaf, McPherson, wishbone, and active); Steering systems including: linkage and rack & pinion. Tires, wheels and bearings. 4 credits (3 lecture hours, 3 laboratory hours), fall semester

#### AUTO 110. Summer Work Experience. (3 Credits)

Work experience of at least 10 weeks in a transportation/mechanical area between the first and second year. Report will be due before the 10 week of the fall semester. A student may receive credit for this course from prior academic experience given appropriate articulation agreement. 3 credits

#### AUTO 138. Automobile Industry Awareness. (1 Credit)

Introduction to the complex and diverse automotive industry. Guest speakers will discuss the many career opportunities as well as the requirements for today's technicians. 1 credit hour (1 lecture hour), A student may receive credit for this course from prior academic experience given appropriate articulation agreement.

#### AUTO 155. Intermediate Auto Electricity. (3 Credits)

Application of the principles of electricity to the Diagnosis, operation, service, and repair of automotive electrical and electronic systems troubleshooting, battery, starting, Charging, and accessory circuits with multimeters, labscopes, and scan tools is emphasized. Prerequisite: AUTO 104 or ASET 112 or permission of instructor 3 credit hours (2 lecture hrs, 3 laboratory hours), spring semester

#### AUTO 171. Automotive Drivetrains. (3 Credits)

This course introduces the automotive student to the theory and repair of modern automotive drive trains. Emphasis is given to testing drivetrain system components to determine faults prior to removal from the vehicle. Topics include automatic transmissions, manual Transmissions, four wheel drive systems, all- wheel drive systems and final drive systems. Lecture and laboratory assignments are combined to give the students both theory and hands on experience. Prerequisites: AUTO 109, AUTO 104 or Instructor Permission 3 credits (2 lecture hours, 3 laboratory hours), spring semester

#### AUTO 202. Autobody Fundamentals. (3 Credits)

Construction, damage analysis, and repair of the modern automobile. Basic sheet metal repair, refinishing systems, panel adjustments, trim panel removal, plastic repair, and restraint systems. 3 credits (2 lecture hours, 1 recitation hour, 2 laboratory hours), fall semester

#### AUTO 203. Automotive Engine Analysis. (3 Credits)

Practical experience in automotive engine rebuilding. Application of basic physical and thermodynamic principles in engine design. Laboratory emphasis is on utilization of special equipment involved in the rebuilding process. Prerequisite: AUTO 103 and permission of instructor 3 credits (2 lecture hours, 3 laboratory hours), fall or spring semester (elective only offered if sufficient enrollment)

#### AUTO 204. Automotive Electronic Systems. (3 Credits)

Application of the principles of diagnostics to the design, operation, service and repair of today's sophisticated computerized automotive systems. Troubleshooting problems with the ignition system, sensors, and networks with multimeters, labscopes, and scan tools is emphasized. Prerequisites: AUTO 103, AUTO 104, or permission of instructor. Corequisite: AUTO 205 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### AUTO 205. Electronic Fuel Systems. (3 Credits)

Examines the principles of service and repair of automotive fuel systems including EFI, PFI, GDI, SFI, fuel pump circuits, and oxygen sensors, together with the relationship of the components as it affects diagnosis and repair. Prerequisites: AUTO 103, and 104. Co-requisite: AUTO 204. 3 credits (2 lecture hours, 3 laboratory hours), fall semester.

#### AUTO 209. Chassis Analysis II. (4 Credits)

Designed to give the student detailed instruction in the diagnosis and repair of modern suspension, steering and break systems and in the troubleshooting and repair of 4-wheel alignment systems. On car brake lathe and road force balance machines included. Prerequisites: AUTO 109 Co-requisite: AUTO 102, AUTO 104 4 credits (2 lecture hours, 1 recitation hour, 3 laboratory hours), spring semester

#### AUTO 255. Driveability & Performance Prob. (5 Credits)

Explores the methods and procedures used in the diagnosis and correction of performance issues, using advanced test equipment. Laboratory practice to ensure a degree of occupational proficiency. Prerequisites: AUTO 204, AUTO 205. Pre- or Co-requisite: AUTO 155. 5 credits, (2 lecture hours, 7 laboratory hours), spring semester.

#### AUTO 259. Non-Structural Repair Refinish. (5 Credits)

Designed to give the student extensive hands-on experience necessary to develop the skills required to repair collision damage to the modern unibody vehicle. Includes identification and analysis of damage as well as advanced repair and refinishing techniques. Prerequisite: Must pass AUTO 202 with a grade of C or better and permission of instructor. 5 credits (2 lecture hours, 7 laboratory hours), spring semester

#### AUTO 260. Auto Air Cond & Refrg Recovery. (1 Credit)

Introduction to the theory, operation, service, repair and diagnosis of factory installed air conditioning. 1 credit (1 lecture hour, 2 laboratory hours), 8 weeks, fall or spring semester

#### AUTO 261. Auto Air Condition & Heat. (3 Credits)

Basic principles, nomenclature and operation as applied to the automotive air- conditioning and heating units. Labs prepare students for required certification in the handling of refrigerant as well as repairs. 3 credit hours (2 lecture hours, 3 laboratory hours), fall or spring semester

#### AUTO 269. Refinishing & Structure Mg. (5 Credits)

This course covers techniques required to properly repair multi-coat paint finishes, including spot and panel painting with HVLP spray equipment, fundamentals of color perception, color, light sources and tinting. It will also cover structural and non-structural analysis and collision repair of Unibody vehicles. Prerequisite: Must pass AUTO 259 with a grade of C or better and permission of instructor. 5 credits (2 lecture hours, 8 laboratory hours), fall semester

#### AUTO 279. Autobody Structural Repair. (6 Credits)

This course covers techniques required to properly analyze and repair Unibody and full frame collision damage. It will also include extensive hands-on experience for increased employability in many segments of the collision industry. Prerequisite: Must pass AUTO 269 with a C or better and permission of the instructor. 6 credits (2 lecture hours, 12 laboratory hours) spring semester

#### AUTO 309. Advanced Automotive Chassis. (4 Credits)

This course contains information about construction and geometry of modern automobile suspension systems. Topics include introduction to metallurgy, suspension design, suspension angles and future trends. The laboratory requirements include a group project, related to automotive vehicle steering and suspension. A laboratory practicum will be required in which the student will assist instructors in developing a training aid and presentation for class. Prerequisite: A.A.S. in Automotive Technology or successful completion of the first 2 years of the BT program with a minimum of a "C" in AUTO 109 & AUTO 209 or equivalent. 4 credits (2 lecture hours, 3 laboratory hours & laboratory practicum), fall semester

#### AUTO 355. Advanced Automotive Diagnostic. (3 Credits)

This course focuses on automotive troubleshooting techniques and tools. Emphasis will be placed on diagnosing engine performance conditions related to mechanical, fuel injection, ignition, and emissions systems. Diagnosis of other computer controlled and networked automotive systems will also be covered. It includes theory of system operation with an emphasis on comprehension and systematic troubleshooting. Included is an emphasis on hands-on practice and familiarity with factory and aftermarket scan tools, and automotive labscopes. Prerequisite: A.A.S. in Automotive Technology or successful completion of first 2 years of BT 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### AUTO 359. Collision Business & Mgt. (3 Credits)

This course covers the operation and management of modern auto body collision repair facilities. Topics covered include: safety and environmental issues, terminology, duties of collision shop personnel, cost control, tools and equipment, collision estimating and shop layout. It also covers interaction with insurance companies, auto body products suppliers, new and recycled parts suppliers and mobile specialty repair businesses. Prerequisite: A.A.S. in automotive or permission of instructor 3 credits (2 lecture hours, 3 laboratory or field trip hours)

#### AUTO 360. Auto Shop Mgt & Supervision. (3 Credits)

Practicum in shop management. Practical experiences in demonstrating leadership skills, problem-solving skills, motivational skills, goal setting, time management, counseling, implementing policy and procedures, conducting meetings, implementing codes of conduct, enhancing professional ethics, interfacing with customers, conflict resolution and dealing with personnel issues in the workplace, such as sensitivity skills, harassment issues and stress management. Prerequisite: BSAD 116 3 credits (2 lecture hours, 3 laboratory hours)

#### AUTO 371. Adv Powertrain Management. (3 Credits)

This course describes performance and design features, as well as diagnosis and repair procedures for the modern automatic transmissions. Emphasis is given to understanding electrical/electronic controls and the proper use of electrical/ electronic test equipment. Disassembly and reassembly of the transmission enables the students to understand and visualize the mechanical and hydraulic components. Prerequisite: A.A.S. in Automotive Technology/successful completion of first 2 years of BT 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### AUTO 380. Auto Parts Management. (3 Credits)

Fundamentals of computer-based parts inventory and P.O.S. systems. Inventory management, core procedures, warranty claims, remanufactured vs. rebuilt parts, team concept of parts and repair departments, customer assistance, marketing strategy, sales techniques, identifying customer base, merchandising, and forecasting business with analysis of profit and loss statements. Prerequisite: BSAD 112 and AUTO 360 3 credits (2 lecture hours, 3 laboratory hours)

#### AUTO 400. Automotive Fleet Management. (3 Credits)

An overview of all automotive repair tasks will be reviewed. Analysis of pertinent tasks for fleet maintenance will emerge and be coupled with labor and price guides time on task evaluations, absolute necessity, intervals of inspection, safety concerns, failure records, component life cycles and environmental issues. Further analysis will reveal decision-making process for in-house repairs or out-sourcing component failure records and vendor responsibilities will be discussed along with fleet discount structure and avenues of saving time, inventory and other overhead to ultimately make the organization efficient. Recordkeeping systems and the development of a fleet maintenance log will be implemented. Written report will include a fleet maintenance guide. Prerequisite AUTO 360 3 credits (2 lecture hours, 3 laboratory hours)

#### AUTO 420. Auto Industry Internship Orien. (1 Credit)

This course is designed to orient the student for successful completion of their internship. The orientation process will assist the student in developing a realistic time-line, to prepare him or her for meeting the responsibilities of an intern and exposing him or her to the various forms and reports related to the internship. Prerequisite AUTO 360 1 credit (1 lecture hour)

#### AUTO 421. Automotive Industry Internship. (12 Credits)

This course is based upon work experience acquired at a pre-approved manufacturer, dealer, distributor, repair facility, or other location with permission in Internship Program Coordinator. Orientation sessions must be competed the semester prior to the internship. The work experience must have employer and program coordinator approval and will include a problem-centered project planned in joint agreement with the employer, student and coordinator and be presented as a written term paper. Prerequisites: Successful completion of required courses, permission of Internship Program Coordinator, completion of orientation sessions (AUTO 420) 12 credits (1 lecture hour, 15-week internship)

# **Biology (BIOL)**

#### BIOL 101. Introduction to Biology. (4 Credits)

This course provides a basic introduction to biological principals for nonbiology related majors. Lecture topics in this course include: introduction to science, the chemistry of life, cellular organization of life, heredity and natural selection, biological diversity, and population and community ecology. The lab covers a variety of techniques and tools related to the investigation of selected topics in biology. This course has an additional lab fee. 4 credits (3 lecture hours, 2 laboratory hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 102. Botany-Form Function Seed Plt. (3 Credits)

Structure and function of higher vascular plants, with emphasis on cell structure, photosynthesis and respiration, anatomy, physiology, reproduction and Mendelian genetics. 3 credits (2 lecture hours, 2 laboratory hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 103. Botany - Plant Diversity. (3 Credits)

An evolutionary survey of the plant kingdom with emphasis on the structure, life cycles, and significance of non-vascular and lower vascular plants. Prerequisite: BIOL/ENSC 102 or permission of instructor. 3 credits (2 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 105. Human Biology. (4 Credits)

A course for non-majors that focuses on human structure, function, diseases and current health topics. Emphasis is on each of the organ systems. Included are lecture discussions on cancer, heredity, genetic engineering, cloning and evolution. 3 credits (3 lecture hours), fall or spring semester Students planning to transfer BIOL 105 as a science course or continue to subsequent biology courses (BIOL 120 or higher) should enroll in the lab BIOL 105L. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 107. Topics in Contemporary Biology. (3 Credits)

This course covers selected topics in Biology currently in public focus. The understanding and use of the scientific method is stressed. Students will apply their understanding of the scientific method while examining topics such as bioterrorism, stem cell research, and the human genome project and cancer biology. This course is designed for non-science majors. (Actual topics change each semester). 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 109. Biology & Literature. (3 Credits)

This course explores topics in the biological sciences trough their use as themes in literature. Students will examine major themes in literature by applying their understanding of the Scientific Method and current biology and technology topics. Through writing and discussion they will analyze the influence of the biological sciences on literature, culture and the world. This course is primarily for non-science majors and topics change each semester. Not repeatable for credit. Prerequisite: A letter grade of "C" or higher in COMP 101 or COMM 105. 3 credits (3 lecture hours), fall or spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 120. General Biology I. (4 Credits)

This course provides the first half of a typical two-semester sequence for biology- related majors. Topics in this part of the sequence are: organization of life, chemistry of living things (including cellular respiration and photosynthesis), cell biology and biological membranes, heredity and reproduction (including mitosis, meiosis and Mendelian genetics), molecular genetics, evolution and ecology. The lab covers a variety of procedures and microscopic studies applied to living things. This course has an additional lab fee. Prerequisite: Placement in BIOL 120 or higher, or successful completion of BIOL 101 or BIOL 105 & 105L with at least a C-. 4 credits (3 lecture hours, 2 laboratory hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 121. General Biology II. (4 Credits)

This course is a continuation of BIOL 120, and assumes mastery of the material covered in it. This second half of the sequence covers: taxonomy of plants and animals, viruses and bacteria, fungi, seedless and seed plants (including plant structure and physiology), animal diversity (an overview of animal phyla), and animal structure and function (including all the life functions and body systems with emphasis on the human. This course has an additional lab fee. Prerequisites: BIOL 120 with a C- or better 4 credits (3 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 135. Myology I. (3 Credits)

The study of the muscles of the body; specifically the muscles of the head, neck and trunk with superficial and postural muscles emphasized. The actions of major muscle groups, origin and insertion of each muscle as well as the physical location via palpation. Nerve innervation will be discussed. Students will practice muscle palpation and muscle testing. This course has an additional lab fee. Pre- or Co-requisite: BIOL 150 3 credits (2 lecture hours, 3 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 136. Myology II. (3 Credits)

This course continues the study of the muscular system with emphasis on the muscle groups and muscles of the extremities. Discussion will focus on the origins, insertion sites and functions of the muscles. Muscle testing will also be included. This course has an additional lab fee. Prerequisite: BIOL 135 with a grade of C or better Pre- or Co-requisite: BIOL 151 3 credits (2 lecture hours, 3 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 137. Neurology. (4 Credits)

A detailed study of the nervous system including nerve origin, insertion and function. Topics include the anatomy and physiology of the nervous system including the brain and cranial nerves, spinal cord, nerves and plexuses, and the sensory, motor and autonomic nervous system. The laboratory component is composed of hands-on exercises including computer simulation, physiological testing, and nerve tracing as well as identification of anatomical structures on specimens, models, and microscopic slides. This course has an additional lab fee. Prerequisites: BIOL 151 with a C- or better 4 credits (3 lecture hours; 2 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 150. Human Anatomy + Physiology I. (4 Credits)

Structure and function of the human body (a systems view). Covers: cells, tissues, skeletal, muscular and nervous systems. The lab includes practical experience with lecture topics including animal dissection. This course has an additional lab fee. Prerequisite: placement in BIOL 120 or higher or completion of BIOL 101 or BIOL 105 & 105L with at least a C-. 4 credits (3 lecture hours, 2 laboratory hours), fall and spring semesters This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 151. Human Anatomy + Physiology II. (4 Credits)

Structure and function of the human body (a systems view). Covers: endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. The lab includes practical experience with lecture topics and dissection of animals. This course has an additional lab fee. Prerequisite: BIOL 150 with a C- or better, 4 credits (3 lecture hours, 2 laboratory hours), fall and spring semesters This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 230. Human Genetics. (3 Credits)

Introduction to the study of heredity and developmental genetics of the human organism. History, problem-solving and statistical methods will be studied as well as contemporary social and ethical problems. Prerequisites: BIOL 120, or BIOL 150 with a minimum grade of C- 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 250. Internship in Biology I. (1 Credit)

A supervised internship to be undertaken in the summer or between semesters. Preparation for the internship will commence in the semester prior to the actual internship. A written and oral report of the internship will be presented. (Students who have completed Allied Health Partnership programs, New Visions, or similar academic internships may use their portfolios to satisfy the requirements of BIOL 250, 251, 252). Prerequisite: Satisfactory completion of at least the first semester of course work in the program; a GPA of at least 2.5 and no less than a C in all courses required in the student's program. 1 credit per course number. The number of courses to be determined by the supervising faculty member. Fall, spring or summer.

#### BIOL 251. Internship in Biology II. (1 Credit)

A supervised internship to be undertaken in the summer or between semesters. Preparation for the internship will commence in the semester prior to the actual internship. A written and oral report of the internship will be presented. (Students who have completed Allied Health Partnership programs, New Visions, or similar academic internships may use their portfolios to satisfy the requirements of BIOL 250, 251, 252). Prerequisite: Satisfactory completion of at least the first semester of course work in the program; a GPA of at least 2.5 and no less than a C in all courses required in the student's program. 1 credit per course number. The number of courses to be determined by the supervising faculty member. Fall, spring or summer.

#### BIOL 252. Internship in Biology III. (1 Credit)

A supervised internship to be undertaken in the summer or between semesters. Preparation for the internship will commence in the semester prior to the actual internship. A written and oral report of the internship will be presented. (Students who have completed Allied Health Partnership programs, New Visions, or similar academic internships may use their portfolios to satisfy the requirements of BIOL 250, 251, 252). Prerequisite: Satisfactory completion of at least the first semester of course work in the program; a GPA of at least 2.5 and no less than a C in all courses required in the student's program. 1 credit per course number. The number of courses to be determined by the supervising faculty member. Fall, spring or summer.

#### BIOL 260. Principles of Zoology. (4 Credits)

This course offers a basic introduction to the animal kingdom, including specific studies pertaining to terrestrial and aquatic invertebrates and vertebrates. Emphasis on zoological organization, identification, structure and life histories. This course has an additional lab fee. Prerequisite: Successful completion of BIOL 120 or an animal life science course, from the School of Agriculture, with at least a C- or better, Environmental & Natural Resource Conservation and Natural Resources Conservation students by permission of instructor. 4 credits (2 traditional lecture hours plus 1 lecture hour with a 2-hour laboratory) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 280. Herpetology. (3 Credits)

Herpetology is a course designed to investigate the thermal physiology, taxonomy, distribution and natural history of reptiles and amphibians. Emphasis is placed on local forms. Techniques of field identification, collection and preservation are covered in the laboratory component. This course has an additional lab fee. Prerequisite: Grade of 'C' or better in BIOL 120, or General Ecology NATR 101. 3 credits (2 lecture hours, 4 laboratory hours) spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 285. General Microbiology. (4 Credits)

The biology of microscopic organisms including bacteria, fungi, protozoa, algae, and viruses. An introduction to basic principles of microbiology, with an emphasis on morphology, classification, cultivation, growth, physical, and chemical controlling agents, antibiotics, hostparasite interactions, and the benefits of microorganisms including genetic engineering applications. The lab includes proper technique in observation, identification of microbes, and reactions under various physical and chemical conditions. This course has an additional lab fee. Prerequisite: Placement in BIOL 120 or higher or one semester of a college-level biology course (ex. BIOL 101 or BIOL 105 and BIOL 105L with at least a C-). 4 credits (3 lecture hours, 2 laboratory hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 300. Biol Normal & Neoplastic Cells. (3 Credits)

The biology of normal and tumor cells will be examined using current data from population, macroscopic, microscopic, and molecular perspectives. Cell biology topics include cell chemistry, basic genetic mechanisms, internal organization and physiology of the cell, and cellcell interaction. The cancer biology portion of the course will examine these topics as they occur in neoplastic cells, along with epidemiology, heredity, causation, diagnosis, treatment, and prevention. Pre-requisite: Completion of college biology course (BIOL 120 or higher) with lab, or DANS 120, or ESCI 110 with grade of C or better. 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 301. Pathophysiology. (3 Credits)

This course is designed to increase the student's understanding of human diseases caused by alteration of physiologic processes. Emphasis is on advanced pathophysiologic mechanisms and manifestations of disease across the lifespan including genetic and cultural variations. Prerequisites: C- or better in BIOL 151 or ESCI 430 and BIOL 285 3 credits (lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 302. Epidemiology. (3 Credits)

The purpose of this courses it to introduce the student to key concepts and methods of descriptive and analytical epidemiology. The utilization of epidemiology by the health profession in culturally diverse populations is reviewed. Disease occurrences and patterns of disease entities including their progression will be examined. Application of epidemiological information will be stressed as well as its relationship to health promotion and disease prevention. Students will utilize critical thinking skills to correlate cause, frequency and distribution of disease processes to infection control, health planning and health policy intervention. Case findings surveillance and screening by health professionals is discussed. Assessing the validity and reliability of health care literature and research studies and it application to epidemiology is also covered. Prerequisites: C- or better in BIOL 285 and MATH 141, MATH 123, BSAD 221, or other statistics 3 credits (3 lecture hours) fall semester 3 credits (3 lecture hours) spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### BIOL 405. Basic Immunology. (3 Credits)

This course is an introduction to the field of immunology for both majors and non- majors. Students will gain an understanding of how the human immune system guards against disease. Included are lecture/ discussions on the components of the immune system, how these components interact, and the end results of these interactions. Relevant clinical topics, such as allergy, autoimmune disease, immunodeficiency diseases (including AIDS), organ transplantation, and cancer will also be discussed. Prerequisites: C- grade or better in the lecture and lab of a college-level biology course (BIOL 120 or higher) with a lab. 3 credits, fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

### **Boat Building (BOAT)**

#### BOAT 110. Introduction to Boat Building. (3 Credits)

A brief review of this history, uses, design and construction of wooden boats, with particular emphasis on canoes and kayaks. Course will include basic techniques for lofting, design and construction of a wooden mold for strip-plank boat building. Student will build a cedar strip canoe in the laboratory. Co - Prerequisites: WOOD 101 or with permission of instructor. 3 credits, (1 lecture hour, 3 hours laboratory) spring semester

### **Business Administration (BSAD)**

#### BSAD 100. Introduction to Business. (3 Credits)

An introduction to the essentials of American business is provided to students who have little familiarity with business or who may be considering a career in business. The course will explore broad areas of business such as entrepreneurship, forms of business organization operations management, marketing, money and banking, financial management, securities markets, human resources management, international business, and career opportunities in each field. 3 credits, (3 lecture hours), fall or spring semester

#### BSAD 102. Business Mathematics. (3 Credits)

This course incorporates the development of arithmetical tools in the mechanics of computation and the fundamentals of problem solving. Emphasis is on the application of acceptable business procedures. Topics include percent, invoicing, cash and trade discounts, principles of markup and markdown, payroll, simple interest, com-pound interest, consumer loans, property taxes, and insurance. Pre or co-requisite: MAGN 101 3 credits (3 lecture hours), fall or spring semester

#### BSAD 104. Organizational Behavior. (3 Credits)

Introduction to organizational behavior and human relations with emphasis on developing skills in dealing with human behavior, particularly as it exists in business organizations. Motivation, leadership, communications, group behavior, organizational change, personality, negotiation and conflict management are topics covered in this course. 3 credits (3 lecture hours)

#### BSAD 107. Legal Reg Aspects of Game Hosp. (3 Credits)

The course examines the legal aspects of operating a casino/resort with particular attention to liability, personal and property liability, labor laws, crimes, tortes, evictions and negligence. Also an examination of the laws and regulations particular to the gaming industry are explored with specific emphasis on the history and development of regulations in the casino industry as well as requirements for gaming licenses. 3 credits, fall semester

#### BSAD 108. Business Law 1. (3 Credits)

This course incorporates the fundamental concepts of the law of business and commerce important to business. Contracts, agency, and negotiable instruments with emphasis on the Uniform Commercial Code become part of the course. An introduction to legal reasoning and the legal approach to business problems play an important role. 3 credits (3 lecture hours), fall or spring semester

#### BSAD 109. Personal Finance. (3 Credits)

This course covers the basic concepts relating to lifetime financial planning including setting financial goals, measuring financial performance, budgeting, reducing taxes, evaluating savings programs, acquiring and using credit, evaluating housing options, understanding insurance needs, and examining various types of investment opportunities including stocks, bonds, mutual funds, and estate planning. 3 credits (3 lecture hours)

#### BSAD 112. Marketing. (3 Credits)

An introductory course that provides insight into marketing techniques in a dynamic environment. Corporate, small business, not-for-profit and for profit business marketing are all discussed. Marketing terms and functions are a necessary part of the course. In addition survey construction and analysis are performed and students demonstrate knowledge of branding and packaging via presentations. 3 credits (3 lecture hours), fall or spring semester

#### BSAD 116. Business Organization & Mgmt. (3 Credits)

This course covers the introduction to concepts of management, development of management thought, and management environments. Special emphasis is placed on the functions of managers including planning and decision making, organizing and staffing, leading, motivating, communicating, and controlling. Review of social responsibility management ethics, and workplace diversity is covered. 3 credits (3 lecture hours), fall or spring semester

#### BSAD 117. Intro to Entrepreneurship. (3 Credits)

The objective of this course is to establish a basic understanding of the entrepreneurship process. Today's successful entrepreneurs need more than just a good idea. This course will introduce the student to the entrepreneurial mindset and explore entrepreneurial opportunities. The student will be exposed to a brief overview of the various steps involved to bring an idea to reality. The class will incorporate several case studies and guest lecturers to expose the student to real life entrepreneurial situations. 3 credits, 3 lecture hours

#### BSAD 140. Business Communications. (3 Credits)

Fundamentals of effective English in written and oral business communications are discussed. Planning and writing effective business letters and memos, letters of application and resume, sales, credit collection, inquiry, order, acknowledgment, claims adjustments, and personnel letters are covered. Gathering and presenting in-formation for reports in written and oral form through research, interviewing, questionnaires, and conferences are presented. The course includes discussion and topics such as understanding the impact of international business teamwork, technology, and multiculturalism on business communications. The course further incorporates networking as well as teamwork opportunities. Prerequisite: COMP 101 with a C or better 3 credits (3 lecture hours), fall or spring semester

#### BSAD 203. Business Law II. (3 Credits)

This course is an in-depth study of business organizations including sole proprietorship, partnerships, limited liability companies and corporations. Basic concepts of property law including personal property (both tangible and intangible), intellectual property (including Internet issues), real property and securities regulation are covered. 3 credits (3 lecture hours), fall or spring semester

#### BSAD 206. Promotion Management. (3 Credits)

Principles, concepts and techniques of personal selling, advertising, sales promotion, publicity, and public relations are covered in the course. The course develops the nature and role of promotion, marketing and management of the promotion program. The practice of promotion in a changing environment is an important aspect of this course. Prerequisites: BSAD 100 or 112 or permission of instructor 3 credits (3 lecture hours)

#### BSAD 209. Professional Sales. (3 Credits)

This course introduces students to the professional, trust-based sales process. Students will learn what is required to initiate, develop, acquire, and enhance customer relationships in the sales process. Topics include: earning trust, effective sales dialogue, communication and presentation development, creating value for customers and sales ethics. Students present team based sales presentations at the end of the semester. 3 credits (3 lecture hours), spring semester

#### BSAD 212. Princ of Financial Mgmnt. (3 Credits)

The first course in finance, which develops an understanding of the links between economic theory, management theory, and the practical managing of the financial aspects of any organization, are part of the course. Sources of money and credit for businesses, agriculture units, consumers, governments, and charitable institutions are related topics. Prerequisites: BSAD 100 or permission of instructor 3 credits (3 lecture hours)

#### BSAD 215. Human Resource Management. (3 Credits)

Human Resource principles and tools useful to any employee or prospective manager are part of this course. Additional topics include manpower needs, recruitment, selection, performance evaluation, personal development, compensation and benefits, the development and influence of labor unions and collective bargaining, public policy and laws in the labor and Human Resource Management field, and reconciliation of varying viewpoints. This course uses a case approach. 3 credits (3 lecture hours), fall or spring semester

#### BSAD 216. Currnt Prob Human Resource Mgt. (3 Credits)

This course introduces students to contemporary problems in Human Resource Management. Issues include AIDS testing, alcohol abuse, and sexual harassment problems in the workplace. The course is designed to allow students to critically analyze the relevant issues encompassed in contemporary business topics and problems. 3 credits (3 lecture hours)

#### BSAD 220. Investments. (3 Credits)

The course will provide the student with an understanding of the nature of the investment process. Students will grasp a fundamental understanding of portfolio management, asset allocation, risk assessment, the securities market and exchanges, equity and debt securities, and margin, futures and option trading. Students will have the opportunity to prepare and present a portfolio of investments. 3 credits (3 lecture hours)

#### BSAD 221. Business Statistics. (3 Credits)

Applying statistical methods as analytical tools, students will learn principles and methodology to create an understanding of statistics used in business in a practical way. A focus on computerized calculations using Excel, along with case studies, will help students implement basic data techniques, tabular and graphic presentation, frequency distributions, averages, measures of dispersion, probability, confidence intervals, sampling methods, and hypothesis testing for students to perform statistical tests that include: Chi-square analysis, t-test, ANOVA, correlations, and simple linear regression analysis. A background in Excel is needed. Pre-requisites: MAGN 101 and CITA 101 or OFFT 110, or permission of instructor. 3 credits, fall and spring.

#### BSAD 224. Managng Diversity In Workplace. (3 Credits)

This entry-level management course explores the impact that a culturally diverse work force has on a business, industry and global/international environment. The course illustrates the manger's role/responsibility in managing a culturally diverse work force and develops student awareness and understanding of the role of culture, values, social behavior and politics in managing diverse groups of employees. 3 credits (3 lecture hours)

#### BSAD 225. International Business. (3 Credits)

This course examines the importance of: cultural understanding; international economics including current fiscal policy; international trade agreements and their effect on the American economy. The course will pay special attention to both the fiscal and human effects of new alliances and the influence on the future of American agriculture, production, banking, finance, communication, and professional services including the legal and medical profession. The American involvement in the growth of multi-international corporations focusing on American ventures in such areas as production and distribution will be discussed. 3 credits (3 lecture hours)

#### BSAD 226. International Marketing. (3 Credits)

This course emphasizes the importance of social, cultural, economic, political, and geographical concerns that international marketers have to deal with when marketing products in other countries. The effects of national policies, political elections and legal systems are discussed. Understanding the contribution that businesses make to underdeveloped nations and understanding trade restrictions are discussed in this course. Risk assessment of developing businesses in areas is evaluated in this course. 3 credit hours (3 lecture hours)

#### BSAD 291. Student Intern Program Busines. (3 Credits)

A field-based internship experience provides majors in the Department of Entrepreneurship and Business an opportunity to apply their knowledge in business situations. Students will work 125 hours at an approved business in the areas of accounting, finance, management, and marketing, and their work will be coordinated through a faculty member. Students will work on a business project/problem for the business. . 3 credits

#### BSAD 295. Business Mgmt/Decision Making. (3 Credits)

The course explores business strategy from two perspectives: Theoretical and practical. At the theoretical level, the student will examine the strategic discourse - a rich exchange of competing ideas, highlighted with conceptual foundation of business, management, and contemporary decision-making. The "knowing" part involves learning concepts and techniques applicable to business administration and strategic management. The "doing" part of the course involves the student's participation in Capsim Foundation®, a strategic management simulation. This simulation provides the student with the opportunity to acquire hands- on experience in managing a business as a member of a "senior management" team. This course allows students to participate in a computer application that simulates activities of a real business. In addition to experiential learning of business management decisionmaking competencies using the simulation, there will be emphasis on ethics and ethical decision-making in various functional areas, and on career portfolio preparation. This course is recommended for seniors, as it is a comprehensive business curriculum course. Prerequisites: ACCT 102, BSAD112, and BSAD116 3 credits, fall or spring semester

#### BSAD 300. Management Communications. (3 Credits)

This course is designed to provide students with the range of communication issues a manager will face in the future. Enduring issues on how to write and speak effectively and devise a successful communications strategy as well as how to make the best use of telecommunications technology will be explored. Through lecture and application, the student will study such areas as handling feedback, managing meetings, communicating change, communicating with diverse populations and external audiences. Prerequisites: BSAD 116 or AGBS 240 or permission of instructor. 3 credits, ( 2 lecture, 2 lab hours) fall or spring semester

#### BSAD 310. Human Resource Management. (3 Credits)

A course designed to analyze the problems, strategies and procedures in managing and assessing human resources in contemporary organizations. Special attention is given to problems in assessing abilities and performance, effective recruitment, selection and training, motivational strategies and developing the organization's human resources. Special emphasis is placed on such topics as Equal Employment Opportunity, ethics, organizational development/teamwork, and total quality management. Prerequisite: BSAD 116 3 credits, fall or spring semester

#### BSAD 320. Entrepreneurship. (3 Credits)

This course explores the basic framework of the beginning stages of a start- up business, starting with the development of an idea and going through the various stages of bringing the idea to market. The course will include assessing risk and reviewing various financing activities. Students will incorporate the class work into a workable business plan, which will address areas which need to be included in starting a new business. The course will use case studies to help reinforce the lecture material. Prerequisite: two of the following, ACCT 100 or 101, BSAD 108, BSAD 112 or permission of the instructor 3 credits (lecture hours), fall or spring semester

#### BSAD 325. Marketing Management. (3 Credits)

This course primarily focuses on the marketing mix (price, product, promotion and distribution) and the management of marketing in an organization. Students will learn basic marketing principles, research techniques and strategies for understanding and managing the marketing needs in the 21st century. Students will gather and interpret information, assess marketing conditions, with market research, and suggest strategies for success. Additionally, students will complete marketing plans supported by appropriate analysis and execute a complete marketing plan presentation and presentation. This course also incorporates a simulation to enhance the management experience. Prerequisites: BSAD 116, ECON 100 or 140, or permission of instructor. 3 credits (3 lecture hours), fall or spring semester

#### BSAD 327. Advertising Management. (3 Credits)

This course examines advertising with a focus on managerial activities and decision-making in the advertising process. Topics include selection of target markets, establishment of communications objectives, selection of and working relationships with advertising agencies, creative strategy and execution, media selection, appropriations and budgets, and program evaluation procedures. The course will also cover ethical approaches to advertising and other promotional activities. Prerequisites: BSAD 325, junior level standing or permission of instructor 3 credits (3 lecture hours), fall semester

#### BSAD 329. Consumer Behavior. (3 Credits)

This course will examine managerial applications of consumer behavior and provide students with the conceptual, quantitative, and analytical skills necessary to develop strategies that directly address consumer behavior and the competitive environment. Topics include factors and trends in consumer behavior, consumer motivation and attitudes, decision-making, consumer relationships and consumer loyalty, and consumer value creation. The course will also cover researching and online consumer behavior. Prerequisite: BSAD 325 or permission of the instructor. 3 credits (3 lecture hours), fall semester

#### BSAD 330. Lead/Manage Family Business. (3 Credits)

This course introduces students to family and closely held businesses, the strategic and operating challenges encountered, and the requirements for success. The course explores and analyzes unique issues and challenges relative to the family, the business, and ownership of these businesses. Designed to enhance student awareness of and appreciation for the unique challenges involved in leading and managing the family and closely-held business, topics include the nature, importance, and uniqueness of family businesses, strategy creation, succession and transfer of power, estate planning, financial, and family business governance. Prerequisite: BSAD 116, or AGBS 240, or permission of the instructor. 3 credits (3 lecture hours)

#### BSAD 343. Intro to Sport Management. (3 Credits)

The course is designed to provide insight as to contemporary sport, such that the student clearly understands how three basic management structures (clubs, leagues, and tournaments) operate. The student of the Introductory Sport Management course will develop knowledge of the history and nature of sport management, along with how the principles of management, marketing, finance, strategy, ethics, law, and leadership are applied to this discipline. This course is also a prerequisite to the Sport Management Option Upper-Division courses in the Technology Management Program. Prerequisite: BSAD 116 or by permission of instructor. This course is a Prerequisite of BSAD 353/Sport Marketing, BSAD 418/Sport Law, and BSAD 443/Strategic Management of Sport Business – Sport Management Option of the B. Tech. Technology Management Degree 3 Credits (3 lecture hours), fall or spring semester

#### BSAD 350. Principles Corporate Finance. (3 Credits)

This course introduces the areas of finance: financial markets, managerial finance, and investments and the importance each has on business transactions and operating performance. Overview of financial markets and financial instruments are important topics. Explanation of basic finance concepts including interest rates, time value of money, valuation, cost of capital, risk and rates of return. Role of finance in decision-making regarding managing daily operations, seeking financing, and providing financing. Incorporates spreadsheet modeling to apply financial concepts and conduct financial analysis. Prerequisites: ACCT 100 or ACCT 101, CITA 101 or CITA 110, and MATH 102, junior level standing, or permission of instructor 3 credits (3 lecture hours), fall or spring semester

#### BSAD 353. Sport Marketing - Strategic Ap. (3 Credits)

This course will provide an intensive evaluation of marketing techniques and promotional strategy. In addition, the topical coverage will include the marketing mix, new product strategy and services, interactive promotion, event marketing and value-added marketing. The student of sport marketing will acquire extensive understanding as to consumers as spectators and participants. In addition to planning the sports marketing mix (product, price, pro-motion and place), the student will examine the execution and evaluation of the planning process, as part of an integrated marketing strategy. This course is designed primarily for student in the B. Tech Technology Management program, with the Sports Management Option. Prerequisites: Co-requisites: BSAD 325, BSAD 343 or permission of instructor – may also be taken concurrent with BSAD 418. This course is also a Prerequisite of BSAD 443 – Sport Management of Sport Business. 3 credits (3 lecture hours)

#### BSAD 354. Financial Management Modeling. (3 Credits)

This course examines financial modeling, forecasting and financial management through case study method. The students will examine valuation of companies, forecasting financial results to value companies, execute capital budgeting, and understand working capital management. The student will obtain understanding through using the case study methodology and modeling of financial problems in each area under consideration. Prerequisite: BSAD 350 3 credits (3 lecture hours)

#### BSAD 375. Management Information Systems. (3 Credits)

This course introduces students to solving business problems and developing new solutions using spreadsheet and database software. Topics include business information systems, E-business (how businesses use information systems), achieving competitive advantage with information systems, IT infrastructure, and foundations of business intelligence. Further topics include telecommunications (the Internet and wireless technology), securing information systems, achieving operational excellence and customer intimacy, E-commerce (digital markets and digital goods), improving decision making and managing knowledge, building information systems, and ethical and social issues in information systems. Prerequisites: BSAD 310, BSAD 325, BSAD 350, ACCT 102 or permission of the instructor. 3 credits (3 lecture hours), spring semester

#### BSAD 380. International Business. (3 Credits)

This course introduces students to management within an international context. Embracing culture and globalization as its foundation, discussions include the latest theories and concepts regarding business interactions within a global environment. Topics include the global business environment, national business environments, international trade and investment, international financial systems, and international business management. Course discussions include managerial risk implications arising from different cultural, socioeconomic, political, and legal systems; volumes and patterns of international trade and investments; international finance systems including international markets and money systems; and international strategy and organizational structure design. Additional topics include identification of international opportunities and entry mode selection; and international management sub-issues including marketing, production and staffing within a global environment. The course incorporates recent, real-world examples, and integrates technology. Prerequisites -BSAD 310, BSAD 325, BSAD 350 and junior level standing or permission of the instructor. 3 credits (3 lecture hours), fall or spring semester

#### BSAD 391. Internship in Business. (3 Credits)

This is a 3-credit (300-hour minimum) approved company sponsored internship. This field-based experience provides majors in businessrelated disciplines an opportunity to apply and gain additional relevant knowledge, skills and experience in the discipline Prerequisites: Enrolled in the Bachelor of Business Administration in Business program, completed 18 credit hours in 300 level or above business or business related course work, and permission of instructor. 3 credits.

#### BSAD 400. Production & Operation Mgt. (3 Credits)

This course examines the strategy and control processes that transform resources into finished goods and services. The primary focus is the use of quantitative techniques for analysis and decision-making, the role of productivity, quality, job design, human resources and other tasks to maximize operational performance. The emphasis is on principles of production system design and operation. Prior exposure to statistics is strongly recommended (MATH 141 or BSAD 221). Prerequisites: MATH 102 or higher and CITA 101, CITA 110 or OFFT 110, and junior level standing or permission of instructor. For students in Automotive Technology B.Tech completion of AUTO 360 is acceptable. 3 credits (2 lecture hours, 2 laboratory hours), fall or spring semester

#### BSAD 408. Responsible Business Ownership. (3 Credits)

This course covers the issues involved in the responsible and ethical conduct of business. It explores responsibility issues from the viewpoint of all the stakeholders in a business. The consequences of irresponsible business behavior and non-compliance with business laws and generally accepted business standards are also explored. Course work will consist of case studies and textual readings in both Ethical and responsible business behavior. Areas of study may include (but not limited to): Business and Social Responsibility, Responsible practices in Human Resources, Ethics in the Marketplace, Financial Responsibility, and The Environmentally Friendly and Compliant Business. Prerequisite: ACCT 100 or ACCT 101, BSAD 108 or BSAD 116 or FSAD 153, and junior level standing, or permission of the instructor. 3 credit hours (3 lecture hours), fall semester

#### BSAD 411. Leadership in Organizations. (3 Credits)

This course examines and analyzes the major theories and conceptualizations of leadership, wherein relevant consideration of the applicable approach of theoretical and conceptual models will be explored for real-world organizations. Major concepts include entrepreneurial leadership, team leadership, transformational leadership, women and leadership, and ethical/responsible business practices. There will be several leadership case problems and leadership action/ skill-building and development exercises. Student leaders will perform research and conduct a thorough investigation of an Organizational Leader, as part of their integrating leadership learning objectives. A Leadership Simulation Program, vLeader<sup>™</sup> is included in the course, to further augment experiential learning and training, for preparedness in effective communication, idealized influence, emotional intelligence, and creativity contribution to organizational success. Prerequisites: BSAD 116, junior level standing or permission of instructor 3 credits (3 lecture hours), fall semester.

#### BSAD 415. International HR Management. (3 Credits)

This course will provide students with a unique blend of theory and practice to help them analyze the vast array of employment practices, employment structures, and human resources management strategies in a comparative and global context. The purpose of the course is to provide the conceptual and practical tools necessary to address the impact of globalization on the practice of Human Resources. The course is taught from comparative and cross-national perspectives. Students will be asked to take a critical approach to Corporate Social Responsibility and Corporate Citizenship Behavior and the impact these have on business policy. Prerequisites: Senior standing, BSAD 116 and either BSAD 215 or 310. 3 credits (lecture hours,) spring semester

#### BSAD 417. International Financial Mgt. (3 Credits)

This course examines the international flow of money and financial markets. An important aspect of the course will focus on foreign exchange rates and the management of changes in currency rates. Students will learn about managing transaction, accounting and translation risks. In addition, students will cover trade financing and international cash management. Prerequisite: BSAD 350 3 credits (3 lecture hours)

#### BSAD 418. Sport Law. (3 Credits)

This course examines legal issues affecting amateur and professional sports. Students will analyze sports cases and materials that cover multiple disciplines, including contracts, torts, constitutional law, antitrust, labor and employment, intellectual property, and criminal law. Students will participate in problem- solving exercises and drafting and negotiation sessions, which explore areas such as player and coaching contracts, investigation of NCSS rules infractions and possible sanctions against universities. Students will augment their learning through analysis and discussion of up-to-the-minute professional and collegiate sports law developments. This course demonstrates how knowledge of the law creates a competitive advantage and helps build a more efficient and successful operation that better serves the needs of its constituents. Learning objectives will be organized around management functions rather than legal theory. This approach will allow students to understand how legal concepts relate to specific managerial functions and will help prepare them to assume a broad range of responsibilities in sport, education, or recreation. This course is designed primarily for students in the B. Tech Technology Management program, with the Sport Management Option. Pre- or Co-requisites: BSAD 108 and BSAD 343 (Introduction to Sports Management) or by permission of instructor. 3 Credits (3 lecture hours), fall or spring semester

#### BSAD 419. Global Marketing. (3 Credits)

This course will examine culture and international trade reflecting on the impact of the marketing mix. Students will examine and assess different cultures as well as the political and legal environment of different countries. During the course, the examination of global marketing opportunities and strategies to exploit those opportunities will take place. A review of product and service marketing in an international setting will be emphasized during the course. Prerequisite: BSAD 325 3 credits (3 lecture hours), fall semester

#### BSAD 443. Strategic Sports Business. (3 Credits)

The primary objective of this course is to provide students the opportunity to analyze and integrate business and managerial concepts, tools, techniques, and strategies in sport management. This course is the culmination of student learning in sport management. Students will effort to assess problems and to make decisions facing sport managers and business leaders. Emphasis will focus on the strategic, profit-oriented, and ethical decision-making that are necessary for sport managers to be successful. The course also focuses in detail on a senior thesis that will provide opportunities for in-depth analysis of a specific area in the field. Small group discussions, case studies, and experiential learning will be utilized in order to facilitate learning. This course will augment critical thinking and analysis skills through analytical essays and strategic group projects associated with the industry. This is a writing-intensive course, therefore the development of quality writing skills will be emphasized. Since the internship of Tech Management Students whose focus is in sport management is imminent at this point, this course will also attempt to provide an analysis as to effective management and leadership strategies and the body of knowledge associated with pursuing a career in sport management. Thorough class preparation and participation are critical for student success. This course is designed primarily for students in the B. Tech Technology Management program, with the Sport Management Option. Prerequisites: BSAD 353 and BSAD 418 Sport Management Option of the B. Tech. Technology Management Degree. 3 Credits (3 lecture hours), fall or spring semester

#### BSAD 449. Management Policy and Issues. (3 Credits)

The emphasis is on analyzing the criteria for which ultimate business decisions are made; business strategies in international and domestic operations and the impact of political, economic and legal factors. Focus will be given to actual situation analysis and applying current functional and managerial techniques to a variety of case studies. Prerequisites: Must complete two of the following courses with a C or better. ACCT 101, BSAD 112, ECON 100 and BSAD 116; and six additional credits of 300/400 level BSAD or RRMT course work; be matriculated in a bachelor degree program with a GPA of 2.0 in business and related classes; or have permission of instructor. 3 credits (3 lecture hours), spring semester

#### BSAD 465. Management Consulting. (3 Credits)

This course is designed to initially overview the consulting profession with a subsequent emphasis on organizational consulting issues. The application of theory from the various disciplines to business problems in a consulting environment is emphasized. Definitions of problems, analysis of appropriate variables, and recommendations are provided by students for implementation by management. Students may choose from two options: (1) Business Project: Students are assigned projects for problem analysis and solution or (2) Consultancy: Student develops a project that is of value with a client organization using academic theory. Student will provide a journal and present the written report to management, the faculty advisor, and class colleagues. Successful completion of CITA 405 is highly recommended. Co and Prerequisites: BSAD 350 with a "B" or higher, concurrent enrollment in BSAD 470 or ENTR 417, or permission of the instructor 3 credits (3 lecture hours), fall or spring semester

#### BSAD 470. Strategic Management. (3 Credits)

This course is a capstone course in the Business Administration (B.B.A) degree program and is required of all seniors. Emphasis is given to the integration of subject matter from other business courses and disciplines in the discussion and analysis of organizational problems. The course attempts to balance theory, research, and practice within a coherent framework. Cases help students integrate and apply concepts and knowledge to actual real-world problems. Prerequisite: Senior standing, admission into the Bachelor of Business Administration degree program, BSAD 350, BSAD 380 and Math 153. 3 credits (3 lecture hours), fall or spring semester

# **Cannabis (CANA)**

#### CANA 101. Introductory Cannabis. (3 Credits)

This course will provide students with a basic understanding of the many aspects related to the cannabis industry. Topics will include production and management practices. Emphasis will be on introducing students to cannabis biology, production techniques, Integrated Pest Management (IPM) strategies, and Best Management Practices (BMPs). 3 credits (2 lecture hours, 2 lab hours), fall semester

#### CANA 301. Advanced Cannabis Prop & Prod. (3 Credits)

Advanced Cannabis Propagation and Production is an advanced study of the propagation, production, and processing of cannabis. The course will explore the scientific and horticultural principles underlying the successful breeding, cloning, production and processing of cannabis plants used for various products. Laboratory time will be used to practice various asexual and sexual propagation techniques, hone production and processing management skills, and examine the influence of environmental factors on plant morphology. Prerequisite: CANA 101 or permission of instructor 3 Credits (2 lecture hours, 2 laboratory hours), spring semester

#### CANA 350. Hemp Production & Processing. (3 Credits)

This is an upper level course evaluating the variety of methods for growing industrial hemp, and subsequent processing needs and methods. The course will cover all three areas of industrial hemp production, for grain, fiber, and high CBD varieties, as well as dual use varieties. Though worldwide trends will be discussed, the focus of the course will be on the New York State industrial hemp industry. The laboratory component of this course will be split between hemp field studies and trips to a variety of hemp processors in the region. Prerequisites: AGRO 110 and AGRO 210 or HORT200 3 credits (2 lecture, 2 hours lab) Fall

# **Casino (CAS)**

#### CAS 101. Intro to Casino Industry. (3 Credits)

This course surveys the history of gaming, casino regulations, organizational structure within gaming, daily casino operations, various types of games, financing and the future development of the industry. 3 credit hours, fall semester

#### CAS 102. Introduction to Gaming. (3 Credits)

This course is designed to familiarize individuals with the various games offered at typical casinos. It provides a survey of the games offered as well as a rather in-depth investigation of the most common games. 3 credit hours, fall semester

#### CAS 103. Casino Security. (3 Credits)

This course is designed to familiarize individuals with the various types of security measures used in the casino industry to protect the agency from loss and maintain the integrity of the games. In addition to providing information relative to typical cheating methods in each game, the course will also provide information relative to the legal aspects of surveillance. 3 credit hours, fall semester

#### CAS 104. Issues in Human Resource Mgt. (3 Credits)

This course surveys current issues, techniques and applications for managing human resources in the hospitality industry. Information strategies, team building, legislation and their impact on achieving service objectives will be studied. Development of a management philosophy appropriate for the service industry shall be the final outcome. AHMA certification. 3 credits (3 lecture hours), fall semester

#### CAS 105. Food & Beverage Implications. (3 Credits)

This course focuses on volume food service in multiple casino operations. Various performance, service and financial objectives as well as interface of the food & beverage department with other casino operations shall be presented. Prerequisite: Acceptance in the CAS program or permission of instructor 3 credits (2 lecture hours, 2 recitation hours), fall semester

#### CAS 230. Technology & Controls Gaming. (3 Credits)

An overview of internal controls, computer applications technological advances and their impact on customer service strategies in the gaming industry. The applications of technology in various facets of gaming/ casino operations. Prerequisites: CAS 101, 103, 251, and BSAD 107 or permission of instructor. 3 credits (3 lecture hours), fall semester

#### CAS 240. Hospitality Sales & Marketing. (3 Credits)

Marketing in the service industries and developing strategies/processes necessary for successful gaming and hospitality operations will be the focus of this course. Interventions which facilitate desirable exchanges and the achievement of financial objectives in the hospitality industry will be examined. Prerequisite: second year standing in the Casino Management Program or permission of instructor 3 credits (3 lecture hours), fall semester

#### CAS 251. Cooperative Work Experience. (2 Credits)

Cooperative Work Experience will be completed in an approved position in the gaming/casino industry (320) hours. Comprehensive written and oral reports are required at the conclusion of the work experience during the fall semester lecture hours. 2 credits (2 lecture hours), fall semester

#### CAS 280. Leadership Development. (3 Credits)

This course focuses on leadership and developing strategies which result in a healthy organizational climate and the achievement of objectives. Competencies of great leaders, ethical leadership and the leader's role in addressing socio/cultural concerns will be studied along with Baldridge Award criteria. Prerequisites: 2nd year CAS standing, CAS 104, 230, or permission of instructor. AHMA certification. 3 credits (3 lecture hours), spring semester

#### CAS 290. Professionalism, Image. (3 Credits)

This capstone course is designed to integrate knowledge and skills into the critical thinking process required for corporate level decision making. Case studies and research of an existing corporation will be the basis for studying issues and presenting issues related to Casino Management. Development of a framework and format for effective operation of a service sector business. Prerequisites: 2nd year CAS standing, CAS 240, 250, 251, or permission of instructor. 3 credits (3 lecture hours), spring semester

#### CAS 311. Surveillance & Security Tech. (1 Credit)

This lecture series will survey the security and surveillance controls and emerging technologies of the gaming industry. An overview of the daily operations of a gaming facility will be presented. Attendees will acquire an understanding of the gaming industry, its environment, and the role of technology. Prerequisites: CAS 103 and BSAD 107 or permission of instructor 1 credit (15-hour lecture series), fall semester Offered as an elective

# **Chemistry (CHEM)**

#### CHEM 101. Basic Chemistry. (4 Credits)

Primarily for students with no previous chemistry. Fundamentals of chemistry including mathematical concepts, classification and states of matter, chemistry symbols, formulas and equations, Chemical reactions, mole concepts, atomic structure, bonding and solutions. Prerequisite: Knowledge of basic algebra strongly suggested. Co-requisite: CHEM 101L 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### CHEM 110. Contemporary Chemistry. (4 Credits)

A descriptive, but non-mathematical approach to chemistry for nonscience majors based on issues important to society and the chemical sciences. Topics to be discussed include, but are not limited to, atmospheric chemistry, gases, and air pollution; aqueous chemistry, water pollution, and acids and bases; thermodynamics, fossil fuels, and alternative energy sources; organic chemistry, plastics, and recycling; drugs, pharmaceuticals, and consumer chemicals; food, chemistry, and agricultural chemicals; biochemistry and biotechnology. Chemistry concepts are presented as needed to discuss a particular issue. The course is meant to fulfill a student's science/liberal arts requirement and does not serve as a prerequisite for CHEM 121 or 141. This course is not meant for students who have taken or will take CHEM 101, CHEM 121/122, or CHEM 141/142 as part of their program requirements. Co-requisite: CHEM 110L 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### CHEM 121. General College Chemistry I. (4 Credits)

A course using chemical principles to explain chemical phenomena. Units, significant figures, dimensional analysis, and math and calculators as tools; chemical symbols, atomic structure, bonding, and the periodic table; anions, cations, molecules, acids, bases, formula writing, and nomenclature; classification of chemical reactions, equation writing, solutions, and stoichiometry. Additional topics to be taken from the gaseous state, the liquid state, the solid state, and thermochemistry. Prerequisite: placement in CHEM 121 or higher and high school algebra, or placement in MATH 102 or higher, or CHEM 101 with a C- or better Corequisite: CHEM 121L 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### CHEM 122. General College Chemistry II. (4 Credits)

A continuation of CHEM 121 emphasizing the practical aspects and applications of chemistry in the fields of health, medicine, agriculture, foods, biology, and engineering. Topics covered include chemical equilibrium, chemical kinetics, acid-base equilibrium, oxidation-reduction and electrochemistry, nuclear chemistry, and organic chemistry. Prerequisite: CHEM 121 Co-requisite: CHEM 122L 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### CHEM 141. Chemical Principles I. (4 Credits)

Theoretical in-depth approach to atoms, electronic structure, bonding, thermochemistry, behavior of gases, and solution behavior. Emphasis on problem solving. Prerequisite: Placement into CHEM 121 or CHEM 141; three units of high school mathematics Co requisite: CHEM 141L 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### CHEM 142. Chemical Principles II. (4 Credits)

Theoretical approach to reaction kinetics, principles of equilibrium and their applications, oxidation-reduction reactions, thermodynamics, nuclear chemistry, metal ion complexes, and organic chemistry. Prerequisite: CHEM 141 or permission of instructor Co-requisite: CHEM 142L 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### CHEM 220. Intro to Organic Chemistry. (4 Credits)

This is a survey of organic chemistry utilizing functional group and mechanistic approaches. The course will review the basics of chemical bonding, thermodynamics, kinetics, and acid-base chemistry needed to understand the chemistry of organic molecules. The chemical and physical properties of the standard functional groups will be examined. Transformations of functional groups will be explored and the fundamentals of the spectroscopic identification of each functional group will be practiced. The three dimensional structure of molecules will be a point of major focus. Examples of the relevancy of organic chemistry to everyday activities will be stressed, and the relationship of organic molecules to the chemistry of life will be highlighted. Prerequisite: CHEM 122 and CHEM 122L or CHEM 142 and CHEM 142L. 3 credits (3 lecture hours) fall and spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### CHEM 241. Organic Chemistry I. (4 Credits)

Bonds and bonding, nomenclature, properties and methods of preparation of the aliphatic compounds as well as conjugation, resonance, stereochemistry and aromaticity. The study of the functional groups correlates with the study of reaction mechanisms, conformational analysis, concepts of resonance, transition state theory, and spectroscopic properties. Prerequisite: CHEM 122 or CHEM 142 or permission of instructor Co-requisite: CHEM 241L 3 credits (3 lecture hours) fall semester This course satisfies SUNY General Education Requirements for "Natural Sciences" as long as students also enroll in the lab. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### CHEM 242. Organic Chemistry II. (4 Credits)

A continuation of CHEM 241. Nucleophilic substitution, aromatic substitution, ethers, aldehydes, ketones, alcohols, carboxylic acids, amines, phenols and special topics. Emphasis on reactions mechanisms. Prerequisite: CHEM 241 and CHEM 241L or permission of instructor Corequisite: CHEM 242L 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### CHEM 361. Biochemistry. (3 Credits)

A study of the molecular components of cells, catabolism, and biosynthesis with applications of principles from general and organic chemistry. Pre- or Co-requisite: CHEM 242 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

# **Coaching (COAC)**

#### COAC 101. Coaching Effectiveness. (3 Credits)

Introduction to sport science including the fields of sport psychology, sport pedagogy, sport physiology, and sport management. Introduction to the rules and regulations of the New York State Public High School Athletic Association (NYSPHSAA). One of three courses fulfilling New York State requirements for coaching certification. 3 credits (3 lecture hours), fall or spring semester

#### COAC 102. Theory Technique Coaching. (2 Credits)

This course introduces the student to the basic concepts of coaching in New York State including general instructional strategies, rules and regulation of play, and periodization of training. Topics to include athletic security and safety, organization and management of practices and sport specific training. One of three courses fulfilling New York State requirements for coaching certification. 2 credits (2 lecture hours) fall or spring semester

#### COAC 103. Health Related Aspect Coaching. (3 Credits)

Examines the responses of the body to exercise and the relationship between various physiological systems and athletic performance and improvement. Provides the basic principles of conditioning and nutrition to enable development of safe and effective training and nutritional programs for athletes. Includes basic first-aid and safety as related to athletic participation. One of three courses fulfilling New York State requirements for coaching certification. 3 credits (3 lecture hours) spring semester

# **College Skills (SKLS)**

#### SKLS 087. Reading Essentials. (3 Credits)

This course addresses the basic skills necessary for efficient college reading. The course concentrates on effective study reading and provides instruction and practice in vocabulary development, reading comprehension and reading rate. 3 credits (not to count toward graduation credit), 3 lecture hours, fall or spring semester

#### SKLS 088. Writing Essentials. (3 Credits)

This course is designed to develop the basic language skills. It is a developmental skills course, grounding students in the mechanics of Standard English through sentence construction and paragraph organization and development. Prerequisite: D or better in high school English 3 credits (3 lecture hours), fall or spring semester These credits do NOT count toward graduation credit.

#### SKLS 091. Pre-Algebra. (3 Credits)

This course consists of basic mathematics with the ground work for introductory algebra. Topics include covers operations with whole numbers, integers, fractions, decimals, percent and application problems for each area. Students will learn strategies for solving problems without the use of a calculator. The goal of Pre-algebra is to prepare the student to deal with math as it occurs in everyday life and to prepare the student for introductory algebra. 3 credits (not to count toward graduation credit), 3 lecture hours, fall or spring semester

#### SKLS 092. Support Course for MAGN. (3 Credits)

This is a support course for MAGN 101: Elementary Algebra and MAGN 107: Mathematical Literacy. Each section of SKLS 092 is paired with a specific section of MAGN (101 or 107) which will be taught by the same instructor. Topics include quantitative reasoning skills, magnitude, rounding, place value, order of operations, fractions, decimals, ratios, proportions, percentages, formulas, algebraic expressions, solving one-step linear equations, and plotting points. Additional topics may be included. The topics are integrated throughout the course and presented just-in-time to support the topics in the section of MAGN 101 or MAGN 107 that it is paired with. This course is a co-requisite for MAGN 101 and MAGN 107 for students who do not meet placement requirements. Students must pass SKLS 092 with a C or better in order to pass MAGN 101 or MAGN 107. If students pass SKLS 092 with a C or better, but fail MAGN 101 or MAGN 107, students can take MAGN (101 or 107) as a stand-alone course. Texas-Instruments (TI-30XII) calculator required. Co-requisites: MAGN 101 or MAGN 107, 3 imputed credits (not to count towards graduation credit)

# **Communications (COMM)**

#### COMM 101. Critical Reading. (3 Credits)

Explore critical reading as an active, reflective process that goes beyond surface comprehension to interact deeply with diverse texts. This course will challenge ideas, draw connections, and build independent opinions while analyzing analogies, metaphors, structure, and arguments. Students will develop skills to identify biases, critique media, evaluate how messages are constructed to shape perspectives and behavior, and practice forming well-supported arguments and making meaningful connections between concepts. This course meets the Liberal Arts and Sciences requirement and the SUNY General Education Core Competency requirement for Critical Thinking and Reasoning. 3 credits (3 credit hours), offered in fall or spring.

#### COMM 105. Research & Communication. (3 Credits)

Engage in college-level composition, research, and presentation in this comprehensive course. Students will be introduced to and practice various modes of rhetoric by writing essays, delivering presentations, and culminating in an argumentative research project. This project will include selecting an appropriate topic, researching this topic, composing an essay on this topic, and finally, presenting this topic to an audience utilizing an extemporaneous style of speaking and appropriate materials and visuals. Topic of the course decided by faculty. In order to know the next topic, please see the subtitle and unique course description available on the college website's course listings page and in the scheduling tools. These will be available prior to registration. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education requirement for Communication Oral and Communication Written as well as the SUNY General Education Core Competency requirement for Critical Thinking and Reasoning and Information Literacy. Pre-requisite: Placement in COMM 105; or "C" or better in COMP 100 or equivalent. 3 credits (3 lecture hours), fall or spring.

#### COMM 111. Introduction to Speech. (3 Credits)

Speech as communication. Composition and delivery of informative and persuasive speeches. Practice in ad-dressing a group in order to develop confidence and proficiency. Lectures and discussion of techniques of organization and presentation ideas. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication - Oral.

#### COMM 121. Theories Interpersonal Comm. (3 Credits)

This course examines dyadic communication and the major variables that impact it. Some issues which will be examined are issues of gender, power, conflict, and culture. Nonverbal communication and the impacts of technology will also be included. Students are given opportunities through in-class exercises and writing assignments to learn new theories, apply them and to assess their competence in using them. 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### COMM 131. Small Group Discussion. (3 Credits)

Introduction to the organization and behavioral characteristics of group interaction in oral decision making. Content includes the analysis of leadership, conflict and consensus, systems theory, and other issues in task-oriented groups. The course will closely examine the impact of communicating over distances on modern small group theory. The impact of technology on modern group theory will also be a covering concept throughout the semester. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement.

#### COMM 300. Visual Communication. (3 Credits)

This is a survey course that examines the evolution of visual communication from the invention of the printing press to the development of the World Wide Web. Students will learn the many ways information is produced and consumed in a modern, media-rich society. Typographic, graphic, informational, cartoon, still, moving, television, and computer images are analyzed within a framework of personal, historical, technical, ethical, cultural and critical perspectives. Prerequisite: C or better in COMP 101 or COMM 105 and junior or senior standing, or permission of instructors 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication.

# **Composition (COMP)**

#### COMP 100. College Composition. (3 Credits)

Review of essay components and structure. Students will refine their ability to write essays that demonstrate college-level thesis construction and execution., developing an academic voice. Prerequisite: Placement in COMP 100 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement.

#### COMP 101. Composition and Research. (3 Credits)

College composition and research. Students practice modes of rhetoric by writing expository essays, culminating in an argumentative research paper. Prerequisite: Placement in COMP 101 or C or better in COMP 100 or equivalent 3 credits (3 lecture hours), fall or spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication and Communication Written.

#### COMP 102. Writing About Literature. (3 Credits)

Explore the world of literature in this introductory course. Students will examine literary elements across genres and themes to analyze, evaluate, and create thoughtful responses to deepen understanding and communication skills. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education requirement for Humanities, the SUNY General Education requirement for Communication Written, and the SUNY General Education Core Competency requirement for Critical Thinking & Reasoning. Prerequisite: C or better in COMP 101 or COMM 105. 3 credits (3 lecture hours), fall or spring.

#### COMP 110. Technical Communications. (3 Credits)

Designed to introduce students to internal and external workplace communications such as memos, manuals, instruction sheets, and proposals. Research and group projects are required and may include oral presentations and visual aids. Students cannot receive credit for both COMP 110 and COMP 310 Prerequisite: C or better in COMP 101 or COMM 105 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication and Communication Written and Oral.

#### COMP 220. Writing in the Disciplines. (3 Credits)

Designed to strengthen students' writing and analytical skills by examining the written language used by arts and humanities, social sciences and public affairs, natural sciences and technology, and business professionals. Students will read and evaluate a diverse spectrum of published materials and contrast for fundamental assumptions, concerns, methodology, terminology, and goals. Imitative and analytical papers are required. Prerequisite: C or better in COMP 101 or COMM 105 3 credits (3 lecture hours), offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication and Communication Written.

#### COMP 221. Advanced Composition Research. (3 Credits)

Rhetorical argument and critical thinking through writing and research are among the topics that will be covered in this course. Students will learn and develop skills of logic and argument in essays requiring rigorous critical thinking and synthesis of information in an argumentative research paper. Prerequisite: C or better in COMP 101 or COMM 105 and COMP 102 or equivalent, or by permission of the instructor 3 credits (3 lecture hours), spring or fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication and Communication Written.

#### COMP 230. Creative Writing - Short Story. (3 Credits)

This is a creative writing course. Students will study the elements of fiction and practice various techniques. Class will be conducted as a workshop and students will critique each other's writing. Submission of a portfolio and a completed short story is required by the end of the semester. Prerequisite: C or better in COMP 101 or COMM 105 3 credits (3 lecture hours), fall or spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### COMP 231. Creative Writing - Poetry. (3 Credits)

This is a creative writing course. Students will study the levels of poetry and its various elements. They will practice generating different poem forms to develop the craft of writing poetry. Class will be conducted as a workshop and students will critique each other's works. They will submit portfolio work throughout the semester. Prerequisite: "C" or better in COMP 101 or COMM 105 3 credits (3 lecture hours), fall or spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### COMP 232. Creative Writing Nonfiction. (1 Credit)

A five-week, one-credit course in creative writing designed to encourage students to develop their creative writing skills and techniques, and to share and discuss their works in a workshop setting. 1 credit (5-week course), offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement.

#### COMP 233. Creative Writing - Nonfiction. (3 Credits)

What is "creative"? What is "nonfiction"? This is a creative writing course about the exciting field of creative nonfiction, which may include: memoir, lyrical essay, literary journalism, collage, nature and travel writing, fragment, creative biography, genre-bending, experimental writing, etc. This is not academic or technical writing. Class will be conducted as a supportive workshop experience in which students will read, discuss, create, share, and critique each other's work and the work of published authors. Prerequisite: COMP 101 or COMM 105 3 credits (3 lecture hours), fall or spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### COMP 240. Editing 1. (1 Credit)

Improve your written work. This course helps you identify and correct errors in grammar, punctuation, capitalization and spelling. Develop the editing skills of careful reading, good judgment and correct use of the English language. Prerequisite: COMP 101 1 credit, offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement.

#### COMP 241. Editing 2. (1 Credit)

Improve your written work. This course helps you identify and correct errors in phrases, clauses, sentence structure and sentence punctuation as well as develop variety in your use of the various types of English sentences. This course will help you develop the editing skills of careful reading, good judgment and correct use of sentences. Prerequisite: COMP 101 1 credit, offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement.

#### COMP 242. Editing 3. (1 Credit)

Fine-tune your written work. This course applies the editing skills learned in Editing 1 and Editing 2 and examines editing for appropriate use of diction and document format. Edit documents written for different audiences and purposes in areas relevant to a variety of college programs and career fields. Prerequisites: COMP 240, 241 1 credit, offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement.

#### COMP 310. Advance Tech Communication. (3 Credits)

Open only to students in bachelor degree programs, this course requires students to study workplace communication. Students will study and produce common workplace documents such as memos, letters, manuals, instruction sheets, abstracts, proposals, analytical reports, feasibility studies, etc. and will also consider ethical issues surrounding workplace communication. Research projects and the production and use of visual aids are required. Oral presentations and collaborative projects may be required. Students cannot receive credit for both COMP 110 and COMP 310. Prerequisite: Junior or senior standing and C or better in COMP 101 or COMM 105, or by permission of instructor 3 credits (3 lecture hours), fall and spring semesters This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Basic Communication and Communication Written.

# **Computer Assisted Design (CAD)**

#### CAD 181. Intro To Computer-Aided Drftng. (1 Credit)

This is an introduction to the fundamental concepts and techniques of two-dimensional drawing using AutoCAD software. Topics include file management, the drawing environment, basic drawing and editing commands, multi-view object representation, text creation, dimensioning, and section views. 1 credit (2 laboratory hours), fall or spring semester

#### CAD 184. CAD for Mechanical Design. (2 Credits)

A comprehensive introduction to two-dimensional drafting techniques. Topics include file management, drawing environment and coordinate systems, geometry construction and modification, inquiry techniques, text, dimensioning, sectional views, blocking and assembly drawing. Emphasis is placed on accuracy of object geometry construction. This course has an additional lab fee. Co-requisite: DRFT 151 or permission of instructor 2 credits (1 lecture hour, 2 lab hours), fall semester

#### CAD 186. 3-D Parametric Solid Modeling. (2 Credits)

Utilization of 3D parametric modeling software to develop and document mechanical part component and assembly models. Topics include the parametric model concept, dimensional and geometric constraints, feature-based modeling techniques, fits in assembly, and plotting dimensioned multiview drawings. Emphasis is placed on model integrity and documentation. Prerequisite CAD 184 or permission of instructor 2 credits (1 lecture hour, 2 laboratory hours), spring semester

#### CAD 288. Advanced Solid Modeling. (2 Credits)

Advanced parametric solid modeling concepts and applications. Topics include solid modeling with 3D sketches, surface modeling, functional assembly modeling, simple mold design, sheet metal modeling, fasteners, visualization and animation tools, kinematic motion analysis, static stress analysis, and dimensioning with geometric tolerances. Emphasis is placed on model integrity and documentation. Prerequisite: CAD 186, DRFT 252 2 credit hours (4 laboratory hours), spring semester

# **Computer Info Tech (CITA)**

#### CITA 100. Introduction to Tech & Apps. (1 Credit)

Provide students with the essential skills to navigating technology responsibly. This course will cover topics such as digital communications, productivity applications, general computer topics, and effective use of widely used technologies, such as, email, word processing and presentation software. Students will explore software and technologies that support student success at the college level. Students will enhance their digital literacy and contribute to a safer online environment. 1 credit (1 lecture hour)

#### CITA 101. Principles Computer Apps. (3 Credits)

Empowers students with a comprehensive understanding of responsible usage of SUNY Morrisville's computing resources. By addressing common issues encountered by students and highlighting potential pitfalls, the course equips them with the knowledge and tools necessary to excel in a digital learning environment. Develop adeptness in utilizing frequently employed technologies, tools, and resources, including word processing, spreadsheets, and presentation software. Emphasizing effective operation of these applications and the importance of seeking assistance, the course instills a sense of responsibility for safeguarding information and computing resources. Avoid behaviors jeopardizing security, gain insights into diverse online threats and risks, and explore strategies to protect yourself and digital assets. Prepare for the demands of the modern digital landscape. 3 credits (3 lecture hours), fall and spring semesters.

#### CITA 110. Intro Information Technology. (3 Credits)

A survey of equipment and programs used in common computer systems. Topics include internal storage, in-put/output devices, operating systems, popular applications packages. Current and future trends will be discussed in reference to networks, mainframe and microcomputers. (Note: This course may be challenged with a formal test out process. Contact your advisor or CIT Dept. for information) 3 credits (3 lecture hours), fall and spring semester

#### CITA 113. Intro to Game Design & Dev. (3 Credits)

This course addresses the theories and practices of the video game design process, with an emphasis on maximizing the aesthetic qualities of student-designed video games. Topics include game design and development processes, game concepts, design components, game worlds, character development, storytelling and narrative, creating the user experience, core mechanics, balancing, and leveling. The creation of 2D games is used to introduce and practice game design. Documentation of the creative process involved in creating/modifying 2D games is required. No traditional programming languages are involved, and no programming experience is required. 3 credits (2 lecture, 2 laboratory hours), fall semester This course satisfied the Liberal Arts and Sciences requirement and the SUNY General Education requirement for The Arts.

#### CITA 120. Computer Concepts & Op Sys. (3 Credits)

A study of the terminology and concepts associated with computer systems hardware and software. Topics include system hardware components, memory organization and management, operating systems, and troubleshooting fundamentals. Students will install, configure, test and troubleshoot system software to apply the various concepts covered in the course. Prerequisites: CITA 110 or CITA 101, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 140. Introduction to Programming. (3 Credits)

Programming in a high level language emphasizing problem-solving and object- oriented programming techniques. Topics include assignment, input/output, selection, looping, scalar and array data structures, string and numeric data and modular development. 3 credits (2 lecture hours, 2 lab hours), fall and spring semester

#### CITA 150. Data Management Techniques. (3 Credits)

Advanced object-oriented high-level language programming focusing on internal memory management techniques, programming structures, and programming style. Topics include character string processing, sorting, searching and lists. Prerequisite: CITA 140 or equivalent, or permission of the instructor 3 credits (2 lecture hours, 2 lab hours), spring semester

#### CITA 155. Intro to Mobile Web Design. (3 Credits)

This course is an in-depth examination of web design concepts, usability, and development practices. Students will apply practical approaches to web development, site implementation, and problem solving. Students will learn to apply design, usability, and technology skills and will develop a professional portfolio site demonstrating responsive web design. Prerequisite: CITA 140 (passing grade) or permission of the instructor. 3 credits (2 lecture hours, 2 lab hours)

#### CITA 190. Intro to LINUX/UNIX Systems. (3 Credits)

Lecture and hands-on instruction in the installation, configuration, and use of the Linux and UNIX operating systems. Hands-on laboratory exercises are used to help students gain experience with practical application of concepts discussed in lecture. Upon successful completion of the course, students will understand basic Linux/UNIX terms and history, installation procedures, Linux/UNIX file systems, the command interface, X Windows, managing processes, common administrative tasks, and Linux/UNIX network services and security. Prerequisite: CITA 110 or CITA 101 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 200. Data Communications Networking. (3 Credits)

A study of the terminology, hardware, and software associated with data communications and networking systems. Topics include design principles for human-computer dialogues, selection criteria for communications devices, the technology behind data transmission, techniques and message protocols for line control and error processing, networking components, and network topologies, routing and protocols. Prerequisite: CITA 120, or permission of the instructor 3 credits (2 lecture, 2 laboratory hours), fall and spring semester

#### CITA 210. Visual Languages & Devel Tools. (3 Credits)

Lecture and hands-on instruction in visual programming which is commonly defined as the visual expressions including drawings, animation, or icons that are directly manipulated by the user in an interactive way. Object oriented and event driven programming that include forms, controls, properties, and solutions. Solutions to application problems encountered in the typical business organization. Prerequisite: CITA 140 or equivalent, or permission of the instructor. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 211. Game Level Design. (3 Credits)

A study of the design and implementation of game levels. Topics include the development of strategies to approach the design of game levels and the processes and best practices for prototyping, testing and balancing game levels. Understanding and practice developing game level design will result in higher quality games being produced by students. Learning the theory and methods to effectively design and program game levels introduces and reinforces a number of different skills: following processes, creative and critical thinking, utilizing functional and aesthetic criteria to create test plans, effectively using feedback to modify designs, and writing code to implement level design. 3 credits (2 lecture hours, 2 lab hours) Prerequisite: CITA 112

#### CITA 212. Fundamentals of Game Design. (3 Credits)

The design of games, both for education as well as entertainment, is explored in detail. The course involves programming in a high-level scripting language. Topics include game concepts, design components and processes, game worlds, character development, storytelling and narrative, creating the user experience, core mechanics, game balancing, and leveling. A user-centric approach to design is emphasized. Prerequisites: CITA 140 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours) spring semester

#### CITA 214. Game Asset Creation. (3 Credits)

This course will cover the creative and technical processes in the development of audio and visual game elements as a form of artistic expression within a game environment. Students develop skills and awareness of game space and layout and obtain the fundamental theory and experience necessary to create efficient and compelling 2D and audio game assets. Prerequisite: CITA 113 3 credits (2 lecture hours, 2 lab hours) spring semester

#### CITA 216. Introduction to 3D Modeling. (3 Credits)

A study of 3D modeling for game design. Topics include 3D basics such as creating, moving, rotating, and scaling objects. Other basics such as lighting, sculpting, physics and rendering are also covered. 3D characters will be designed and modeled, rigged and animated. Prerequisites: CITA 214 3 credits (2 lecture hours, 2 lab hours), spring semester

#### CITA 220. Systems Analysis. (3 Credits)

This course explores the philosophy, objectives and organization of the systems analysis activity. Topics include: the justification of the need for information systems to support management decisions; the impact of information systems on individuals and organizations; life cycle and prototyping methodologies; tools and techniques of systems analysis. Emphasis is on transaction processing systems. Prerequisite: CITA 140, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 225. Introduction to Data Structure. (3 Credits)

A study of the fundamental data structures for representing information in computer memory. Topics include data structure concepts; abstract data types and their implementations; arrays; stacks; queues; simple linked lists; trees; recursion and backtracking; and sorting and searching algorithms. Achieving an understanding of fundamental data structures and the tradeoffs between different implementations of these abstractions will result in higher quality programs, including games, being produced by students. Prerequisite: CITA 210 and MATH 149 or permission of the instructor 3 credits (2 lecture hours, 2 lab hours)

#### CITA 230. Network Technology. (3 Credits)

Survey and evaluation of network media, access methods, and topologies. Design, configuration, operation and maintenance questions are explored. Topics will include end user perspective, network operating systems, cabling, hardware protocols, software, design, and administration. Prerequisite: CITA 200, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 245. Intro to Database Concepts. (3 Credits)

A study of the basic terminology and concepts associated with databases and database management systems. Topics include historical development of databases, data organization and structure, relational databases, and basic structured query language (SQL). Students will use a DBMS to design and create a database and write basic queries to access the data. Prerequisite: CITA 140 (passing grade) or permission of the instructor 3 credits (2 lecture hours, 2 lab hours)

#### CITA 255. App Development. (3 Credits)

Cross-platform mobile application (app) development focusing on User Interface (UI) design, layouts, and controls. Learning how to apply these fundamental developing concepts will result in higher quality applications being produced by students. Topics include navigation patterns, managing states, arrays, strings, and data binding. Prerequisite: CITA 140 (with a grade of C or better) or permission of the instructor. 3 credits (2 lecture hours, 2 lab hours), fall semester.

#### CITA 260. Photography & Digital Imaging. (3 Credits)

An introduction to the principles of photography. This course will include the use of the camera, processing and printing. Computer scanning and the manipulation of photographic images with software editing tools will be covered. Design and composition will be stressed. Students will be expected to have access to a good camera, and they must purchase additional materials. Prerequisite: CITA 110 or CITA 101 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 270. Fundamentals Network Security. (3 Credits)

Survey of fundamental knowledge needed to analyze security risks to systems and implement a workable security policy that protects information assets from potential intrusion, damage, or theft. Students learn to deploy effective countermeasures to thwart potential attacks in a hands-on laboratory environment. Prerequisite: CITA 200 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 275. Computer Crime Digital Forensi. (3 Credits)

A study of computer crime and digital forensics providing an introduction to foundational terminology and concepts. Areas of study include current trends in computer crime, methodologies for computer crime investigation, techniques for maintaining legal chain-of-custody and documentation, and application of basic digital forensics tools. Students may not receive credit for both CITA 270 and CITA 275. prerequisites: CITA 101 or CITA 110, or permission of instructor 3 credits (3 lecture hours), fall and spring semesters

#### CITA 280. Tools/Tech for Appl Devel.. (3 Credits)

This course includes lecture and hands-on instruction in application and database development. Topics include data modeling; database design; the use of database management software, screen and report generators; query languages; 4GLs. Current topics in application development are also discussed. Prerequisite: CITA 220, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 300. Computer System Support Mainte. (3 Credits)

This is a project-oriented course that focuses on the support and maintenance of PCs. Students will learn how plan, organize, implement and operate a support system and apply this knowledge and skill through actual participation in a help desk environment. Students will also learn how to upgrade, troubleshoot, and maintain PC hardware and software, and how to build and repair PCs in a hands-on environment. Prerequisite: CITA 120, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 305. Computer Crime Digital Forensi. (3 Credits)

A study of computer crime and digital forensics providing an introduction to foundational terminology and concepts. Areas of study include current trends in computer crime, methodologies for computer crime investigation, and techniques for maintaining legal chain-of-custody and documentation, and application of basic digital forensics tools. Prerequisites: CITA 101 or CITA 110, or permission of instructor 3 credits (3 lecture hours), fall and spring semesters

#### CITA 312. Intermediate Game Design. (3 Credits)

The design of intermediate games and simulations, both for education as well as entertainment, will be explored in detail. Involves programming in a high-level scripting language and algorithmic development. Topics include 3D game/ simulation concepts, design components and processes, 3D game/ simulation worlds, 3D character/ vehicle/ terrain development, creating the user experience, core mechanics, and multitier client/ server support. A user- centric approach to design will be emphasized.] Prerequisite: CITA 212 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 314. Extended Reality Game Program. (3 Credits)

A study of the programming of real and virtual environments for games generated by computer graphics and wearables. Programming Virtual Reality (VR) as well as Augmented Reality (AR) games involves the study of VR and AR design principles, locomotion and comfort, teleportation, implementing and utilizing physics, and working with scriptable objects and input events. Learning the theory and methods to effectively design and program Extended Reality (XR) games introduces and reinforces a number of different skills: following processes, creative and critical thinking, utilizing functional and aesthetic criteria to create better XR games, effectively using feedback to modify designs, and writing code to implement XR games. Prerequisite: CITA 312 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 320. Network Administration. (3 Credits)

Students will use a variety of network management tools to manage, monitor, support and troubleshoot network operations. Topics will include performance issues, end-user accounts, data security, disaster recovery, supporting applications and documentation. Prerequisite: CITA 230 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 325. Network Defense & Countermeas.. (3 Credits)

Network Defense and Countermeasures provides the student with a solid foundation in network security fundamentals; while with the primary emphasis is on intrusion detection, the course also covers such essential practices as developing a security policy and then implementing that policy by performing Network Address Translation, packet filtering, and installing proxy servers, firewalls, and Virtual Private Networks. Students will learn to design, configure and deploy an IDS and analyze current network security risks. Prerequisite: CITA 270 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 340. Data Base Concepts. (3 Credits)

The course is a study of the theory, terminology, languages, and software associated with data base systems. Topics include data organization and structure, relational data-bases, data access methods, and database languages. Students will plan, analyze, design, develop, and test database systems. Current topics in database design and development are also discussed. Prerequisites: CITA 210, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 345. Advanced Database Concepts. (3 Credits)

This course builds on the introductory module in databases, Students will apply database concepts including advanced data modeling, transaction management, Big Data, and NoSQL, data warehousing, database connectivity and web technologies, and database administration and security. Prerequisite: CITA 245 (passing grade) or permission of the instructor. 3 credits (2 lecture hours, 2 lab hours).

#### CITA 350. Object-Oriented Systems. (3 Credits)

This is a project-oriented course that requires the installation and use of software found in business and industry. Students will gain experience implementing and deploying various industry-wide software products, including, but not limited to, operating systems, configuration management tools, and cloud solutions utilizing a variety of virtualization techniques. Prerequisite: CITA 210 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 355. Adv App and Mobile Web Develop. (3 Credits)

Advanced cross-platform mobile application (app) development focusing on User Interface (UI) design, layouts and controls. Topics include navigation patterns, managing states, arrays, strings, and data binding. This course will also cover client-side scripting, syntax and debugging, web form processing and data validation, using common programming structures and dynamic content. Prerequisite: CITA 255 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 360. Oper Systems & Software Deploy. (3 Credits)

This is a project-oriented course that requires the installation and use of software found in business and industry. Students will gain experience implementing and deploying various industry-wide software products, including, but not limited to, operating systems, configuration management tools, and cloud solutions utilizing a variety of virtualization techniques. Prerequisite: CITA 200, CITA 190 recommended, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 370. Network Design Concepts. (3 Credits)

This is a laboratory-oriented course in which students will design and implement network systems utilizing the various topologies, media, protocols and network hardware, such as bridges, switches, hubs, and routers. Prerequisite: CITA 230 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 375. Internet & Intranet Firewalls. (3 Credits)

Firewalls are the primary tools used to prevent unauthorized access to network resources. This course focuses on protecting the network using various firewall designs. Students will gain extensive hands-on experience installing and configuring firewalls. Students will learn how to allow access to key services while maintaining information security. Prerequisite: CITA 325 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### CITA 385. User Interface Design. (3 Credits)

Design, evaluation, and prototyping of user interfaces for a variety of computing devices will be covered. This course focuses on usercentered design for interfaces that promote usability, interactivity, and accessibility. A range of interface types will be considered to include those for desktop applications, Web applications, mobile devices, turnkey systems, and others as technology continues to advance. Design and prototyping projects will be included. Evaluation techniques will be applied to existing interfaces and those created by students as part of this course. Prerequisites: CITA 210, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 386. Game Interface Design. (3 Credits)

This course covers the creative and technical processes of designing interfaces specifically for electronic games. Design, evaluation, and prototyping of game interfaces for a variety of digital devices will be covered. This course focuses on designing interfaces that promote basic elements of interface design including aesthetics, functionality, usability, and accessibility. A range of game interface styles will be considered such as manual, visual, active, and passive. Evaluation techniques will be applied to existing game interfaces and those created by students as part of this course. Prerequisites: CITA 212 & CITA 210 or permission of the instructor. 3 credits (2 lecture hours, 2 lab hours), fall semester

#### CITA 395. Internship Orientation Seminar. (1 Credit)

This course will be taken in the semester prior to the student's internship experience. Topics include the role of the internship in the student's professional development, formulating personal and professional goals, the current employment outlook in the Information Technology field, employer expectations of an intern, formulating a job search strategy, the role of networking through the use of personal contacts and referrals, interviewing skills, the work environment in large, medium and small organizations. The documents and methods that will be used to evaluate the student during the internship will be clearly defined. Prerequisite: At least junior status, or permission of the instructor 1 credit (1 lecture hour), 15 weeks, fall and spring semester

#### CITA 405. Project Management. (3 Credits)

This course provides an introduction to project management. Students learn project management concepts and how to use appropriate tools and software to manage various types of projects from start to finish. Students are challenged with the wide range of issues professional project managers are required to master. planning, prioritizing, scheduling, budgeting, negotiation, organizing, controlling cost, and handling change. Project management applies to a wide spectrum of real-world projects both within and outside the technical sciences. This course emphasizes learning through lecture, homework, student participation and presentations. Class projects give students handson experience applying project management skills and use of software tools. Prerequisites: CITA 110 or CITA 101 and BSAD 300 or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours), fall and spring semester

#### CITA 410. Multi-Media Computing. (3 Credits)

This course is a study of the simultaneous control of media elements including graphic, hypertext, digital audio, CD audio, MIDI, digital video and animation. Students will learn and apply the process of creating participant interactive or self-running computer presentations. Prerequisite: CITA 380 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 412. Advanced Game Design & Applica. (0 or 3 Credits)

An in-depth study of complex, object-oriented, 2D and 3D game development including, but not limited to: animation, character modeling, textures, terrains, collision detection, particle effects, lighting, audio, and net-working. Students work in teams to produce a functional digital game suitable for distribution. Prerequisite: CITA 312 or permission of the instructor 3 credits (2 lecture hours, 2 lab hours), spring semester

#### CITA 417. Game Engine Architecture. (3 Credits)

This course provides students with an in-depth exploration of game engine architecture. Students will learn state-of-the-art software architecture principles in the context of game engine design and investigate the subsystems typically found in an actual production game engine. Students will participate in individual hands-on lab exercises and also work in teams to design and build a functional game engine by designing and implementing engine subsystems. Understanding both the theory underlying the various subsystems that comprise a game engine and also the data structures and algorithms that are used to implement them will result in higher quality games being produced by students. Prerequisite: CITA 350 or permission of the instructor 3 credits (2 lecture hours, 2 lab hours), spring semester

#### CITA 425. Operating System Security. (3 Credits)

The course will provide in-depth explanations of operating system security features as well as systematic configuration guides for proper operating system configuration. This course also provides the knowledge and skills students need to maintain the integrity, authenticity, availability and privacy of data. Through extensive hands-on lab exercises, students will gain experience establishing user, file system, and network security for enterprise computing environments. Students will learn to use tools and utilities to assess vulnerabilities, detect configurations that threaten security and provide effective access controls. Prerequisites: CITA 325 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 430. Comp Integration & Interop. (3 Credits)

The study of system integration and the construction of system components that are designed to provide capabilities for cooperation in the accomplishment of given tasks. Topics covered include communication, synchronization, and representation of data. Methods of system integration and design for interoperability will be covered. Prerequisite: CITA 370 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 440. Design Managing Org Training. (3 Credits)

In this course students will apply theories of adult learning and instructional development to the design, delivery, and evaluation of training for organizational and end-user information systems. Topics include: needs assessment, instructional design and strategy, live and mediated instruction, implementation management, evaluation and follow-up methods, and evaluation of training strategies. Prerequisite: BSAD 300, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 450. Applied Database Manager. (3 Credits)

A study of object-oriented system applications including, but not limited to relational database concepts and methodology, SQL, ODBC, Access programming with VBA, client/server concepts, and SQL server. One or more graphical user interface, object-oriented languages will be used. Prerequisite: CITA 340 and CITA 350, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 455. Cross-Platf App Mobile Web Dev. (3 Credits)

This course combines app, mobile web, and database programming to develop both a cross-platform mobile app and a responsive web app using the Agile software development process. Working in teams, the semester long projects will cover the conceptualization, analysis, design, and production of working, functional prototypes of crossplatform and mobile web apps. A Model-View-Controller (MVC) framework will be utilized and will include such topics as database integration, authentication, administrative tools, content management, and other features common to app and mobile web development. Prerequisites: CITA 345 and CITA 355, or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### CITA 460. Organizational & End User IS. (3 Credits)

This course is a study of the management of organizational information systems. Relevant information technology and business concepts will be used to explore the role of information systems within organizations and the relationship of information systems to the external organizational environment. Emphasis will be on organizational results, attaining efficiency and effectiveness, and achieving competitive advantage in the global economy. In-formation systems management case studies will be utilized. Prerequisite: BSAD 300, senior status, or permission of the instructor 3 credits (3 lecture hours), fall semester

#### CITA 480. Internship Information Tech. (12 Credits)

Supervised fieldwork in a selected business, industry, government or educational setting. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor of in-formation technology in an organization. Each intern will be supervised by a member of the CIT Department faculty in accordance with CIT Internship Guidelines. Written and oral reports of work experience activities will be required. Prerequisite: Enrolled in CIT Bachelor Degree Program, CITA 395 and senior status, or permission of the internship committee. 12 credits, fall, spring, or summer semester

# **Computer Science (COSC)**

#### COSC 112. Elementary Data Structures. (4 Credits)

Continuation of COSC 111 with emphasis on abstract data types and their implementation. Includes linked lists, stacks, queues, and trees, design and testing principles and software interfaces. Prerequisite: COSC 111 or equivalent with a grade of 'C' or better 4 credits (4 lecture hours), spring semester

#### COSC 201. Programming With C. (3 Credits)

General introduction to fundamentals of programming with the C programming language in a UNIX environment. Topics include: syntax and semantics, identifiers, data types, functions, arrays, strings, pointers, structures, unions, macros, and applied data structures. Emphasis is on systems programming and the use of standard libraries. Prerequisite: COSC or CIS major with programming experience or permission of instructor 3 credits (3 lecture hours), spring semester

#### COSC 211. Computer Graphics Techniques. (3 Credits)

General introduction to the elements and techniques of creating programs that produce graphic images or analyze graphic content. Covers the basic shapes (points, lines, poly-objects, text, and circles) and transformations, and then advances to user interaction, animation, three-dimensional images, fractals and scene analysis. Prerequisite: Knowledge of Java or similar language and permission of instructor 3 credits (3 lecture hours), fall semester

#### COSC 221. Assembly Language Programming. (3 Credits)

Basic concepts of computer systems, computer architecture, and programming in an assembly language. Representation and storage of information; components of the hardware; CPU architecture; instruction sets; addressing modes; using the debugger, linking modules, and macros; I/O ports and interrupts; DOS and BIOS services. Prerequisites: COSC 111 or equivalent, and MATH 145, or permission of instructor 3 credits (3 lecture hours), fall semester

#### COSC 231. Advanced Programming Technique. (3 Credits)

Utilization and expansion of analysis and programming techniques developed in previous courses. This course covers various topics of current interest such as neural networks, genetic algorithms, artificial intelligence, finite state machines, and non-procedural languages. More sophisticated problem-solving techniques are utilized to address typical computing situations. Prerequisite: COSC 112 with a grade of C or better, or permission of instructor 3 credits (3 lecture hours), spring semester

### **Criminal Justice (CJUS)**

#### CJUS 100. Law Enforcement Use Force Sim. (1 Credit)

Provide an authentic applied learning experience for students interested in how enforcement officers, pursuant to their official duties, are trained to use lethal and nonlethal force necessary to overcome resistance to arrest, self-defense, and in the defense of others. Based on a professional-grade use of force simulator, students will experience reality-based simulations that may (or may not) require the application of force and to what degree. Additional topics include theory, function, and capabilities of the simulator, laws governing use of force (including the consequences for its inappropriate use), discussion of topical events, rules of firearms safety, and proper firearms handling. 1 credit, 5 weeks (3 lecture hours), fall or spring semester.

#### CJUS 101. Intro Criminal Justice Systems. (3 Credits)

A survey course which examines the linkages which exist between and among the police, courts, prosecutors, corrections, probation and parole. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement.

#### CJUS 201. Corrections. (3 Credits)

An introduction to community, county, state and federal correction procedures and administration. This course examines punishment, rehabilitation and incarceration. Legal issues and the complexities of prison management are also explored. Prerequisite: CJUS 101 3 credits (3 lecture hours) spring semester

#### CJUS 202. Policing. (3 Credits)

This course will examine the role of policing in a democratic society. The roles, responsibilities and behaviors of police will be studied. This course also gives attention to ethics and appropriate use of discretion. Prerequisite: CJUS 101 Introduction to Criminal Justice 3 credits (3 lecture hours) fall or spring semester

#### CJUS 220. Criminal Investigation I. (3 Credits)

An introduction to the science of criminal investigation. Students learn information/evidence gathering, surveillance, interview, interrogation, use of informants and instrumentation techniques used in investigations of arson, narcotics, sex offenses and larceny crimes. Prerequisite: CJUS 101 and CJUS 202 or permission of the instructor 3 credits (3 lecture hours); fall or spring semester

#### CJUS 221. Criminal Investigation II. (3 Credits)

A continuation of the science of criminal investigation. This course addresses the information gathering, interrogation and instrumentation used in investigations of homicide, assault and explosions. Rules of evidence, fingerprints, castings, firearms, trace minerals and criminal profiles are emphasized. Prerequisite: CJUS 220 or permission of instructor 3 credits (3 lecture hours) fall or spring semester

#### CJUS 230. Basics of Penal Law. (3 Credits)

An examination of the penal code and legislatively imposed legal parameters on law enforcement and citizens. Students will learn how to read and evaluate laws, to differentiate between numerous degrees of similar offenses, and apply the laws appropriately. Prerequisite: "C' or better in COMP 101 Prerequisite or Co-requisite: CJUS 101 3 credits (3 lecture hours) fall semester

#### CJUS 231. Criminal Procedure Law. (3 Credits)

An examination of Criminal Procedure Law and its impact on law enforcement. Topics will include arrests, warrants, and rules of evidence. Court and Grand Jury procedures will be addressed. Prerequisite: "C' or better in COMP 101 Prerequisite or Co-requisite: CJUS 101 3 credits (3 lecture hours) spring semester

#### CJUS 235. Juvenile Delinquency. (3 Credits)

Social pressures on children in our society that push them toward deviant behavior are focused on in this course. Power structure, socioeconomic factors, urbanization, marginalized or underrepresented groups, and the effects of technological change concurrent with urban growth are considered. Family, peer group, gang and societal subcultures are examined as influences in development of the delinquent. Theories of delinquency and methods of prevention, treatment, and corrections are appraised. Prerequisite: PSYC 101 or SOCI 101 3 credits (3 lecture hours) spring semester This course satisfies the Liberal Arts and Sciences requirement.

#### CJUS 301. Crime Scene Investigation & Mgt. (3 Credits)

This course addresses the scientific and legal components of crime scene management and investigation. Methods of scene control, evidence collection, documentation, photography, and investigation are explored. Laws and court decisions and admissibility of evidence are emphasized. Prerequisite: CJUS 221 3 credits (2 lecture hours, 2 lab hours) fall or spring semester

#### CJUS 310. Serial Murder Criminal Justice. (3 Credits)

This course will examine the unique phenomenon of serial murder. Distinct from other forms of multiple murders, various types of serial murder will be studied along with definitions and ramifications and difficulties of apprehension. Other topics include the serial killer myths, race and gender, the impact of the media, profiles and possible criminological explanations. Students should be aware that due to the nature of the topic, graphic sexual and violent descriptions and images may be presented as part of this course. Prerequisite: CJUS 202 Policing 3 credits (3 lecture hours), spring semester

#### CJUS 311. Interviewing Techniques in CJ. (3 Credits)

Interviewing Techniques in Criminal Justice addresses interviewing techniques of suspects and witnesses. Overcoming resistance, interviewing people under adverse or stressful circumstances and the detection of lies will be emphasized. Prerequisite: CJUS 221 3 credits (3 lecture hours) spring semester

#### CJUS 312. Victimization. (3 Credits)

This course examines the plight of victims and their relationships with the criminal justice officials and agencies, policymakers, victim right advocates, the news media, offenders, security businesses, and service providers. Practical responses to victimization will be discussed. Prerequisite: CJUS 202 Policing or permission of the instructor. 3 credits (3 lecture hours), fall semester

#### CJUS 313. Sexual Offenses. (1 Credit)

This course examines the roles of the criminal justice, treatment, and victim advocacy communities in the management of sexual offenses. The practical application of emerging research ad best practices will be appraised. Prerequisite: CJUS 202 1 credit (1 lecture hour)

#### CJUS 314. Diversity within CJ Systems. (1 Credit)

This course will examine the issues surrounding diversity within the criminal justice employment and its relations within the community and clientele, encompassing racism, sexism, ageism, and bias against the disabled. The role of media and special interest groups will be evaluated. The practical application of emerging research and best practices will be appraised. Prerequisite: COMP 101 and CJUS 101 or permission of the instructor 1 credit (1 lecture hour), spring semester

#### CJUS 315. White Collar Crime. (3 Credits)

White Collar Crime addresses the illegal, unethical or deviant activity of institutions or individuals conventionally considered respectable or of high status. Students will explore the policing, prosecution and impact of white collar crime. Prerequisite: CJUS 202 3 credits (3 lecture hours) fall or spring semester

#### CJUS 316. Animal Abuse Investigations. (1 Credit)

This course explores the complex physical and emotional components of animal abuse. Students will learn the basics of animal abuse investigations and the limitations of law. Pre-requisite: CJUS 101 Introduction to Criminal Justice or permission of the instructor 1 credit (1 lecture hour)

#### CJUS 401. Emergency Planning & Response. (3 Credits)

Emergency and security staff strategize and execute plans to prevent loss of persons and property for communities and businesses. This course will focus on planning considerations and technology, including the use of the Internet, GIS and GPS tools, direct and remote sensing, and warning systems. Prerequisite: CJUS 221 3 credits (3 lecture hours) fall or spring semester

#### CJUS 402. Terrorism & Law Enforcement. (3 Credits)

This course addresses terrorism and its implications on law enforcement and domestic tranquility. The class will examine the terrorist profile and motivations. The impact of law enforcement's response on civil rights will be emphasized. Prerequisite: CJUS 221 and junior status 3 credits (3 lecture hours) fall semester

#### CJUS 403. Private Security. (3 Credits)

This course will introduce students to the US Private Security Industry. Focusing on practical, real-world concepts, this course will address retail, business, employment, personal, premises, and other forms of security with professionalism and ethics. Prerequisite: CJUS 301 Crime Scene Investigation and Management. 3 credits (3 lecture hours), fall semester

#### CJUS 404. Use of Force Continuums. (1 Credit)

Appropriate application of use of force to gain lawful compliance and personal protection impacts law enforcement and citizens. This course examines use of force continuums, emotional and physical impacts, the courts, and the public response. Prerequisite: CJUS 202 1 credit (1 lecture hour), spring semester

#### CJUS 405. Crime Scene Photography. (1 Credit)

Apply crime scene photography to document evidence. Students will use photography methodology and compare and review specialized skills of crime scene photography with an understanding of cameras, lighting, filters, and crime scene priorities. Video recording will also be examined. Prerequisite: CJUS 220 Criminal Investigation I. 1 credit, 5 weeks (3 lecture hours), fall or spring semester.

#### CJUS 412. Arson & Bomb Investigations. (3 Credits)

This course addresses arson and bomb investigations including the science of combustion of liquid, gas, and solid fuels in fire and bombs. Specific scenes, such as vehicles, structures, and the wilderness, will be examined as a means to study the behavior of fires and the courses of investigation. Prerequisite: CJUS 221 3 credits (3 lecture hours) spring semester;

#### CJUS 414. Staff Misconduct/Work Violence. (3 Credits)

This course provides the theoretical and practical tools to investigate staff misconduct and workplace violence. Prerequisite: CJUS 221 3 credits (3 lecture hours) fall semester

#### CJUS 449. Internship Preparation. (1 Credit)

This course prepares the student for a full time internship in the criminal justice field. Also reviewed are career options within the discipline including law enforcement and private security. Job skills will be discussed. Prerequisite: Successful completion of at least 90 credits of criminal justice degree requirements. Usually taken in the semester immediately preceding internship. 1 credit (3 lecture hours/5 weeks) fall or spring semester

#### CJUS 450. Criminal Justice Internship. (15 Credits)

The full-time internship is designed to immerse students into the Criminal Justice profession through an assignment at a pre-approved site. Prerequisite: Grade of "C" or better in CJUS 449 and successful completion of 107 credits of criminal justice degree requirements. 15 credits, fall or spring semester

#### CJUS 498. Special Topics in CJUS. (1 Credit)

This course examines current and special topics impacting the field of criminal justice. Offerings will vary each semester to address multiple topics such as Restorative Justice, Organized Crime, Technology in Law Enforcement and other current issues. Prerequisite: CJUS 202 Policing or permission of the instructor. 1 credit (1 lecture hour, online, hybrid or lab hours) fall or spring semester

#### CJUS 499. Special Topics: Crim. Justice. (3 Credits)

This course examines current and special topics impacting the field of criminal justice. Offerings will vary each semester to address multiple topics such as Restorative Justice, Organized Crime, Technology in Law Enforcement and other current issues. Prerequisite: CJUS 202 Policing or permission of the instructor. 3 credits (3 lecture, online, hybrid or lab hours)

# **Culinary Arts (CUL)**

#### CUL 101. Culinary Arts I. (4 Credits)

An introduction to the principles, skills and techniques necessary for basic food preparation. Areas of culinary study will include the understanding and performing of a wide variety of cooking techniques. Broiling, Roasting, Sauteing, Grilling, Braising, Steaming and Stir Frying will be studied and learned to prepare basic and advanced menu items. The proper use of commercial kitchen equipment and recipes, basic sanitation and safety techniques in the kitchen will be practiced. Culinary terminology and product identification will be a focus. Majors Only 4 Credits (1 lecture hour, 6 lab hours), fall semester/spring semester

#### CUL 111. Professional Baking. (3 Credits)

An introductory course in the principles of baking, with emphasis on bakeshop ingredients, their function, measurement, and scaling. Scratch baked items to include quick breads and muffins, yeast breads, cookies, Danish pastries, cakes, pies, custards, creams and sauces. Majors Only 3 Credits (1 lecture, 4 lab hours), fall/spring semester

#### CUL 201. Advanced Culinary Arts. (4 Credits)

A continuation on the principles, skills and techniques learned in Culinary Arts I. Areas of culinary study will include intense concentration on the understanding and performing of a wide variety of cooking techniques. Students will prepare advanced menu items while utilizing scratch cooking for all recipes whenever possible. Students will be able to convert recipes to provide purchasing lists and then fabricate portions from primal and sub primal cuts of meat and then produce those food items. Students will also continue to use basic sanitation and safety techniques in the kitchen. Prerequisite: CUL 101 Minimum grade of C 4 Credits (1 Lecture Hour, 6 Laboratory Hours), fall semester

#### CUL 211. Culinary Restaurant. (6 Credits)

This course is designed to give students a realistic view of a functioning restaurant operation. Students receive hands on experience in how to effectively manage, operate, and maintain a fine dining restaurant operation at the Copper Turret Restaurant in the village of Morrisville. Working alongside professional chefs, servers and bartenders, students will plan, prepare and serve a fine dining menu in an upscale facility. Students will be tasked with developing menu items from a variety of cuisines. Students will learn how to construct menus, pair wines with the menus, and present food products properly for service. Students will rotate through all positions in the restaurant to gain practical experience. Emphasis is placed on menu authenticity, proper management techniques as well as fiscal responsibility. Prerequisites: CUL 101, CUL 111, and FSAD 102 6 Credits Spring (1 lecture hour, 12 laboratory hours), spring semester

#### CUL 301. Advanced Culinary Skills. (4 Credits)

This course focuses on refining the students culinary skills learned in previous classes. Students will master skills in cold platter presentation, glazing meat and fish, carving, and garnishing. Students will refine their skills in fabrication of beef, poultry, veal, lamb, game meats, lobster, round fish and flat fish. Menus for various types of dinners will be created. Vegetable knife cuts will be a focus as students demonstrate mastery of the various cuts required to meet industry standards. Basic baking and pastry skills will be practiced and students will demonstrate mastery of producing a short dough and pastry cream. The course will prepare the student for the exciting and challenging aspect of the culinary competition and teach students how to successfully prepare for various competitions. Students build on previously learned skills and will train to meet the demands of culinary competition. The student will work on developing a mental thought process and understanding of the discipline needed to be properly prepared for culinary competitions. Each student will learn how to craft a professional entry packet for hot food competitions following American Culinary Federation requirements. Students will complete a cold food entry for an in-house competition. Opportunities may exist for students to take part in official American Culinary Federation competitions. Prerequisites: CUL 111 and CUL 201 or permission of instructor. 4 Credit Hours (1 lecture hour, 6 lab hours) fall semester

# **Dairy Animal Science (DANS)**

#### DANS 100. Dairy Nutrition. (3 Credits)

Functions and properties of nutrients, comparative digestive anatomy of non-ruminants and ruminants, the effects of proper nutrition on health and reproduction. Labs will deal with the composition and nutritive value of feeds and ration balancing for different classes of livestock. Emphasis on dairy cattle. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### DANS 110. Breeding Dairy Cattle. (3 Credits)

Animal breeding including animal reproduction and basic genetics. Male and female reproductive anatomy and physiology, hormonal control of the reproductive system, the estrous cycle, fertilization, reproductive failures, diseases and management practices associated with reproduction and artificial insemination. Mendelian genetics utilizing simple dominance, sex influenced inheritance and systems of mating. 3 credits (2 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.
#### DANS 115. Dairy Cattle Artificial Insem. (1 Credit)

Provides students with skills associated with the modern concept of artificial insemination. Topics include history, economic importance, equipment, techniques, estrous cycle of the cow, timing of insemination, and record keeping. 1 credit (1 lecture hour), spring semester

#### DANS 120. Anatomy & Physiology-Dairy Cow. (3 Credits)

A systematic introduction to the anatomy and physiology of the dairy animal, emphasizing structure and function. The practical aspects that relate to type, production, health, management and general knowledge are stressed. The laboratory follows the lecture course with a more indepth application of lecture material in regards to functional anatomy. Lab includes dissection of fresh tissues. 3 credits (2 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### DANS 140. Dairy Cattle Judging. (1 Credit)

Judging, selecting and evaluating dairy cattle according to breed type qualifications to develop a well-balanced breeding program for milk production and type. 1 credit (2 laboratory hours), spring semester

#### DANS 150. Dairy Farm Practicum I. (2 Credits)

This course will introduce students to the daily tasks required to run a dairy operation. Students will learn the proper techniques required of each of the tasks, and will be integrated into the schedule throughout the semester. Students will be expected to complete a weekly milking shift, and will either be assigned to assist with calf feeding and care, OR to help with maternity and fresh cow monitoring. Throughout the semester students will learn how to: properly milk dairy cows, identify sick animals, administer injections, feed calves, safely operate equipment, and clean and bed animals. 2 credits (1 hour lecture, plus weekly barn duty chores), fall semester

#### DANS 151. Dairy Farm Practicum II. (2 Credits)

This course is a continuation of Dairy Practicum I, and will provide additional opportunities for students to perfect their dairy management skills. In addition to reiterating proper techniques required of their daily tasks, students will be integrated into the milking and feeding schedule throughout the semester. Students will be expected to complete a weekly milking shift, and will either be assigned to assist with calf feeding and care, OR to help with maternity and fresh cow monitoring, depending on which task they were assigned to the previous semester. Additionally, students will be trained how to safely operate farm machinery to clean pens and push up feed throughout the dairy operation. Students are expected to complete the following throughout the semester: properly milk dairy cows, identify sick animals, administer medications, feed calves, safely operate equipment, and clean and bed animals. Prerequisite: DANS 150 with a C or better, or permission of the instructor 2 credits (1 hour lecture, plus weekly barn duty chores), spring semester

#### DANS 160. Introduction to Dairy Science. (3 Credits)

An introductory course to the dairy industry with a focus on its evolution and the scope of New York's, United States' and the world's industry. It will include discussion of farm types, production techniques, breeds of cattle, cattle behavior and selection, economics and trends. Dairy products will be studied, as well as consumer trends, milk quality and processing, a section on farm organization, cooperative careers, farm management structure and the future of the industry will be included. The lab will supplement the lecture and will include animal behavior, marketing, performing milk quality tests, and field trips. 3 credits, (2 lecture hours, 2 laboratory hours), fall semester

#### DANS 200. Nutrition Mnagmnt-Dairy Cattle. (2 Credits)

Complete nutritional program assessment emphasizing analysis of crop production, forage analysis, ration balancing, pasture management, feeding strategies and feeding systems for optimum production and profit on a dairy farm. Computer applications, on-farm visits, and introduction to advanced technology will be included. Prerequisite: DANS 100 2 credits (1 lecture hour, 3 laboratory hours), spring semester

#### DANS 210. Dairy Health. (3 Credits)

Physiology, anatomy and health of the dairy cow. Emphasis on hygiene, disease prevention, herd health programs, and routine disease and injury treatment. Prerequisite or Co-requisite: DANS 150 or 151 3 credits (3 lecture hours), fall semester

#### DANS 220. Dairy Herd Management. (3 Credits)

The focus is on the dairy industry as a business enterprise, its history, future, productivity trends, milk production and management strategies to be competitive and profitable. Discussion on the application of scientific principles associated with progressive dairy cattle management including breeding systems, feeding systems, herd health practices, dairy herd replacements and heifer programs. Lab will include computer applications on the farm, de-horning, hoof trimming, herd health monitoring, dairy records interpretation and analysis, and assessing housing and cow comfort. Prerequisite or Co-requisite: DANS 150 or 151 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### DANS 225. Dairy Production & Management. (3 Credits)

This course is designed to study bovine mammary system, anatomy and physiology, milk secretion and ejection, milking machines, mastitis and prevention to attain high efficiency milk production. Herd record evaluation and use of Dairy management software will be used for production analysis. Students will work in teams and become assistant herd managers. The course will also include topics on housing systems and cost effective housing. Guest speakers, professional conferences and filed trips will be part of the course. Prerequisite or Co-requisite: DANS 150, DANS 151 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### DANS 235. Dairy Production Seminar. (1 Credit)

A course in seminar format where students, with the help of faculty and guest speakers, complete a study of dairy production literature and applications on topics in the dairy industry. The course is intended for students to gain technical and production knowledge of contemporary topics in the dairy industry by reinforcing course work with real-life applications. Prerequisites: DANS 100, DANS 115, DANS 210, DANS 220 1 credit (1 lecture hour), spring semester

#### DANS 240. Dairy Farm Data Management. (1 Credit)

Data management on a dairy farm is critical for the success of the operation. This course will familiarize students with the dairy management software Dairy Comp 305, the software used on the majority of dairy operations in the U.S. Students will learn how to enter data, generate lists and reports, and monitor performance measure on dairy operations using this software. Students will also be able to extract files from Dairy Comp 305 into Microsoft Excel and generate spreadsheets, charts, and graphs with the data. In addition, students will examine farm performance factors and compare them to benchmarks within the dairy industry. 1 credit (1 lecture hour), spring semester

#### DANS 245. Advanced Dairy Cattle Judging. (2 Credits)

This course is designed for students with a dairy judging background who are interested in judging dairy cattle in a competitive setting. Students will participate in bi-weekly practice sessions where they will use sound judgement to place classes of cattle based on dairy strength, udder conformation, correctness, and frame. Students will be trained to back up their placings by presenting oral reasons, in preparation to present their reasons at national dairy judging competitions. Prerequisite: C or better in DANS 140, or permission of the instructor. 2 credits (4 hours per week, lab), fall semester

#### DANS 250. Dairy Management Perspectives. (1 Credit)

Principles and procedures involved in the management of a dairy business. Topics include setting personal and business goals; business planning and development; business analysis and capital investment; cash flow planning; economics and management dealings with facility planning; feeding efficiencies; environmental and community concerns; and leadership roles in tomorrow's dairy industry. 1 credit (1 lecture hour), spring semester

#### DANS 255. Dairy Management Fellowship. (2 Credits)

The program is for students with a serious interested in farm management. Objectives are to gain a better under-standing of the integration and application of dairy farm management with respect to principles and programs with respect to progressive dairying and related industries. Topics include the trends, challenges, and positioning of dairy managers in businesses for competitiveness and profitability. Topics will integrate technical and management aspects of a farm business including establishing personal and business goals, business and planning development, business capital investment analysis, cash flow planning, and feeding efficiencies. Prerequisites: At least two of the following: DANS 100, DANS 115, DANS 210, DANS 220, AGBS 240 2 credit hours (2 lecture hours), spring semester

#### DANS 260. SHARP Manager. (2 Credits)

The program is designated for students who have a sincere interest in dairy replacement management and applied research and demonstration. Objectives are to gain further understanding of the integration and application of technical principles in a management setting involving the dairy replacement program at SUNY Morrisville. Prerequisites: DANS 100, DANS 115, DANS 210; DANS 220, and AGBS 240 2 credits (limited to seniors), spring or fall semester

#### DANS 300. Internship In Dairy Husbandry. (4 Credits)

This internship involves students working in an approved job in the dairy industry. A journal, written report, employer and faculty evaluation are required upon completion of the internship. May be taken 2 times for credit if each is a different learning experience. Instructor permission required for each internship. Prerequisites: DANS 150 or 151 4 credits (12 weeks, 480 hours minimum), fall and/or spring semester

#### DANS 301. Dairy Management Experience. (16 Credits)

The Cornell Dairy Management Experience (CDME) consists of courses and the modules that are required for the Bachelor of Technology in Diary Management. Students, in the spring semester of their junior year, will spend one semester in residency at Cornell University taking courses through the Department of Animal Science. The syllabus consists of courses and modules that place emphasis on practical technical and management applications in dairy herd management, herd health, dairy nutrition, and farm finance. Prerequisites: DANS 100, DANS 110, DANS 120, DANS 140, DANS 151, DANS 160, DANS 210, DANS 220, DANS 225, DANS 250, AGBS 100, AGBS 200, AGBS 240 16 credits (limited to juniors in the BT Dairy Management), spring semester

#### DANS 305. Dairy Calf & Heifer Management. (3 Credits)

This course is designed for students who have a sincere interest in dairy replacement management and the production practices associated with economical rearing of heifer replacements. Those considering career positions as calf and heifer managers should strongly consider taking this course. The objectives are to gain further understanding of the integration and application of management and technical principles associated with the heifer enterprise from the time the calf is born to the first calving. This includes the economics, feeding, health, facilities and management of the heifer enterprise in today's industry. Prerequisites: DANS 100, DANS 115, DANS 220, AGBS 240 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### DANS 340. Advanced Dairy Reproduction. (3 Credits)

This course is designed to study the dairy cattle reproductive system and provide students with expertise in managing herd reproductive programs effectively. Students will study in depth the anatomy and physiology of the male and female reproductive tracts, understand hormonal controls of the estrous cycle and be able to manipulate the estrous cycle with approved hormone therapies. Students will be responsible for herd heat detection and some artificial inseminations. Students will work with reproductive records, herd managers and artificial insemination technicians to manage the dairy herd's reproductive program. Prerequisites: DANS 110, DANS 115, or permission of instructor 3 credits (2 lecture hours, 3 laboratory hours), alternate years, odd years

#### DANS 450. Advanced Dairy Herd Mgt. (4 Credits)

Students will gain experience in managing a dairy herd with major emphasis placed in the areas of milking management, dairy nutrition, herd health and labor relations. Students will form a direct working relationship with dairy/ farm managers, farm staff and industry professionals to effectively manage the dairy facilities at Morrisville State College. Students will be actively involved in gathering, organizing and analyzing data and records on the college farm. Students will use this information to generate weekly reports and will make effective weekly reports and recommendations for improvements in different areas on the dairy operation. Students will have additional opportunities to attend professional meetings in preparation for a career in the dairy industry. Prerequisite: A "C" or better in DANS 100, DANS 110, DANS 115, DANS 120, DANS 150, DANS 151, DANS 220, DANS 225 Or permission of Instructor 4 credits (1 lecture hour, 9 laboratory hours), fall semester

#### DANS 451. Adv Dairy Herd Mgt II. (4 Credits)

This course is a continuation of DANS 450, Advanced Dairy Herd Management Students will gain a practical, hands-on experience in managing a dairy herd with a more detailed major emphasis in the areas of milking management, dairy nutrition, herd health and labor relations. Students will work directly with the dairy herd manager at Morrisville State College to gather, organize and analyze data and records on the college farm. Students will also be actively involved in working independently with industry personnel and representatives to gain additional hands-on experience and knowledge of relevant topics in the dairy industry. Students will have opportunities to attend professional meetings in the dairy industry that prepare them for a professional career in the dairy industry. Prerequisites: DANS 450 or permission of instructor 4 credits (1 lecture hour, 9 laboratory hours), spring semester

# **Dairy Science (DASC)**

#### DASC 100. Dairy Cattle Feeding Mgt - SC. (2 Credits)

An introduction to the management of feeding cattle, including forage storage, feed rates from storage, management of the feed bunk, mixing of feed, body condition scoring, lameness, cow comfort, and sampling of feed for analysis. The 2 credit option offers more in-depth exposure and analysis on all topics and will contain additional course material. 1 credit option (1.5 lecture hours, 1.5 lab hours per week for 6 2/3 weeks) 2 credit option (1.5 lecture hours, 1.5 lab hours per week for 13 1/3 weeks) Offered during a winter term from November 1 – April 15

#### DASC 111. Diary Breeding Short Course. (2 Credits)

This course covers breeding, including animal reproduction, male and female reproductive anatomy and physiology, hormonal control of the reproductive system, the estrous cycle, fertilization, and reproductive failures. DASC 111 combined with DASC 112 will substitute for the three-credit DANS 110. 2 credits (1.5 lecture hours/week, 1.5 laboratory hours/ week), total of 20 lecture hours plus 20 laboratory hours, 13 1/3 weeks Offered during a winter term from Nov. 1-March 15.

#### DASC 112. Dairy Breeding II Short Course. (1 Credit)

This course covers animal breeding including animal reproduction and offers an in-depth look at reproductive programs to achieve cattle pregnancies. The course provides a hands-on approach where students will be practicing reproductive management daily. Introductory dairy cattle genetics will be discussed. DASC 112 combined with DASC 111 will substitute for the three-credit DANS 110. 1 credit (10 lecture hours/week, 10 laboratory hours/week), total of 10 lecture hours plus 10 laboratory hours, 1 week Offered during a winter term during one week of January

#### DASC 211. Dairy Herd Health Short Course. (2 Credits)

Physiology, anatomy and health of the dairy cow. Emphasis on hygiene, disease prevention, her health programs, and routine disease and injury treatment. Prerequisite: Sufficient diary experience as determined by the instructor 1-2 credits (1.5 lecture hours per week, 1.5 laboratory hours per week) Offered during a winter term from November 1 to April 15.

# **Diesel Technology (DTEC)**

#### DTEC 105. Diesel Powertrains I. (4 Credits)

A course covering the operation, diagnosis, and repair of power transmission components on Heavy Equipment and Over-The-Road Tractors. Topics addressed will include: Clutches, Standard Transmissions, Torque Converters, Automatic Transmissions, and Drive shafts. 4 credits (3 lecture hours, 2 laboratory hours), spring semester

#### DTEC 110. Diesel Powertrains II. (4 Credits)

A course covering the operation, diagnosis, and repair of chassis components on Heavy Equipment and Over-The-Road Tractors. Topics addressed will include: Chassis systems, alignment, PTOs, single and tandem rear axles, springs, shocks and other suspension components, tires, wheels, and bearings, and braking systems including ABS and brake chamber servicing. 4 credits (3 lecture hours, 2 laboratory hours), spring semester

#### DTEC 125. Diesel Electrical Systems. (4 Credits)

An introduction to the fundamentals of electricity and their application in diesel engines and equipment. Basic theory of AC and DC systems used for charging, starting, lighting, and accessory circuits is covered. Lectures emphasize understanding of common circuit configurations and sample wiring schematics. Labs emphasize testing of components, troubleshooting circuits, and common repair techniques. 4 credits (3 lecture hours, 2 laboratory hours) fall semester

#### DTEC 150. Diesel Systems. (3 Credits)

Theories and principles of diesel operation and construction. Engine removal, inspection, disassembly, part analysis, and rebuilding. Engine run-in, dyno testing, and principles of troubleshooting will be discussed. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### DTEC 151. Seminar Caterpillar Power Syst. (2 Credits)

Theories and principles of caterpillar diesel engines, operation and construction, engine removal, inspection dis-assembly and rebuild are covered in this course. Caterpillar-specific software and reference material will be used. Co-requisites: DTEC 150 or permission of the instructor. 2 credits (1 lecture hour, 2 laboratory hours), fall semester

#### DTEC 225. Diesel Electronics. (4 Credits)

A continuation of DTEC 125. Expanding on basic AC and DC theory, to include multiplexing, active and passive sensors and digital electronics, this course addresses more complex wiring schematics, sensor troubleshooting and wiring harness repair. Students will use diagnostic equipment, lap top computers and current manufacturers' software and communication adapters to analyze and repair digital electronic systems fund on construction, on highway, agricultural and electric power generation systems. Pre- or co-requisite: DTEC 125 or MAGN 101, or permission of instructor. 4 credits (3 lecture hours, 2 laboratory hours) spring semester.

#### DTEC 250. Mechanical Injection Systems. (3 Credits)

Principles of injection systems, design, and construction of different systems. Inspection, tear down, and service of various components. Use of special testing and calibrating equipment. Special emphasis on diesel equipment used on farm tractors and power equipment. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### DTEC 290. Diesel Equip Tech Internship 1. (1 Credit)

This course is designed for Diesel Equipment Technology majors to complete a limited time internship as part of their program. The student must select a diesel industry employer to work for during a college break most likely during the winter break. Students will be introduced to onthe-job skills as well as interpersonal skills necessary to maintain a job. Prerequisite: DTEC 150 or AGEN 100, or permission of instructor; cumulative GPA of 2.0. 1 credit, spring semester (internship to take place during winter break).

#### DTEC 295. Diesel Eqip Tech Internship 3. (1 Credit)

This course is designed for Diesel Equipment Technology majors to complete a limited time internship as part of their program. The student must select a diesel industry employer to work for during a college break most likely during the winter break. Students will be introduced to onthe-job skills as well as interpersonal skills necessary to maintain a job. Concentration will be on advanced skills and management systems. Prerequisites: Final semester status in diesel program, permission of instructor, overall GPA of 2.0. 1 credit, spring semester (internship to take place during winter break)

#### DTEC 300. Diesel Equip Tech Internship 2. (4 Credits)

This course is designed for Diesel Equipment Technology majors to complete a summer internship as part of their program. The student must select a diesel industry employer to work for during the summer (or other extended break from college) between their first and second year of study. Students will learn on-the- job skills as well as interpersonal skills necessary to maintain a job. Prerequisites: DTEC 150, AGEN 100, DTEC 125, DTEC 105, permission of instructor, overall GPA of 2.0. 4 credits, fall semester

#### DTEC 325. Electrical Power Generation. (3 Credits)

Students will develop the knowledge and skills necessary to install, troubleshoot and service on-site power generation systems up to 50kW. This course emphasizes various generator types driven by both typical and atypical methods. Instruction is provided in the areas of diesel and gaseous fueled engines, control systems and governors. Advanced instruction is provided in electrical components necessary in the generation, storage, conversion, switching, and transmission of electric power. Students develop the practical skills needed to work with on-site electrical power generation equipment and related systems. Prerequisites: DTEC 125 or ELEC 190 & DTEC 150 or AGEN 210 or by permission of instructor Co-requisites: MAGN 101 3 credits (2 hours lecture, 2 hour lab), fall semester

#### DTEC 350. Advanced Diesel Fuel Systems. (3 Credits)

Involves more advanced concepts of diesel engines, injection systems, two- and four-cycle engines, use of advanced testing and calibration equipment. Electronic control of diesel fuel injection systems, operating principles, and computer diagnostics will be addressed. Prerequisite: DTEC 150. 3 credits (2 lecture hours, 2 laboratory hours), spring semester.

# **Drafting (DRFT)**

#### DRFT 151. Engineering Drawing I. (2 Credits)

Introduction to the graphic language, conventions, and tools of sketching and technical drawing. Topics include lettering, geometric constructions, multiview projection, dimensioning, sectional and auxiliary views, and geometric tolerancing. Co-requisite: MAGN 101 2 credits (1 lecture hour, 2 laboratory hours), fall semester

#### DRFT 252. Geometric Dimension Tolerance. (2 Credits)

This course covers functional dimensioning, tolerancing and design principles and applications based on ASME Y14.5M - the international engineering language used to communicate the size, form, orientation, and location of part features. Topics include fundamental rules, symbology, tolerance expression and interpretation, datums, fit systems, inspection techniques and design for manufacture. Prerequisite: CAD 186, MATH 102 2 credits (4 laboratory hours), fall semester

# Early Childhood (ECHD)

#### ECHD 103. Observation/Assess - Field 1. (3 Credits)

This course introduces students to observation and assessment techniques that are needed to understand and interpret young children's growth and development in order to meet the individual needs of children in a diverse population. Students will examine formal and informal assessments of physical, cognitive, language and social/emotional development. Current methods, confidentiality and professionalism will be stressed. Students will have the opportunity to practice the techniques and assessments through the semester in a field placement setting. Prerequisite: ECHD 101 Prerequisite or Co-requisite: ECHD 102, PSYC 241 or Permission of Instructor 3 credits (2 lecture hours/2 lab hours), spring semester

#### ECHD 201. Family/Child Hlth,Safety,Nutr. (3 Credits)

This course will examine the health, safety and nutritional needs of children birth-8 years. The unique needs of early childcare settings will be addressed and include the following topics: personal hygiene, safety practices, nutritious meals, chronic conditions and health policies. In addition, students will explore the variety of environmental, behavioral and constitutional factors which influence health within the family, the childcare setting and the community. Investigation of current issues and community agencies will be included Prerequisites: ECHD 101 3 credits (3 lecture hours), fall semester

#### ECHD 202. Language, Literacy & Lit in EC. (3 Credits)

This course examines the development of language and literacy in young children from birth through the primary years. Theoretical foundations and various models that support young children's early literacy will be explored. Other topics included are: working with families to support literacy development, assessing early literacy development, integrating literacy throughout the curriculum, and selecting quality literature that addresses cultural, racial, linguistic, religious, gender, age and family diversity. Students will be given the opportunity to explore all genres, and a student-created children's book will be a culminating project. A two hour community project involving reading to children is required. Prerequisites: ECHD 103 or Permission of Instructor 3 credits (3 lecture hrs.), fall semester

#### ECHD 203. Infants and Toddlers. (3 Credits)

This course focuses on the development of high quality programs for infants and toddlers in group care, providing for their physical, social/ emotional and cognitive needs. Understanding the significance of providing sensory rich and stimulating environments, experiences and relationships with infants and toddlers will be the foundation for developing programs. Developmentally and culturally diverse approaches, techniques and materials will be emphasized as well as setting up positive and nurturing learning and growing environments. Students will learn the importance of the caregiver's role, building relationships with parents and the significance of early intervention. The role of a professional and professionalism will be stressed. There will be a minimum of one infant and one toddler observation experiences in child care settings. Prerequisites: ECHD 103, PSYC 241 or Permission of Instructor 3 credits (3 lecture hours), fall semester

#### ECHD 204. Children with Special Needs. (3 Credits)

This course is intended to provide students with knowledge of the nature and requirements of children and families with special needs in the areas of health, sensory, physical, developmental, learning and behavior disorders as well as traumatic brain injuries and giftedness. The significance of early identification, assessment and intervention will be emphasized. Students will learn about Federal and State laws and regulations including the Individuals with Disabilities Education Act and the placement of students in special education settings and mainstream classroom inclusion. The emphasis will be on ways to adapt curriculum and the environment to meet the needs of a diverse population of children within the context of an inclusive classroom. Students will have the opportunity to observe children in different settings and participate in the development of developmentally appropriate anti-bias activities for children. Prerequisites: ECHD 201, ECHD 202, ECHD 203 or Permission of Instructor 3 credits (3 lecture hours), spring semester

#### ECHD 205. Creative Activities in Arts. (3 Credits)

This course addresses the creative arts process and curriculum integration of art, drama, literature, music and movement for students preparing to work with young children. It is a participation rich, hands-on course giving all members of the class many varied experiences in the arts both as teachers and as students. Students will learn the value of the arts for growth and development of children as well as ways to integrate the arts into planned programs. Through class discussions, activities, readings and research, students will create specific arts activities that address the needs of a diverse population of children and provide rich multicultural experiences. Pre-requisites: ECHD 103 or Permission of Instructor 3 credits (3 lecture hours), spring semester

#### ECHD 206. Curriculum Methods Mat. & Mgt.. (3 Credits)

This course focuses on curriculum development for preschool and primary school children (through second grade). Students will learn to plan developmentally appropriate learning experiences, design positive learning environments and incorporate play for young children's cognitive, emotional, social, linguistic and physical growth and development. Students will develop materials and activities that address all content areas of early childhood while integrating cultural awareness, diversity and inclusion. Linking the family and community with the early childhood program will be emphasized. A.A.S Degree students in Early Childhood will incorporate some of the activities and materials into the Practicum-Field Experiences Course. This course is to be taken concurrently with ECHD 212 (Practicum-Field Experience II). Prerequisites or Co-requisites: ECHD 204, ECHD 205, ECHD 212 or Permission of Instructor 3 credits (3 lecture hours), spring semester

#### ECHD 212. Early ChildPracticum Field II. (4 Credits)

This course provides each student with direct experience working in a high quality early childhood setting. The experience will connect students' educational theory with actual classroom experience. The student will work with an experienced early childhood professional as his/her cooperating teacher for a minimum of 90 hours during the semester. In addition, students will attend weekly hour seminars. This is the culmination of college work for students in the A.A.S. Degree Program for Early Childhood. Successful completion of this course and the personal portfolio are requirements for this Degree. Prerequisites or Co-requisites: ECHD 206; Restricted to students enrolled in the final semester of the program; 2.0 GPA, satisfactory criminal background check, and current CPR certification required. 4 credits (1 lecture/3 lab); spring semester

### **Economics (ECON)**

#### ECON 100. Introduction to Macroeconomics. (3 Credits)

Basic macroeconomics related to the development of the American economics system. Factors which determine prices in a market economy, the use of budgets, efficiency in business and government, the role of money and monetary institutions and monetary policy in our economy, the measurement of economic activity, the principles of taxation, business cycles, and the determination of income and employment, economic security and economic stability, and economic growth and ecology. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### ECON 140. Introduction to Microeconomics. (3 Credits)

Basic micro-economics related to the development of today's American economic system. Principles of production, operation of the price system, the competitive market model, oligopoly, monopoly and the role of government, allocation of economic resources, income distribution, role of the U.S. in the international economy. 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### ECON 300. Money, Banking Financial Mkts. (3 Credits)

This course is a study of essentials of the domestic monetary system, banking structure, and financial markets. It focuses on monetary practices, theory, and policy. Included in the course are an analysis of the nature, functions, and theory of money; an overview of the commercial banking system and the structure of the Federal Reserve System; and an examination of monetary policy as related to fiscal policy, economic activity, and international financial activities. Prerequisite: ECON 100 or permission from the instructor. 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### ECON 370. International Economics. (3 Credits)

This interdisciplinary global course interrelates various elements of economics, government and history into the traditional economic analysis. Topics will be related to individuals, families and organizations. Current debates, problems and issues are examined along with an analysis of production, money, finance and trade. Prerequisite: ECON 100, Junior-level status (or permission of instructor) 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

### **Education (EDU)**

#### EDU 101. Introduction to Teaching. (3 Credits)

This course introduces students to the requirements for becoming a certified teacher, including academic coursework, degrees, certification areas and requirements, NYS Teacher Certification Exams, fieldwork requirements and current issues in education. Emphasis is on reflective thinking needed to make an informed career choice. Written and oral reports and ten hours of guided fieldwork are required. This course is designed primarily for Liberal Arts and Sciences/Teacher Education Transfer majors. 3 Credits (3 lecture hours), fall or spring semester

#### EDU 201. Foundations of Education. (3 Credits)

This course provides an introduction to teaching as a career by exploring sociological, philosophical and historical aspects of education and the profession of teaching. Emphasis will be placed on the topics of the school environment, student diversity, teacher effectiveness, curriculum, and contemporary issues in education. Written and oral presentations, critical thinking, reflective reading, research and discussion are integral parts of this course. Prerequisites: Cumulative GPA of 2.7 or better and admission to the Teacher Education Transfer Program or permission of instructor. Co-requisite: EDU 202 3 credits (3 lecture hours), fall or spring semester

#### EDU 202. Guided Fieldwork in Education. (1 Credit)

In this course, students learn introductory guided field work in an elementary or secondary school. This course provides a clinical experience to help students see the connection between educational theory and the actual classroom experience. It also helps students decide if teaching is an appropriate career choice. Field work experience includes observing, interviewing, assisting, and interacting with students, teachers, administrators, and staff. Thirty hours of field work and a reflective journal are required. Prerequisites: Cumulative GPA of 2.7 or better. Co-requisite: EDU 201 1 credit (30 field work hours) fall or spring semester

# **Engineering (ENGR)**

#### ENGR 100. Computer Tools in Engineering. (3 Credits)

An introduction to the engineering profession followed by a survey of PC-based computer tools applicable to new Engineering Science students. These tools range from standard word processing through graphics and CAD to analysis tools such as spreadsheets and computer math packages. These tools are applied in project context providing an introduction to the engineering design process from initial identification of need through specification and communication of final design. Preor Co-requisite: MATH 103 or equivalent 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### ENGR 135. Comp & Numer Tech for Science. (3 Credits)

Introduction to a modern, math oriented programming language and to the computer-assisted solution of engineering problems. Introduction to more advanced programming topics including the handling and manipulation of complex numbers, the solution of large systems of equations and unknowns, and numerical searches and root finding. Structured programming methodology will be emphasized. This problem- oriented course will use a current programming language as recommended by the Engineering Science program coordinator. Prerequisite: MATH 151 or permission of instructor Pre- or Co-requisite: MATH 152 3 credits (3 lecture hours), spring semester

#### ENGR 201. Analytic Mechanics I. (3 Credits)

Students will gain knowledge of composition and resolution of forces and couples, equivalent systems, equilibrium of simple structures, trusses and frames, friction, properties of areas. Free body diagrams and vector algebra will be used. Prerequisite: PHYS 154 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### ENGR 202. Analytic Mechanics II. (3 Credits)

Kinematics of motion, Cartesian, path and polar coordinates, rigid body motion and relative motion analysis. Kinetics of particle and rigid body motion using force-acceleration, work-energy, and impulse-momentum approaches. Vector calculus used throughout. Prerequisite: ENGR 201, MATH 261 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### ENGR 210. Introdctn To Electrical Systms. (3 Credits)

Analysis of linear one-dimensional electric circuits including DC, AC and transient solutions. Basic network principles and theorems, loop and node solutions, transfer functions, frequency response, analogs, zero-pole concepts and coupled circuits. Computer analysis. Pre- or Corequisite: MATH 262 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### ENGR 212. Mechanics Of Materials. (3 Credits)

Examination of stress-strain relationships, physical properties of engineering materials. Analysis of mechanics of deformation, stress and strain for axial, torsion, and transverse loadings, combined stress, buckling of columns. Pre- or Co-requisites: ENGR 202 and MATH 262 3 Credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

# Entrepreneur & Small Bus Mgmt (ENTR)

#### ENTR 317. Entrepreneurial Process. (3 Credits)

The course will focus on the issues involved in the theory, process, and practice of Entrepreneurship. It is offered as the beginning course for the BBA in Entrepreneurship/Small Business Management. Subject areas covered include (but are not limited to) the current entrepreneurial environment, the individual as an entrepreneur, entrepreneurial planning, and creating and managing the venture. Prerequisite: Admission into the BBA Entrepreneurship and Small Business Management program 3 credits (3 lecture hours)

#### ENTR 320. Accounting for Entrepreneurs. (3 Credits)

This course examines the basics of accounting and accounting relationships. The course will cover the accounting cycle, Quick Books, financial analysis, cash flow, cost analysis, and budgeting. The student will obtain the fundamentals of accounting skills needed for entrepreneurs to use accounting in their business and be able to begin making financial decisions that are important to a newly created firm. Prerequisites: MATH 102 and Junior Standing 3 credits (3 lecture hours), fall semester

#### ENTR 327. Guerilla Mktg Tactics Sm Bus. (3 Credits)

This course will provide the student with the marketing fundamentals necessary in the startup, development, and operation of a small business. Students will develop successful marketing strategies with limited or nonexistent budgets. Guerilla Marketing tactics, innovation, and the incorporation of social media are emphasized. Prerequisites: ENTR 317, or BSAD 320 and BSAD 325. 3 credits (3 lecture hours, 1 laboratory hour), fall semester

#### ENTR 335. Entrepreneurial Finance. (3 Credits)

This course examines the basics of financial analysis, cash flow, credit and lending, the process of financing and financial growth of a new venture. The student will be introduced to obtaining and using various financial re-sources. The student will also learn how to create value using financing and financial structure as well as how to measure the value of a firm that might be used to purchase the operations. Topics include financial statements, forecasting, banking, venture capital, financial resources, business plan as related to financial information, and management of the financial resources of the firm. Prerequisites: Admission into the Entrepreneurship and Small Business Management BBA program, ENTR 317, BSAD 116, BSAD 221, ENTR 320, and ECON 100 or 140 3 credits (3 lecture hours)

#### ENTR 338. Legal Issues for Entrepreneur. (3 Credits)

This course focuses on several areas of the law that may affect Entrepreneurial success. The course will start with a discussion of contracts basics. From there we will cover the legal issues concerning; funding and finance, location issues (zoning, leasing, purchasing), types of business organizations (proprietorships, partnerships, limited liability companies, corporations), franchising, buying a business, product liability, insurance, intellectual property (patents, copyrights, trademarks), taxes, harvesting, and how, when and where to get legal help. Prerequisites: ENTR 317, BSAD 116, BSAD 221, ENTR 320, and ECON 100 or 140 3 credits (3 lecture hours), spring semester

#### ENTR 342. Innovation & Venture Creation. (3 Credits)

This course examines product and venture creation for the entrepreneur. The student will also learn about innovation that would lead toward the creation of ideas for future ventures or businesses. The student will learn how to identify new opportunities and screen those opportunities for success versus failure. The student will also learn how to build a model for a future business and handle rapid growth of a business. The course will also look at the feasibility of the ideas generated by the student in order for the student to identify possible future businesses. Prerequisites: ENTR 317 or BSAD 320, BSAD 116, BSAD 221, ENTR 320 or ACCT 102, and ECON 100 or 140 3 credits, spring semester 3 credits, spring semester

#### ENTR 352. Value Chain Management. (3 Credits)

This course examines the management and optimization of various operations of a business. The student will learn how to handle vendors and purchasing, managing quality and project as well as logistics and inventory. The student will understand the various aspects of the supply chain in order to reduce the obstacles and maximize the efficiency and effectiveness of the operations of a new venture. The student will learn how to identify and assess risk concerning the business and learn how to manage the resources of the business so that the business is efficient and effective. Prerequisites: ENTR 317, BSAD 116, BSAD 221, ENTR 320, and ECON 100 or 140 3 credits (3 lecture hours)

#### ENTR 417. Creating the Business Venture. (3 Credits)

This course will require the student to use all of the entrepreneurial tools and business skills acquired in the Entrepreneurship and Small Business Management program by preparing two complete business plans. To that end, the course will cover the sections of a business plan in detail including: Executive Summary, Mission Statement/Business Description, Business Environment, Marketing Plan, Operations Plan, Management Team, Financial Section (forecasts), Legal/Insurance Section, Critical Risks, Assumptions/Conclusions, and Harvest Strategy. Each Student will be required to research and complete two full and detailed business plans for their chosen ventures. Students will also be required to give a 15-minute presentation of one of their business plans. Prerequisites: ENTR 335, 342, 352, and 338 3 credits (3 lecture hours), fall semester

#### ENTR 474. Preparation for Field Study. (1 Credit)

This course is designed to prepare the student for the capstone course in the Entrepreneurship and Small Business Management degree program, ENTR 475. The student, with the guidance of a faculty member, will explore their options for applying their prior coursework, both as an entrepreneur and an intrapreneur. They will develop several field experience plans to complete during the field study, their outcomes for the experience, and what skills and knowledge they anticipate deriving from the field study. The course culminates in a presentation and committee approval of the student's field study plan. Prerequisite: Junior standing in the Entrepreneurship and Small Business Management degree program or per-mission of instructor. Co-requisite: ENTR 417 1 credit, fall semester

#### ENTR 475. Practicum in Entre/Bus Consult. (15 Credits)

This course serves as the capstone experience in the Bachelor of Business Administration (BBA) in Entrepreneurship and Small Business Management degree program. This course requires students to undergo a practicum in business consulting or in creating their own business. The practicum will require student interns to work directly with successful entrepreneurs in high-growth, innovative companies or to engage in faculty-mentor supervised activities associated with starting their own business. ONLY students of senior status in good standing enrolled in the BBA in Entrepreneurship and Small Business Management degree program are eligible for the practicum. The students must complete at least 480 hours of activities for at least 12 weeks with their host company. Students choosing to create their own businesses must devote a commensurate number of hours toward creation, start-up, and/or management of their own company. Prerequisite: ENTR 417 (grade of C or better) and ENTR 474 or permission of instructor. 15 credits (15 laboratory hours) spring semester

# Env and Natural Resource Mgmt (ENRM)

#### ENRM 302. Riparian Ecology & Wetland Mgt. (3 Credits)

The focus of this course is on processing functions and structure of riparian and wetland areas and the multiple human influences on these areas. The options for management of these areas will be stressed. Lectures are used to introduce students to the principles and concepts; and lab exercises are used to visit and evaluate field sites for future management consideration. This course has an additional laboratory fee. Co-requisite: NATR 210 Prerequisites: NATR 101, NATR 115, or college-level course in ecology, ENRM matriculation or permission of instructor 3 credits (2 lecture hours, 3 laboratory hours) fall semester

#### ENRM 303. Fundamentals Geospatial System. (4 Credits)

This course is intended to cover the fundamentals of geospatial information systems. These include the geographic information system (GIS) which represents a computerized data management system designed to input, store, analyze and output geographically-referenced spatial data; the global navigation satellite system (GNSS) which combines globally-functional satellite constellations (including the U.S. Global Positioning System or GPS) with global and regional groundbased reference stations (at accurately surveyed locations) to enhance and broaden positioning; and remote sensing which is widely used to gather information about features on the earth's surface without being in physical contact with these features. The course is designed to provide students who possess limited geospatial technology and analysis background with the ability to gather spatially=distributed and geographically-references data, query data, analyze spatial relationships, and produce professional outputs. The specific topics covered include geospatial data models, geodesy, datums, map projections, and coordinate systems; mapping and cartographic output; data collection and entry; GNSS and coordinate surveying; aerial and satellite imagery; geospatial and tabular data analyses; basic geospatial analysis; advanced geospatial (including terrain) analyses; geospatial estimation; geospatial modeling; and data standards and quality. The laboratory work will focus on the practical application of geospatial information systems following the hands-on approach where the student is expected to gain practical knowledge on using QGIS, ArcGIS for Desktop, aerial and satellite imagery, and a number of positioning and navigation systems. Prerequisite: NATR 213 and ENRM matriculation, or permission of instructor 4 credits (2 lecture hours, 4 laboratory hours), spring semester

#### ENRM 305. Environment Law Policy Justice. (3 Credits)

The focus of this course is on the major federal environmental and related health and safety statues currently in force. This course will also make general suggestions and give ideas on how one can identify potential environmental law problems and how to resolve them as effectively and efficiently as possible. Prerequisite: Bachelor degree standing or permission of instructor 3 credits (3 lecture hours) spring semester

#### ENRM 312. Field Sampling Design & Techniques. (3 Credits)

A comprehensive study of sampling theory and methodologies currently used in the environmental sciences. Course specifically addresses research sampling considerations and strategy design; sampling considerations for data accuracy and precision; sampling and characterization of terrestrial, wetland and aquatic ecosystems; vertebrate, invertebrate, and flora collection techniques; and watershed and catchment delineation. Course includes field dress and safety, data management, watercraft operation, system modeling and biometry, and reference collection curation. Prerequisites: NATR 250 or permission of instructor 3 credits (2 lecture hour, 3 laboratory hours), fall semester

#### ENRM 332. Environment Planning & NR Mgt. (3 Credits)

Current issues, theories, practices and trends associated with multipleuse environmental planning and natural resource management. Emphasis is on critical thinking processes for the identification, definition, and resolution of environmental problems; planning and the implementation of plans; and management strategies for specific management goals. Prerequisite: Junior standing or permission of instructor 3 credits (3 lectures hours), spring semester

#### ENRM 345. Surface & Groundwater Mgt.. (3 Credits)

An examination of the methods and strategies available for the delineation, assessment and characterization of confined and unconfined groundwater aquifers, as well as their recharge areas. Introduction to groundwater extraction and well functions. Surface water management issues, including watershed delineation and protection. Issues in surface and groundwater contamination and remediation. Approaches to water rights and allocation. Brownfields. Federal, state and local regulatory issues. Prerequisite: NATR 250 or permission of instructor 3 credits (2 lecture hours, 4 laboratory hours), spring semester

#### ENRM 350. Tropical Ecology. (3 Credits)

During this field course, students will actively experience the wildlife, agriculture, fisheries, and unique ecosystems of Florida, and gain comprehensive insight into tropical ecology and conservation concepts and case studies of conservation biology. In addition, students will gain extensive experience in the field methods and techniques used by managers and researchers to study terrestrial and aquatic natural resource ecology and conservation in tropical regions. The focus of this course is an immersive 7-day field experience in Florida with trips to springs, state parks, national wildlife refuges, aquariums, tropical fish farms, and diverse aquatic ecosystems. In this course students will be introduced to the flora and fauna of the unique ecosystems of Florida such as everglades, springs, coral reefs including travel to the southernmost point of the United States. This course has an additional fee. Prerequisite: NATR 101 Ecology or NATR 153 Marine Biology with a passing grade or permission of the instructors. 3 credits (1 lecture hour, 2 laboratory hours)

#### ENRM 351. Tropical Ecology II. (3 Credits)

During this field course, students will actively experience the wildlife, agriculture, fisheries, and unique ecosystems of the Caribbean tropics, and gain comprehensive insight into tropical ecology and conservation concepts and case studies of conservation biology. In addition, students will gain extensive experience in the field methods and techniques used by managers and researchers to study sustainability in regions of the tropics. The focus of this course is an immersive field experience with a field base with trips to coral reefs, mangroves, blue holes, and diverse aquatic ecosystems. In this course students will be introduced to the flora and fauna of the unique ecosystems in the Caribbean such as mangroves, coral reefs, seagrass beds and participate in active research and data collection. This course requires a valid passport and following health travel regulations and requirements of the host country. This course has an additional fee. Prerequisite: NATR 101 Ecology or NATR 153 Marine Biology with passing grade or permission of the instructors. 3 credits (1 lecture, 2 laboratory hours)

#### ENRM 412. Ecosystem Adaptive Management. (3 Credits)

This is the capstone course of the Environmental & Natural Resources Management curriculum, building upon theory and analytical skills gained in prerequisite courses and closely integrated with ENRM 332 - Environmental Planning and Natural Resources Management. This course will integrate theory and technical management concepts with policy considerations so that terrestrial, aquatic and human system management issues may be approached at a systems-level rather than as individual mitigation or mediation efforts. This course has an additional laboratory fee. Prerequisite: ENRM 332 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### ENRM 420. Geospatial Tech Applications I. (1 Credit)

This course involves the presentation of two integrated teaching modules that focus on the application of geospatial technology to forest and wildlife management. The first module includes the application of geospatial technologies to the integrated management and monitoring of forest land. The second module utilizes the application of geospatial technology to assess habitat resources for wildlife management. The two modules incorporate the global positioning system (GPS), geographic information system (GIS), and remote sensing technologies combined with field-tested, scientifically-based principles providing an integrated approach to natural resources management. The two modules are vertically integrated where field measurements are combined based on common sampling points. Pre- or Co-requisite: ENRM 303; and ENRM matriculation or permission of the instructor 1 credit (1 lecture hour, 2 laboratory hours), 10-week course, spring semester

#### ENRM 421. Geospatial Tech Application II. (2 Credits)

This is a capstone course in the Environmental & Natural Resources Management BT program where students are expected to master the application of geospatial technology to natural resources management through independent and group projects where many of the college properties will be inventoried using the methodology covered in ENRM 420. The course follows integrated approaches to the management and monitoring of forest land as well as the assessment of habitat resources for wildlife management by focusing on a new college property each year. Geospatial technologies including the global positioning system (GPS), geographic information system (GIS), and remote sensing are combined with field-tested, scientificallybased principles providing an integrated approach to natural resources management of the forest. Prerequisite: ENRM 420, ENRM matriculation or permission of the instructor 2 credit (1 lecture hour, 5 laboratory hours), 10-week course, fall semester

#### ENRM 450. Environmental & Natural Resource Management Internship Orientation. (1 Credit)

This course is designed to prepare students for an internship and to assist them with the process of employment and career development. It prepares students for internship requirements such as goal definition, internship site identification, job application, performance evaluation and report writing. ENRM 450 formalizes internship planning and preparation to ensure that internships are procured, conducted in a professional manner, follow course guidelines, and satisfy the goals and objectives of students, faculty advisors and cooperating placement sites. 1 credit (2 lecture hours), 7-week course,

# ENRM 470. Internship in Environmental & Natural Resource Management. (12 Credits)

This course involves supervised fieldwork at an approved placement site. Students carry out a planned program of educational work experiences under direct supervision of an owner, manager, or supervisor. Each intern is advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report and an oral presentation. Prerequisite: ENRM 450 and permission of the instructor 15 credits

# **Environmental Science (ENSC)**

#### ENSC 100. Intro to Environmental Science. (3 Credits)

A dual-credit course with designated high schools to acquaint selected high school students with the basic principles of environmental sciencetopics such as soils, water, air, energy, wildlife, IPM, population ecology, forestry and waste management will be covered. Students will design and carry out a long-term project which will be based on a current environmental issue. 3 credits (minimum of 45 lecture class hours), spring semester

#### ENSC 101. Agricultural Science. (3 Credits)

Basic introduction to general agricultural and life science principles as an aid to the understanding of plant, animal and soil functions, as well as fundamental computations as applied to agricultural production. This course is intended for non-ENSC majors. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Sciences (and Scientific Reasoning).

#### ENSC 102. Botany-Form Function Seed Plt. (3 Credits)

Structure and function of higher vascular plants, with emphasis on cell structure, photosynthesis and respiration, anatomy, physiology, reproduction and Mendelian genetics. 3 credits (2 lecture hours, 2 laboratory hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science (and Scientific Reasoning).

#### ENSC 103. Botany - Plant Diversity. (3 Credits)

An evolutionary survey of the plant kingdom with emphasis on structure, plant life cycles, ecological significance, and importance of non-vascular and lower vascular plants. Prerequisite: BIOL/ENSC 102 or permission of instructor (3 credits; 2 lecture hours and 2 laboratory hours per week), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science (and Scientific Reasoning).

#### ENSC 106. Pesticide Use and Handling. (2 Credits)

Basic principles of pesticide use, handling and application, including laws, safety, the environment, storage and disposal. Students will be given the opportunity to be tested by the Department of Environmental Conservation to receive certification at the end of the course. 2 credits (1 lecture hour, 2 laboratory hours), spring semester

#### ENSC 107. Integrated Pest Management. (1 Credit)

Principles of pest control emphasizing biological, cultural, and regulatory control methods in a sound ecological and economic manner. Introduction to integrated pest management tactics of monitoring, forecasting, determining thresholds and control options. The course will also survey pest management programs used in various agricultural environments. 1 credit (1 lecture hour), fall semester

#### ENSC 125. Environmental Chemistry. (4 Credits)

Explore the chemical phenomena that occurs in natural environments to gain a clear understanding of ecosystem processes through a chemistry lens. Reactions, transport, and fate of chemical species in the air, soil, and water environments, and the chemistry of waste and energy will be addressed. The focus will be placed on applying knowledge of introductory chemistry to natural resource concerns to better understand the how and why of these problems. Laboratory experiments will provide experience with methods of evaluating environmental systems using the scientific method, sample collection, methods of analysis, and data interpretation. 4 credits (3 hours lecture, 2 hours lab), satisfies the SUNY General Education requirement for Natural Science

#### ENSC 261. Environmental Justice. (3 Credits)

This course will examine environmental quality and social justice. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income concerning the development, implementation, and enforcement of environmental laws, regulations, and policies. The basic premise of the course is to discuss and analyze the history of environmental justice and current advocacy introducing the concept that all people have a right to live in a clean environment and have access to resources to sustain their health and livelihood. The course will cover the environmental justice movement's history, issues, and future, including climate, energy, water, food, and urbanization justice. The course relies on readings, student interaction, and site visits. Student can not earn credit for both ENSC 261 and SOCI 261 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science and Diversity: Equity, Inclusion and Social Justice.

## **Environmental Technology (ENVT)**

#### ENVT 100. Intro Environmental Technology. (3 Credits)

A study of the basic concepts of water pollution control, air pollution control, and solid waste management. Review of regulations relating to Environmental Protection and waste minimization/pollution prevention activities are covered. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

# **Environmental Training (ETC)**

#### ETC 101. Basic Op Wastewater Treatment. (4 Credits)

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. The course includes fundamental concepts of wastewater treatment, laboratory procedures in process control, operational strategies for various methods of treatment, personnel management, development of in-plant safety and equipment maintenance programs, and public relations. 4 credits (short course, 60 contact hours) scheduled 4 times yearly, TBA

#### ETC 102. Basic WW Laboratory Procedures. (1 Credit)

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. Topics covered include basic wastewater chemistry, an overview of the principles of chemistry and laboratory techniques and safety. The course is comprised primarily of laboratory exercises used to teach and provide practice with important laboratory tests and techniques. Prerequisite: ETC 101 1 credit (short course, 24 contact hours) scheduled 4 times yearly, TBA

#### ETC 200. Activated Sludge WW Treatment. (1 Credit)

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. The course includes an activated sludge process overview, modifications and variations, process control testing and calculations, nitrification, and process troubleshooting. Approximately half of the course is held at nearby treatment facilities. Prerequisite: ETC 101 1 credit, (short course, 24 contact hours), scheduled 5 times yearly, TBA

#### ETC 210. Grade 3 Supervision. (3 Credits)

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. Topics covered include training skills, safety and health programs, budgeting, supervisory management, and public relations. The course is comprised primarily of group exercises used to teach and allow practice with vital supervisory skills and techniques. Prerequisite: ETC 101 3 credits (short course, 30 contact hours) scheduled 2 times yearly, TBA

#### ETC 300. Grade 4 Management. (2 Credits)

This course is designed to meet the requirements of New York state sanitary code part 650.4 relative to the training required to receive a New York state wastewater operator's license. Topics covered include residuals handling and beneficial reuse, effluent toxicity, comprehensive plant evaluation and troubleshooting, treatment plant design and construction, tertiary treatment and other advanced operations topics. Prerequisites: ETC 101, ETC 102, ETC 200 and ETC 210 2 credits (short course, 30 contact hours), scheduled 2 times yearly, TBA

## **Equine Riding (ERID)**

#### ERID 102. Intermediate Equitation. (2 Credits)

This course is an introduction to intermediate skills in western equitation. It provides a reinforcement of western equitation for the rider with basic skills, a review of AQHA guidelines, and a continuation of the basics of grooming, tack, bits, and safety as well as proper position and skills while riding. This course has an additional fee. Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course. 2 credits (1 lecture hour, 1- 2 hour laboratory of riding-western seat), fall semester

#### ERID 102W. IntermediateEquitationWestern. (2 Credits)

This course is an introduction to intermeditate skills in western equitation. It provides a reinforcement of western equitation for the rider with basic skills, a review of AQHA guidelines, and a continuation of the basics of grooming, tack, bits, and safety as well as proper position and skills while riding. Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course. 2 credits (1lecture hour, 1-2 hour laboratory of riding-western seat), fall semester.

#### ERID 103. Inter. Western Equitation II. (1 Credit)

A continuation of ERID 102, Intermediate Western Equitation II, emphasizing development and advancement of skills necessary to communicate effectively to the horse to prepare the student for riding intermediate maneuvers. This course has an additional fee. Prerequisite: ESCI 150 with a C or better, and ERID 102 with a grade of B or better or ERID 104 with a C or better, and permission of the instructor 1 credit (2 laboratory hours), spring semester

#### ERID 104. Advanced Equitation. (3 Credits)

This course is an introduction to advanced skills in western equitation. It provides a reinforcement of western equitation for the rider with intermediate skills and includes a review of AQHA guidelines, and a continuation of grooming tack, bits, and safety as well as proper position and skills while riding. This course has an additional fee. Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course. 2 credits (1 lecture hours, 1 - 2 hour laboratory of riding- western seat), fall semester

#### ERID 104W. Advanced Equitation Western. (2 Credits)

This course is an introduction to advanced skills in western equitation. It provides a reinforcement of western equitation for the rider with intermediate skills and includes a review of AQHA guidelines, and a continuation of grooming tack, bits, and safety as well as proper position and skills while riding. Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course. 2 credits (1 lecture hours, 1-2 hour laboratory of riding-western seat), fall semester

#### ERID 105. Adv Western Equitation II. (1 Credit)

A continuation of ERID 104, Advanced Western Equitation II, emphasizing development and advancement of skills necessary to communicate effectively to the horse to prepare the student for riding advanced maneuvers. This course has an additional fee. Prerequisite: ESCI 150 with a C or better, and ERID 102 with a grade of A or ERID 104 with a B or better, and permission of the instructor 1 credit (2 laboratory hours), spring semester

#### ERID 109. IntermediateEquitationHuntSeat. (2 Credits)

This course is an introduction to intermediate skills in hunt seat equitation. The student will continue to develop and advance the basic riding skills of the hunt seat involving the horse and rider working as a team. Particular attention is given to the development of a light set of hands and a balanced seat for the rider through a series of maneuvers and exercises. The student will continue to advance their flat work skills to prepare to jump small courses. This course has an additional fee. Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course. 2 credits (1 lecture hours, 1 - 2 hour laboratory of riding- Hunt seat), fall semester

#### ERID 109H. Intermediate HuntSeat. (2 Credits)

This course is an introduction to intermediate skills in hunt seat equitation. The student will continue to develop and advance the basic riding skills of the hunt seat involving the horse and rider working as a team. Particular attendtion is given to the development of a light set of hands and a balanced seat for the rider through a series of maneuvers and excercises. The student will continue to adcance their flat work skills to prepare to jump small courses. Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course. 2 credits (1 lecture hours, 1-2 hour laboratory of riding - hunt seat), fall semester.

#### ERID 110. Advanced Equitation Hunt Seat. (2 Credits)

This course is an introduction to advanced skills in hunt seat equitation. It provides a reinforcement of basic intermediate hunt seat equitation for the rider with intermediate skills and includes a review of the student's ability to walk, trot and canter the horse with light hands and a balanced seat. The student will continue to develop an improved and independent seat, feel for the horse, and will develop and advance the skills necessary to jump a course of fences. This course has an additional fee. Prerequisite: Admission into the Equine Science and Management Degree Program, Requires permission of instructor or prior placement into course. 2 credits (1 lecture hours, 1 - 2 hour laboratory of riding- Hunt seat), fall semester

#### ERID 110H. Advanced Equitation Hunt Seat. (2 Credits)

This course is an introduction to advanced skills in hunt seat equitation. It provides a reinforcement of basic intermediate hunt seat equitation for the rider with intermediate skills and includes a review of the student's ability to walk, trot and canter the horse with light hands and a balanced seat. The student will continue to develop an improved and independent seat, feel for the horse, and will develop and advance the skills necessary to jump a course of fences. Prerequisite: Admission into the Equine Science and Management Degree program, requires permission of instructor or prior placement into course. 2 credits (1 lecture hours, 1-2 hour labortory of riding - hunt seat), fall semester.

#### ERID 111. Intermediate Hunt Seat. (1 Credit)

This course, a continuation of ERID 102, emphasizes development and advancement of skills necessary to safely jump a two-foot course of fences. This course has an additional fee. Prerequisites: ESCI 150 with a C or better; and ERID 102 with a B or better or ERID 104 with a C or better; and permission of instructor 1 credit (2 laboratory hours), spring semester

#### ERID 112. Advanced Hunt Seat. (1 Credit)

In this course, which is a continuation of ERID 104, development and advancement of skills necessary to safely jump a three-foot course of fences is emphasized. This course has an additional fee. Prerequisites: ESCI 150 with a C or better; and ERID 102 with an A or ERID 104 B or better 1 credit (2 laboratory hours), spring semester

#### ERID 200. Western Riding. (1 Credit)

Development and advancement of basic riding skills of western horsemanship involving the horse and rider working as a team with particular attention to the development of a light set of hands and a balanced seat for the rider. This course has an additional fee. Prerequisites: ERID 103 with a B or ERID 105 with a C, ESCI 150 and ESCI 151 with a C grade or better, and permission of instructor 1 credit (2 laboratory hours), fall semester

#### ERID 210. English Dressage. (2 Credits)

Development and practice of the horse and rider in the basic schooled riding techniques. This course has an additional fee. Prerequisites ESCI 150 and ESCI 151 with a C or better and either ERID 111 with a B or better or ERID 112 with a C or better and by permission of instructor 2 credits (1 lecture hour, 30 contact hours of riding), spring semester

#### ERID 220. Western Dressage. (2 Credits)

Advanced training of the western horse and rider. This course is designed to develop and refine the student's skills and techniques in riding western horses. Emphasis on the rider's ability to develop correct movement at all gaits. Training theories and horse psychology will be explored as it relates to the enhancement of effective riding and getting the desired response from the horse. This course has an additional fee. Prerequisites: ERID 200 with a B grade or better, and by permission of instructor 2 credits (1 lecture hour, 30 contact hours of riding), spring semester

#### ERID 240. Intro Train Hunters & Jumpers. (4 Credits)

The introduction of Hunt Seat Riding techniques to establish the foundation for the student to continue with more intensive training in advanced courses. The students will gain a broad working knowledge of the psychology of horses and different theories on the breaking and training of horses Theory and intensive work on the riders form and function; introduction and advancement of lateral and longitudinal bending techniques; introduction to training horses over cavaletti, lines, and courses. Management of the training horse's health care and maintenance techniques and barn management and equipment knowledge and care will be introduced. This course has an additional fee. Prerequisites: ESCI 150, ESCI 151, ERID 111 with a B grade or better or ERID 112 with a B grade or better and permission of instructor. 4 credits (1 lecture hour and 12 laboratory hours), fall semester

#### ERID 250. Breaking And Training. (3 Credits)

The training of young, unbroken horses. Emphasis on the techniques to break and train these horses on the ground, riding or driving. Students are also responsible for the complete care of both the horses and the training facility. This course has an additional fee. Prerequisites: ERID 103 with a B or better or ERID 105 with a B or better and permission of instructor, ESCI 150 and ESCI 151 with a C or better 3 credits (1 lecture hour/week, total of 60 laboratory hours), fall semester

#### ERID 255. Intermed Breaking & Training. (4 Credits)

The training of young horses utilizing techniques learned in ERID 250 as well as advanced techniques. Management of young horses, record keeping, health care and stable management are emphasized. This course has an additional fee. Prerequisite: ERID 250 with minimum grade of 'B' or better and permission of instructor 4 credits (12 laboratory hours/week for 15 weeks), spring semester

#### ERID 260. Inter Training Hunters Jumpers. (4 Credits)

An exploration of Hunt Seat riding techniques to train the young, spoiled or difficult horse on the flat and over fences. Functions and applications of cavaletti and gymnastics; the systematic progression in training from cavaletti and through jumping lines, more difficult obstacles, full courses and cross country work. Procedures for marketing the jumping horse and showing it in competitive situations. Management of the training horse's health care and maintenance techniques and barn management and equipment knowledge and care will be continued. This course has an additional fee. Prerequisite: ERID 240 with a B or better or ERID 250 with a B or better and permission of instructor 4 credits (12 laboratory hours), spring semester

#### ERID 300. Adv. Equine Specialization I. (4 Credits)

This is the first of three intense courses in a specific concentration (hunt seat, western, or draft/driving). Advanced principles and practices of breaking, training and management will be emphasized. Students will help manage the horses and facilities in the particular area of concentration. This course has an additional fee. Prerequisites: ERID 255 or 260 or ESCI 170 with a minimum grade of B and ESCI 130 with a B or better and permission of instructor 4 credits (1 lecture hour and 9 laboratory hours), fall or spring semester

#### ERID 330. Equine Instruction Methodology. (1 Credit)

A study of effective teaching techniques relating to equine riding and driving courses with consideration of the physical and psychological factors involved. Appropriate class preparation, teaching methods and student evaluation will be covered. Opportunities for observation, assisting and teaching experience. Prerequisite: Equine major with at least 60 credit hours 1 credit (1 lecture hour, 2 laboratory hours), fall semester

#### ERID 350. Advanced Equine Special II. (4 Credits)

This is the second of three intense courses in a specific concentration (Hunt seat, western, draft/driving or breeding) the horse will be brought to its best possible level of management/performance. An analysis of the horses' physical and mental capabilities will be used to develop them to their fullest. Horses may be prepared for competition and exhibitions. The management of groups of competitive show horses will be taught. In some options, students will participate in the supervision of underclassmen. This course has an additional fee. Prerequisite: ERID 300 with a B or better or ESCI 320 and 340 with a B or better and permission of instructor 4 credits (1 lecture hour and 9 laboratory hours), fall or spring semester

#### ERID 400. Adv Equine Specialization III. (4 Credits)

This is the third course in a three-course sequence designed to enhance the students' skills in hunt seat, western, or draft horse training and management. Designed to utilize the skills taught in ERID 300 and 350. This course focuses more on the student's own managerial abilities. Students may assist in teaching students at the freshman and sophomore levels. This course has an additional fee. Prerequisite: ERID 350 with a B or better and permission of instructor 4 credits (1 lecture hour, 9 laboratory hours), fall or spring semester

# **Equine Science (ESCI)**

#### ESCI 110. Equine Anatomy & Physiology. (3 Credits)

The study of the anatomy and physiology of horses' body systems: skeletal, muscular, respiratory, cardiovascular, neurological, endrocrinological, digestive, and reproductive systems. 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science (and Scientific Reasoning).

#### ESCI 130. Equine & Stable Management. (3 Credits)

Lecture subjects include general knowledge and observation of horse health, e.g., condition, dentistry, internal and external parasites, limb and hoof care, and shoeing and trimming, as well as stable management and employee success. Laboratory skills include, leg wraps, basic restraints, equipment applications, hoof trimming and shoeing, and fitting and showmanship. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### ESCI 140. Equine Judging. (2 Credits)

Evaluating and placing conformation and performance classes of various breeds of horses with an emphasis on the stock breeds. Proper use of terminology as it applies to conformation and performance classes will be taught. Video and live classes will be used as a tool for properly evaluating horses and their performance. 2 credits (1 lecture hour, one 2-hour laboratory), spring semester

#### ESCI 150. Farm Practicum I Equine. (2 Credits)

Hands-on practical experience in stable, farm management. Mucking, grooming, feeding, general maintenance of arena, paddocks, stable, and stable. 2 credits (3 hours per day, 7 days per week for 2 2-week sections), fall semester

#### ESCI 151. Farm Practicum II (Equine). (2 Credits)

Hands-on practical experience in stable and farm management as well as supervising work details and management of horses. 2 credits (3 hours per day, 7 days per week for 2 2-week sections), fall or spring semester

#### ESCI 170. Draft Horse Management. (2 Credits)

Lecture topics emphasize a survey of today's industry, breeds, history, and conformation, principles of harnessing and hitching, and management of draft horses. Also included are showing procedures, breeding, foaling and training. Laboratory consists of hands-on experience in the handling, harnessing, hitching, driving, care and management of draft and driving horses. 2 credits (1 lecture hour, 3 laboratory hours), spring semester

#### ESCI 210. Equine Nutrition. (3 Credits)

Functions and properties of nutrients, the digestive system of the horse as compared to simple stomached animals and ruminants, the effects of proper nutrition on horses of different ages and levels of exercise. Labs on the composition and nutritive value of feeds, the use of feeding standards in balancing rations and forage and concentrate identification. Yearly feed costs under set conditions. 3 credits (2 lecture hours, one 2hour laboratory), fall semester Prerequisite: ESCI 110 with a C- or better or permission of instructor 1 credit (2 laboratory hours), spring semester

#### ESCI 225. Equine Artificial Insemination. (1 Credit)

The artificial insemination of horses. Topics and competencies include A-V types and preparation, stallion collection, semen evaluation, teasing and mare preparation, and insemination techniques. Co-requisite/ Prerequisite: ESCI 305 1 credit (2 laboratory hours), spring semester

#### ESCI 235. Fitting And Marketing-Equine. (1 Credit)

The fitting and marketing of various breeds of horses. Topics include records, pedigree evaluation. Actual experience in the sales preparation of horses and mechanics of sales operation through direct participation in the annual fall college standardbred auction. 1 credit (3 laboratory hours), fall semester

#### ESCI 300. Internship In Equine Husbandry. (4 Credits)

Students work in an approved job in the equine industry in this internship. Comprehensive oral and written reports are required as well as an employer and staff evaluation. The student will give an oral presentation. Prerequisite: Completion of one semester in Equine Science and approval/ permission of staff 4 credits (12-week, 480-hour minimum), fall or spring or summer semester

#### ESCI 305. Equine Reproduction/Mgt. (3 Credits)

Anatomy and Physiology related to the functional performance of the male and female reproductive systems. Processes involved with the formation of the sperm and ova; estrous cycle of the horse; methods of semen collection and insemination. Breeding problems and the importance of selection and management are also emphasized. Basic Genetics applicable to the improvement of horses, color genetics and inherited abnormalities are covered. Prerequisite: ESCI 110 with a C- or better, ESCI 130 or approval from instructor. 3 credits (2 lecture hours, 2 Laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science (and Scientific Reasoning).

#### ESCI 310. Applied Equine Nutrition. (3 Credits)

Review of basic nutrition principles. Application of theoretical principles of nutrition as applied to feeding groups of horses. Ration balancing for different classes of horses combined with feeding trials to assess ration efficiency. Emphasis on feeding for growth and performance within economic parameters. Avoidance of metabolic and nutritional disorders. Discussion of nutrient metabolism and biochemistry of nutrition. Labs on ration balancing, group feeding, performance analysis relating to rations. Prerequisites: ESCI 210 with a C- or better 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### ESCI 312. Equine Health & Lameness. (3 Credits)

Emphasis on etiology, diagnosis and treatment of lameness. Metabolic, bacterial, viral, fungal and parasitic diseases of the horse. Prerequisite: ESCI 110 with a C- or better or permission of instructor 3 credits (3 lecture hours), spring semester

#### ESCI 313. Lab in Equine Health Lameness. (1 Credit)

Application of the principles learned in Equine Health and Lameness to the health care of the college's horse herd. Subjects covered will include routine vaccination and deworming, blood testing, dental care and lameness evaluation. Prerequisite/co-requisite: ESCI 312 1 credit (2 laboratory hours), spring semester

#### ESCI 315. Equine Business Management. (3 Credits)

Content will emphasize equine enterprise management. Topics to include equine inventories, measurement and cost determination of enterprise inputs, employer labor responsibilities, employee evaluation, contractual and billing procedures, insurance, facility evaluation and work reports. Prerequisite or co-requisite: ERID-ESTB 300 or ESCI 320-340; ESCI 335-345; and AGBS 240 Farm Management and Finance 3 credits (3 lecture hours) fall semester

#### ESCI 320. Equine Young Stock Management. (1 Credit)

This course provides hands-on and management skills needed by working equine farm managers. It will include such skill areas as weaning foals, young stock management, identification, record keeping and sales preparation of yearlings. The course will also deal with prebreeding season techniques such as, semen evaluation in stallions and photoperiod regulation in mares. Prerequisites: ESCI 305 with a B or better, , ESCI 225 with a B or better, and ERID 250 or ERID 240 with a B or better, or permission of the instructor . 1 credit (2 laboratory hours), fall semester

#### ESCI 330. Farrier Science. (2 Credits)

This course is designed to teach students the science of trimming, shoeing and resetting shoes on a variety of horses, based on an understanding of the anatomy of the horse's hoof and lower leg structure. Students will learn to use a forge to make different shoes. Prerequisite: ESCI 110, ESCI 130 2 credits (1 lecture hour, 3 laboratory hours), fall semester

#### ESCI 335. Equine Aquatic Therapies. (2 Credits)

This course will provide an introduction to the aquatic modalities used in equine rehabilitation and athletic conditioning of horses. Students will gain practical experience working with the underwater treadmill, cold salt water spa, and swimming. Current scientific research on aquatic therapies as they relate to both rehabilitation and conditioning will be discussed. Prerequisites: ERID 250 or ERID 240 or ESTB 210 or ESTB 200, ESCI 312 with a C or better or permission of instructor 2 credits (1 lecture hour, 6 laboratory hours), fall and spring semesters

#### ESCI 340. Equine Promotion & Sales. (3 Credits)

This course is designed to provide students with the opportunity to get the "hands on" skills needed to prepare a horse for private of public sale. Discussions on the economics of public sales, bookkeeping procedures, forms needed, advertising, legal responsibilities of sales companies, buyer and owner interaction and auction variations among different breeds. Prerequisites: ESCI 305, ESCI 130, ESCI 235 3 credits (1 lecture hour, 4 laboratory hours), fall semester

#### ESCI 345. Advanced Equine Anatomy. (2 Credits)

This course will provide a focused examination of equine anatomy as it relates to rehabilitation. Musculoskeletal anatomy will be presented in detail, as an understanding of the relevant anatomy is crucial for effective rehabilitation in horses. Skeletal structures will be presented within the context of equine biomechanics and muscles will be grouped by both function and region. Anatomical models and live hoarse will be utilized to provide context and hands-on study of the information presented. Prerequisites: ESCI 312 with a C or better or permission of instructor 2 credits (4 laboratory hours), fall and spring semesters

#### ESCI 350. Advanced Equine Aqua Therapies. (2 Credits)

This course will serve as a continuation of ESCI 335 Equine Aquatic Therapies. Students will gain additional practical experience working with the underwater treadmill, cold salt water spa, and swimming, including learning to start new horses in the equipment and working with more difficult cases. Students will learn how to assess improvement in athletic fitness and develop treatment protocols for both rehabilitation and athletic conditioning. Prerequisites: ESCI 335 2 credits (4 laboratory hours), spring semester

#### ESCI 360. Intro to Equine Medications. (1 Credit)

This course will introduce the major classes of medications used in the equine industry, including sedatives, antimicrobials, NSAIDs and steroids. Students will learn the physiological mechanisms behind the actions of these medications and the common usage within the industry. This course will also cover adverse effects of certain medications frequently used in the equine industry and why they develop. Prerequisite: ESCI 312 with a C or better 1 Credit (1 lecture hour)

#### ESCI 370. Concepts for Diagnosis. (1 Credit)

This course introduces the various diagnostic methods used to diagnose rehabilitation cases. Students will discuss lameness and neurologic evaluations as they relate to the common cases seen in equine rehabilitation. Imaging modalities and their differences will be presented to enable students to understand their role in diagnosis and evaluation throughout rehabilitation. Prerequisites: ESCI 312 with a C or better or permission of instructor 1 credits (1 lecture hour), fall and spring semesters

#### ESCI 380. Equine Rehab Therapies. (3 Credits)

This course will provide and instruction to the various modalities used in equine rehabilitation. Students will gain practical experience working with the therapeutic laser, therapeutic ultrasound, MagnaWave, and GameReady. The scientific basis for using these treatments will be presented and students will gain an understanding of the physiologic effects of these treatments as well as indications and contraindications for their use. Prerequisites: ESCI 345 with a B or better, ESCI 312 with a C or better of permission of instructor 3 credits (1 lecture hour, 6 laboratory hours), fall and spring semesters

#### ESCI 390. Current Research in Rehab. (1 Credit)

This discussion-based course focuses on current research papers related to the equine rehabilitation field. Research papers will be presents and discussed on laser therapy, acupuncture, underwater treadmill, cold therapy, therapeutic ultrasound, and various other rehabilitation modalities as well as major causes of lameness in horses. Prerequisites: ESCI 335 with a C or better and permission of instructor, Co-requisite: ESCI 380 1 credits (1 lecture hour), fall and spring semesters

#### ESCI 400. Adv Equine Reproduction/Mgt. (4 Credits)

This course is designed to provide an advanced level of management for breeding farm operations. It deals with the management of stallions, brood mares and foals and all related activities. A general knowledge of computers, record keeping, equine health, reproductive physiology and horse handling skills is needed prior to admittance. Prerequisites: ESCI 340, ESCI 320, ESCI 310, ESCI 225, 4 credits (1 lecture hour, 9 laboratory hours), spring semester

#### ESCI 401. App. Adv. Equine Specializatio. (4 Credits)

This course is designed to enhance the student's skills in hunt seat, western, or draft horse training and management. Students will utilize the skills taught in ERID 300 Advanced Equine Specialization I and ERID 350 Advanced Equine Specialization II but under the direct supervision of an owner, manager, supervisor or educator. Student must submit weekly logs (below) to the instructor detailing their learning outcomes and how they achieved them that week. Log questions are provided to guide the students in providing information to their supervisor. Students will be required to give a final presentation discussing learning outcomes achieved throughout the course. This course can be taken in lieu of ERID 400 Advanced Equine Specialization III with instructors' permission and all other degree course work must be completed prior to requesting enrollment. Prerequisite of ERID 300 and ERID 350 with a B or better, permission from instructor and division chair. Internship 4 credits (12 hours per week for 15 weeks)

#### ESCI 405. Problems and Diseases. (2 Credits)

This course focuses on the major causes of lameness in houses and the process of diagnosing and treating them. Students will work through clinical cases in a discussion format to determine the cause of the lameness and develop treatment plans for each case. Prerequisites: ESCI 370, ESCI 335, and ESCI 380 or permission of instructor 2 credits (2 lecture hours), fall and spring semester

#### ESCI 410. Equine Exercise Physiology. (2 Credits)

This course will cover technology and methodology of conditioning horses used in sport. Emphasis will be placed on the state of fitness of the equine athlete and its effect on the bodily systems. Prerequisites/corequisite: ESCI 312 and ESCI 110 all with a C or better 2 credits (2 lecture hours), spring semester

#### ESCI 415. Equine Rehabilitation III. (4 Credits)

This course will apply knowledge and skills developed during ESCI 325 and ESCI 365. Students will be involved with implementing physical rehabilitation programs for horses, documenting the horses' progress as well as facility maintenance, equipment operation, budget development, ordering of supplies, billing, and client communication. Students will also assist students enrolled in ESCI 325/365. Current research papers regarding physical rehabilitation will be discussed. Students will be evaluated on skills, effectiveness, leadership, work ethic, and communication skills. Presentations by students on the uses of therapies in equine rehabilitation/training will be required. Prerequisites: ESCI 365 with a B or better, and ESCI 410 with a C or better, and permission of instructor 4 credits (1 lecture hour, 9 laboratory hours), fall and spring semester

#### ESCI 420. Equine Internship. (15 Credits)

A supervised field work program in a selected equine field. Students will carry out a planned program of educational experiences, under the direct supervision of an owner, manager, supervisor, or educator. This Internship must be pre- approved by an internship coordinator. Students and employers must submit weekly reports and evaluations while on internship. The student will be required to submit a written report and give an oral presentation. A student must complete 15 credit hours of academic study or the equivalent of supervised work (40 hours of supervised work is equal to one credit hour). A combination of academic study and work experience totaling 15 credit hours is acceptable. An international equine exchange program is acceptable and available in fulfilling this requirement. "Visiting student" status may be granted to students enrolled in other United States equine programs who wish to pursue an international exchange program. Prerequisite: ESCI 450 Internship Orientation 15 credits, (minimum 15 weeks minimum 40 hours/week)

#### ESCI 430. Clinical Application. (4 Credits)

This course allows students to implement all the information gained in their previous equine rehabilitation courses in a clinical setting. Students will perform daily treatments of horses in a clinical setting. Each student will be assigned care horses, which they will be responsible for assessing daily for changes related to treatment. Students will present assigned cases during rounds each week and will provide insight into progress seen and suggest changes in treatment plans. Students will become more involved in the management of the facility and learn to use veterinary records software to monitor cases, manage inventory, etc. Prerequisites: ESCI 370, ESCI 335 with a C or better and ESCI 380 with a C or better or permission of instructor 4 credits (1 lecture hour and 9 laboratory hours), fall and spring semester

#### ESCI 450. Equine Sci Intern Orientation. (1 Credit)

This course is designed to prepare students for an internship and to assist them with the process of employment and career development. It prepares students for internship requirements such as goal definition, placement site identification, job application, performance evaluation and report writing. ESCI 450 formalizes internship planning and preparation to insure that internships are procured, conducted in a professional manner, follow course guidelines, and satisfy the goals and objectives of students, faculty advisors and cooperating placement sites. Students must complete ESCI 450 prior to enrolling in ESCI 420. Prerequisite: junior level or higher standing required. 1 credit - 1 lecture hour (spring semester)

## **Equine Standard Bred (ESTB)**

#### ESTB 100. Care & Training Race Horse I. (5 Credits)

Introductory course in horse racing, covering basic stable management, harnessing, tacking, jogging, feeding and conditioning of the race horse. Use and application of miscellaneous equipment. Breaking of the yearling and training of the 2-year old. 5 credits (10 laboratory hours combined with lecture/recitation), fall semester

#### ESTB 101. Care & Training Race Horse II. (5 Credits)

Continuation of ESTB 100 Principles of shoeing, training, problem horses, gaiting problems. Train and condition horses in preparation for racing. Prerequisite: ESTB 100 or permission of instructor 5 credits (15 laboratory hours combined with lecture/recitation), spring semester

#### ESTB 200. Harness Racing. (5 Credits)

A continuation of ESTB 100 and ESTB 101. This course provides the actual hands-on experience of racing at county fairs and amateur events. Students condition and race college owned or privately owned horses. Prerequisites: At least a B average in ESTB 100, ESTB 101 and an USTA driver's F-Q license, permission of the instructor 5 credits (one lecture hour, five two-hour laboratories), summer semester

#### ESTB 210. Advanced Equine Racing. (0 or 4 Credits)

A continuation of ESTB 101. This course focuses upon topics relative to racing horses at pari-mutuel racetracks in the United States. Students will have the opportunity to study rules of racing relative to starting, claiming, and placing of race horses. Students will also have the opportunity to study sales of weanlings, yearlings and 2-year-olds in training. Prerequisite: ESTB 101 with a C or better or permission of instructor 4 credits (1lecture hour and 9 laboratory hours), fall semester

#### ESTB 220. Equine Racing Capstone. (0 or 4 Credits)

ESTB 220 is a capstone course designed to provide students in the equine racing management program with an opportunity to utilize and integrate concepts learned in the first three semesters of course work. Prerequisite: ESTB 210 or permission of the instructor 4 credits (1 lecture hour and 9 laboratory hours), spring semester

#### ESTB 300. Adv. Equine Special- Racing. (4 Credits)

Students will be assigned the enterprise of a two-horse stable. Management responsibilities include breaking of yearlings, shoeing, equipment and nutritional needs, owner correspondence and conditioning young standardbred or thoroughbred race horses. Students are evaluated on effectiveness and leadership, management skills, decision making skills, knowledge of specialization, work ethic, creativity and communication skills. Papers and presentations are required in theory portion. The theme for lecture topics will concentrate on horse psychology and training methodologies in the early training of the race horses. Prerequisite: ESTB 210 and 220, with a minimum grade of B or permission of instructor 4 credits (1 lecture hour and 9 laboratory hours), fall semester

#### ESTB 350. Adv Equine Special II Racing. (4 Credits)

Students will be assigned to manage a four to five-horse race stable. Management duties expanded from ESTB 300 to include inventory, horse evaluations, billing, ordering supplies, budget development, and equipment operation. Students will train problem horses, fast-training trips. Evaluation procedures continued from ESTB 300. Theme for lecture session will be conditioning procedures, evaluating race fitness, exercise physiology and physiological profiling of the race horse. Prerequisite: ESTB 300 with a B or better and permission of instructor 4 credits (1 lecture hour and 9 laboratory hours), fall semester

#### ESTB 400. Equine Racing Mgt III. (4 Credits)

Students assigned management of a 10 to 12 horse race stable. Responsibilities will include the complete management, health, training, conditioning and racing of horses. Students will be evaluated on effectiveness of management and training responsibilities. The theme for the lecture portion will concentrate on effective management techniques. Prerequisite: ESTB 350 with a B or better and permission of instructor 4 credits (1 lecture hour and 9 laboratory hours), spring semester

### **Exercise Science (EXSC)**

#### EXSC 100. Intro to Wellness & Fitness. (4 Credits)

This course presents a basic understanding of physical fitness as it relates to health and disease. Emphasis is placed on safe, effective, techniques for developing all components of physical fitness. Course assists students in critically evaluating exercise information promoted by the media. Includes discussion of the many and varied career opportunities in exercise science. 4 credits (3 lecture hours and 2 lab hours per week), fall and spring semester

#### EXSC 101. Fieldwork in EXSC. (1 Credit)

This course is designed to provide the student with his/her first practical experience in the corporate, clinic and/or community setting. The primary objective of this practicum is to give the student an opportunity to closely observe the daily operations of a facility in which exercise is used. This experience is intended to assist the student in determining potential areas of interest for the senior internship. Prerequisite: EXSC 100 1 credit (45 fieldwork hours), spring semester

#### EXSC 200. Exercise Physiology I. (4 Credits)

EXSC 200 examines sport and exercise (primarily cardiovascular exercise) are assessed from a strong scientific and physiologic perspective. Topics covered include the body's acquisition and use of energy to fuel daily activities and exercise. Foundational muscular and cardiovascular physiology are evaluated, with an emphasis on how these systems adapt to training and exercise. Laboratory classes apply the principles learned in class to actual physio-logical experiments. This class has an associated lab fee. Prerequisite or Co-requisite: MAGN 101 4 credits (3 lecture hours and 3 laboratory hours per week), fall semester

#### EXSC 201. Exercise Physiology II. (4 Credits)

EXSC 201 will continue the study the body's acquisition and use of energy to fuel daily activities and exercise, but with a more in depth view than was covered in the prerequisite EXSC 200 course. Students will become familiar with the chemical reactions involved in these energetic processes. The body's nervous system, and how electronic signals are sent throughout the body in order to elicit a required response. This will serve as a foundation for a more in depth discussion of the cardiac conduction system, and how the conduction of electricity through the heart can be mapped on an ECG. Students will also investigate the respiratory system, acid-base & temperature regulation, and how these factors adjust in response to exercise. Time permitting, training for higher performance will also be investigated. Prerequisite: EXSC 200 4 credits (3 lecture hours and 3 laboratory hours per week), spring semester

#### EXSC 300. Sport & Exercise Psychology. (3 Credits)

This course introduces the student to the psychological factors that influence individual and group sport and exercise participation. Topics include the influence of personal psychology and the environment on athletic performance, techniques to enhance athletic and exercise performance and adherence, and the dynamics of group processes as they relate to sports. Discussion to address psycho-social factors related to the healthy psychological growth and development of children including aggression, character development, and sportspersonship. Prerequisite: PSYC 101, fall semester 3 credits (3 lecture hours per week)

#### EXSC 301. Kinesiology & Applied Anatomy. (4 Credits)

EXSC 301 examines the anatomical structures and mechanical aspects of human movement. Basic neuromuscular and biomechanical principles are introduced. Emphasis is placed on understanding the functional anatomy of the musculoskeletal and articular systems; the course will culminate in students utilizing knowledge of these systems to evaluate posture, locomotion, and a complex motion of their choice. Laboratory exercises concentrate on the role of muscle and joint action during basic movements. Students will be required to apply their knowledge of anatomy towards understanding individual joint function as well as the integrated function of several joints during complex activities such as normal human locomotion. Prerequisites: C- or better in BIOL 150 Pre- or Co-requisite: PHYS 107 4 credits (3 lecture hours and 2 laboratory hour per week), fall semester

#### EXSC 304. Community Service in Sport Sci. (1 Credit)

This course is designed to enable the student to participate in and to lead volunteer work in the community promoting health and fitness. This experience emphasizes donating time to promote community well-being through application of a variety of skills developed in Exercise Science classes. The experience may include work at health or wellness fairs, at county health department functions, or in public schools. Pre-or Co requisite: EXSC 201 Prerequisites: MAST 100 and permission of the faculty member. 1 credit (45 fieldwork hours), spring semester

#### EXSC 305. Fitness Assess and Ex Rx. (4 Credits)

EXSC 305 develops the rationale for, and the skills required to evaluate and prescribe health-related fitness programs for individuals. Students will learn the theory underpinning cardiovascular, musculoskeletal and body composition assessment, then how this theory can be applied practically in designing appropriate exercise prescriptions. The practical laboratory also includes a component on exercise leadership in a facility setting, designed to prepare students for the professional setting of the Wellness Center Internship (EXSC 402). The course is also intended to help prepare the student to sit for a number of national certification exams. Prerequisite: EXSC 201 4 credits (3 lecture hours, 3 laboratory hours), spring semester

#### EXSC 310. Exercise for Cancer Population. (3 Credits)

This course will prepare students to assess, train, supervise and motivate Wellness Center clients who are currently undergoing cancer treatment, have recently completed cancer treatment, or experience ongoing symptoms that require specific consideration. Students will extend their understanding of exercise assessment and prescription theory to incorporate the limitations that accompany a cancer treatment regimen, as well as the help improve negative effects of treatment that linger long after treatment is complete. Working in this manner with the cancer community is an element of the EXSC 402 Wellness Center Internship requirement for this major. Prerequisites: BIOL 150 and EXSC 305 3 credits (3 lecture hours)

#### EXSC 400. App Strength Cond Principles. (3 Credits)

Provides students with the ability to develop and to implement sportspecific training programs, including periodization of the training cycle. Sport-specific conditioning of aerobic and anaerobic systems, including strength training, and discussion of short- and long-term benefits of specialized programs. Emphasis will be on appraisal and determination of individualized training needs and the establishment of personal performance goals. Includes instruction in the proper techniques and execution of training activities, as well as skill development in client education. Practical mastery is included. Prerequisite: EXSC 201 3 credits (3 lecture hours), fall semester

#### EXSC 401. Cardiopulmonary Assess for Ex. (3 Credits)

Integration of cardiorespiratory physiological concepts into the assessment of an individual's aerobic capacity and the application of these data in designing an effective aerobic exercise program. ACSM Guidelines will be followed. Prerequisite: EXSC 305 3 credits (3 lecture hours), fall semester

#### EXSC 402. Wellness Center Internship. (3 Credits)

Experience in the operation of the SUNY Morrisville Wellness facility and in the promotion of wellness concepts on campus. Student assumes a leadership role in the wellness center performing administrative as well as practical exercise-related tasks including exercise testing, exercise programming, facility supervision, and client monitoring. Students participate in wellness promotions on campus including health fairs, dorm meetings, health center seminars, etc. Student works under direction of the center supervisor and a faculty sponsor. Pre- or Corequisites: EXSC 401, and permission of the faculty member. 3 credits (135 fieldwork hours), fall and spring semesters

#### EXSC 403. Ex Phys Special Populations. (3 Credits)

EXSC 403 evaluates the impact of various disease processes in the cardiovascular and musculoskeletal assessment of an affected client. Diseases discussed reflect common contemporary diseases that students are likely to encounter in a professional situation, but, time permitting, may be adjusted to suit student interests. Typical topics include diabetes, chronic heart disease, COPD, HIV/ AIDS and arthritis. Because this is a 400 level class, recent research related to these topics is also reviewed, analyzed, discussed in class and assessed in insemester and final exams. Prerequisite: EXSC 305 3 credits (3 lecture hours), fall semester

#### EXSC 404. Fitness Leadership and Admin. (3 Credits)

Prepares the student to manage and operate a health/fitness program. Provides instruction in the areas of decision making, problem solving, personnel issues, fiscal policies, budgetary procedures, legal foundations, and facility management. Pre- or Co-requisite: EXSC 402 3 credits (3 lecture hours), spring semester

#### EXSC 405. EXSC Internship. (6 Credits)

Capstone experience for all Exercise Science majors. A practical learning experience in an exercise setting. Sites include corporate fitness centers, wellness clinics, university fitness facilities, and community- based health clubs. Students are involved with day-to-day operations of the agency. Involves variable 270 - 540 hours of work at chosen agency. Corequisite: EXSC 400, EXSC 401, EXSC 403 and permission of faculty member Variable 6 Credits (270 fieldwork hours), fall and spring semester

### Food & Agribusiness - MS (FAB)

# FAB 500. Leadership and Organizational Behavior for Agribusiness. (3 Credits)

The purpose of this course is two-fold: for students to enhance their intrapersonal perspective of management and leadership as well as their understanding of individuals and teams within organizational systems. We adopt the viewpoint of upper level managers, owners, and or board members; we explore human interaction through theory concepts and application. With the use of academic and live case studies students will diagnose, formulate, and develop recommendations for complex situations to enhance organizational performance. Specific emphasis is placed on the fundamentals of organizational behavior with regard to agricultural cooperatives, family owned businesses, family boards, and leadership within the foods system. 3 credits, Fall or Spring, Online. Prerequisite: Graduate Standing or instructor's approval.

# FAB 510. Quantitative Methods for Agribusiness and the Food System. (3 Credits)

This course provides students with foundational statistical and optimization methods used in agribusiness. Methods include probabilistic reasoning, calculation of functional extrema, ordinary least squares, maximum likelihood, experimental design, and hypothesis testing. Students apply material to agribusiness data using R software. Prerequisite: Graduate Standing or instructor's approval. 3 credits. Fall or Spring. Online.

#### FAB 520. Advanced Quantitative Methods. (3 Credits)

Students gain the ability to process real-world experiences and observations through the lens of subtle statistical models. Topics are chosen that are commonly successfully used in business and social sciences, economics, and agriculture. Applications focus on agribusiness and the food system. Students exit the course with enhanced abilities to use information for business and policy decision making, and will be able to apply state-of-the-art statistical models to business, economic, and social science data. Prerequisite: FAB 510 Quantitative Methods for Agribusiness and the Food System with a C or better 3 credits. Fall or Spring. Online.

#### FAB 530. Agribusiness Economics. (3 Credits)

Powerful frameworks for strategic decision making and understanding food and other agricultural markets are surveyed. Focus is on agribusiness issues and applications. Typical topics include demand and production analysis, factor input decisions such as labor, capital, and production inputs, general and partial equilibrium analysis, price aggregation, game theory, monopolist and oligopolist behavior, agricultural cooperatives, product differentiation, asymmetric information, advertising, R&D, and price discrimination. 3 credits. Online.

#### FAB 550. Supply Chain Management of Perishable Goods. (3 Credits)

Learn the fundamentals of how food gets distributed from farm to table. Develop the skills needed to effectively manage perishable inventory. Topics include the structure of the food system, perishable inventory management, the bullwhip effect, price transmission, control and coordination in food and agricultural supply chains, food safety, traceability, sustainability, and food waste. Prerequisite: FAB 510 Quantitative Methods for Agribusiness and the Food System with a C or better 3 credits. Online.

#### FAB 600. Finance for Food and Agribusiness. (3 Credits)

This course is the study of financial management applied to problems and opportunities faced by firms which operate in the food and agricultural sectors. Financial management, performance measurements, long- and short-term investment analysis, capital structures, risk management, credit risk assessments, lender-borrower relationships, financial contracting, and leasing vs ownership will be applied to the agribusiness decision making. We will go well beyond the introductory period and actually use financial tools to better manage the decisionmaking process. Prerequisite: FAB 510 Quantitative Methods for Agribusiness and the Food System with a C or better3 credits. Online.

#### FAB 610. Personnel Management for the Food System. (3 Credits)

This course is the study of applied personnel management as faced by firms which operate in the food and agricultural sectors. Emphasis is placed on the unique aspects of labor laws, labor management, compensation, productivity, performance, recruitment, training, development, and terminating employees with regard to a multicultural workforce. Course includes application through the use of reproduced and live case problems. Prerequisite: FAB 510 Quantitative Methods for Agribusiness and the Food System with a C or better3 Credits. Online.

#### FAB 640. Food Labeling. (3 Credits)

Food label regulation is necessary for efficient markets that provide maximize net benefits to both consumers and producers. Students develop a keen understanding of the subtle messaging on food packaging through analysis of consumer perceptions of food product attributes, private and public benefits and costs of labeling, and the goals of government policy with respect to nutrition, health and food safety, and consumer and producer rights. Students consider the policy and economic implications of food labels and learn how to develop food labels for food brands. The rationale and rules of government food label regulations are discussed and debated. Topics include the economic analysis of food labels, food label requirements, nutrition and health claims, misbranding, adulteration, third part verification, bioterrorism, religious and dietary labeling, and the past and future of food labeling. 3 credits. Online.

#### FAB 650. Marketing in Agribusiness and the Food System. (3 Credits)

Students construct creative marketing plans for food products. Marketing decisions are supported by methodical analysis of the marketing environment and consumer behavior. Factors specific to food markets are studied in high detail and used to practice strategic, creative decision making. 3 credits. Online.

#### FAB 660. Agricultural and Food Policy. (3 Credits)

Understand the needs and reasons for policy, mechanisms for program implementation and administration, and analytical and evaluation tools to assess agricultural and food policy. Topics are motivated by a systems approach to agricultural production and food distribution, and include U.S. farm policy goals and programs, U.S. trade and international development policy, environmental policy options and consequences, food assistance and nutrition policy, and consumer-driven policy issues regarding food systems. 3 credits. Online.

#### FAB 670. Seminar in FAB. (1-3 Credits)

Students and faculty delve deep into a special topic or project germane to the food and fiber system. High levels of participation are expected. Seminars may include paper readings and discussions, industry studies, business studies, research projects, marketing projects, data analysis, guest speakers, and lectures. Topics and credits will change each semester at the discretion of the instructor. The purpose is to provide a forum in which students and professors can apply expertise to fresh topics on a continuing basis. Contact FAB program coordinator for details before enrolling. 1 credits (Course is repeatable for credit up to 3 times provided content differs). Online.

#### FAB 680. FAB Project Capstone. (3 Credits)

Students and faculty work closely together on student Master's Projects. Students learn how to formulate a research question, research design, acquire data, manage a project, present results, craft a report or article, construct a narrative, and distribute `outputs. Food and Agribusiness (FAB) Master's Students are required to pass either FAB 680 or FAB 690, but not both. Prerequisites: FAB 500, 510 and 530 with a C or better. 3 Credits. Online.

#### FAB 690. Agribusiness Consulting. (3 Credits)

Graduate students, working in consulting teams, will act as top managers to apply the concepts and tools they have developed in Food and Agribusiness (FAB) courses to an agribusiness of their choice. Consulting teams will analyze an agribusiness organization, make recommendations to enhance the competitiveness of the organization, and students will present their implementation plan to the organizations' top executives. FAB Master's students are required to pass either FAB 680 or FAB 690, but not both. Prerequisites: FAB 500, 510 and 530 with a C or better.3 credits. Online.

#### FAB 700. Master's Project & Consulting. (1-6 Credits)

Students conduct projects to fulfill the requirements of Master of Science (MS) in Food and Agribusiness (FAB) under the advisement of the student's Project or Capstone MS Committee Members. Faculty prepare students for professional advancement beyond FAB. Credits are determined by faculty to reflect the workload of the student. Repeatable. Prerequisite: Second Year Graduate Student. 1-6 credits. Online.

# Food service Administration (FSAD)

#### FSAD 100. Global and Ethnic Foods. (3 Credits)

Presents food and cultural topics to Food majors and Travel and Tourism students. Lecture and laboratory sections will allow students to investigate sources of information and achieve hands-on experience with ethnic foods. Students will gain an appreciation of the importance of various foods in the tourism industry. This course has an associated lab fee. 3 credits (1 lecture hour/week, 4 lab hours/week), fall semester

#### FSAD 101. Quantity Foods Preparatn & Serv. (3 Credits)

An introduction to basic procedures and techniques for quantity food preparation as well as institutional food service equipment (use and maintenance). Also includes sanitation and math competency. 3 credits (1 lecture hour, 3 laboratory hours, 15 hours volume food service), fall semester

#### FSAD 102. Applied Food Servic Sanitation. (1 Credit)

A comprehensive course in food service sanitation designed to lead to national certification as a food service handler by the Education Foundation of the National Restaurant Association. 1 credit (15 lecture hours per semester), fall semester

#### FSAD 153. Management I. (3 Credits)

Basic management theories and principles common to all types of hospitality operations. Organization and management, the management process, leadership, objectives, policies and ethics, communications and discipline. Case studies and critical review of current management literature. 3 credits (3 lecture hours), spring semester

#### FSAD 154. Equipment Selection & Layout. (3 Credits)

Analysis of factors for selection of equipment according to type of food service, comparative evaluation of equipment, purchase specifications. Each student develops a prospectus for a given food service operation and makes a schematic layout. 3 credits, spring semester

#### FSAD 200. Internship in Customer Service. (3 Credits)

Customer service laboratory experience in conjunction with state or national hospitality operations. A field based experience providing food service administration, culinary arts, restaurant management, and travel/tourism majors with an opportunity to apply their knowledge in a customer service environment. Student experience supervised by faculty. 3 credits, (1 lecture hour, 6 lab hours) spring semester

#### FSAD 201. Cooperative Summer Work. (2 Credits)

Summer work in an approved job in the food service industry, preferably in the area of specialization. Comprehensive written report required at the end of the work period. Work is evaluated by the college and employers. 2 credits, fall semester

#### FSAD 205. Food& Beverage Merchandise Mgt. (4 Credits)

Students learn principles of motivating personnel, merchandising products and advertising of various types of food service units, meal management techniques involving menu planning, recipe development, staffing, training, safety, purchasing and production. Student projects involve producing an actual menu form which integrates knowledge gained in a laboratory setting. 4 credits (1 lecture hour, 6 laboratory hours), fall semester.

#### FSAD 222. Certification Food Safety Mgt. (1 Credit)

A comprehensive course in food safety management, designed to lead to national certification as a food safety manager by a nationally accredited program approved by the Conference for Food Protection, Certified Professional Food Manager from Prometric. Open to off-campus students only. Pre/co requisite: FSAD 102 or permission of the instructor. 1 credit (15 lecture hours), spring, summer, winter or fall semesters

#### FSAD 255. Food Purchasing & Cost Control. (4 Credits)

Instruction in determining food products specifications, understanding distribution systems, supplier selection, specifications, and product knowledge. Also includes purchasing and inventory principles, as well as cost control. Prerequisites: FSAD 101 or CUL 101 4 credits (4 lecture hours), fall semester

#### FSAD 256. Industrial Relations. (3 Credits)

Management of people at work, the dimensions of labor management and responsibilities. Labor-management relations. Role playing in collective bargaining. Internal and external union functioning. 3 credits (3 lecture hours), spring semester

#### FSAD 257. Senior Seminar. (1 Credit)

Prepares students for entry into professional management. Portfolio development videotaped interviewing, discussion of technology and service strategies with experts from the industry, analysis and discussion of current trends are topics covered. 1 credit (1 lecture hour), spring semester

#### FSAD 258. Restaurant Mgt & Operations. (6 Credits)

A comprehensive course in restaurant management, designed to show the importance of an actual, operational food-service unit including organization, planning, leading, directing, (supervising) and measuring products and people, with applied emphasis on food purchasing, cost control, food preparation and customer service, merchandising, menu planning, advertising, and managerial decision making. Prerequisites: FSAD 101 or CUL 101, FSAD 102 or instructor's permission. 6 credits (1 lecture hour and 12 laboratory hours), spring semester

#### FSAD 259. Introduction To Catering. (3 Credits)

Discover the Art of Catering: An Introduction to Culinary Excellence. This course is designed to provide students with a foundational understanding of the principles, practices, and techniques essential for successful catering operations. Through a blend of theoretical knowledge and practical application, students will explore various aspects of catering, including menu planning, food preparation, presentation, customer service, and business management. 3 credits (3 lecture hours).

#### FSAD 292. Prof Food Service Mgt Cert. (1 Credit)

A comprehensive course in Professional Food Service Management Certification. This course reviews all aspects of managing a foodservice operation including customer service, food safety, restaurant math, purchasing, inventory control, beverage control, human resources, food production and service management, menu design and analysis, food service accounting and financial management. Designed to lead to national certification as a Professional food service manager by a nationally accredited program approved by the Conference for Food Protection, Certified Professional Food Manager from Prometric. Open to off-campus students only. Pre/co-requisite: FSAD 102 or permission of instructor 1 credit (15 lecture hours), fall, spring, summer, winter semesters

#### FSAD 293. HACCP Management. (2 Credits)

A comprehensive course focusing on HACCP, the management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product. This class is a national certification course leading to Certified HACCP manager as defined by The National Sanitation Foundation, Conference for Food Protection and Prometric. Pre/co requisite: FSAD 102, or FSAD 222, or permission of instructor Open to off-campus students only. 2 credits, (30 lecture hours), fall, spring, summer, winter semesters

# Ford Asset (ASET)

#### ASET 111. Intro to Automotive Service. (2 Credits)

This course covers the basic concepts and terms of automotive technology, work place safety, state inspections, pre-delivery, safety and environmental regulations, and use of service information resources. Topics include familiarization with automotive and shop components along with identification and proper use of various auto-motive hand and power tools. Upon completion, students should be able to describe terms associated with automobiles, identify and use basic tools and shop equipment, and use information sources and conduct basic safe- ty/ emissions and/or PDI inspections. 2 credits (64 hours combined lecture and laboratory), fall semester

#### ASET 112. Intro Auto Electrical Systems. (3 Credits)

This course covers basic electrical theory and wiring diagrams, test equipment, and diagnoses/repair/replacement of batteries, starters, alternators and basic electrical accessories. Topics include diagnosis and repair of battery, starting, charging, lighting and basic accessory systems problems. Upon completion, students should be able to diagnose, test, and repair the basic electrical components of a car. Prerequisite: ASET 111 3 credits, (96 hours combined lecture and laboratory) fall semester

#### ASET 113. Intro to Braking Systems. (3 Credits)

This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disk brakes involving hydraulic, vacuum boost, hydra boost, parking brake, anti-lock and electronic stability control systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking system issues. Prerequisite: ASET 111, 112 3 credits (100 hours combined lecture and laboratory), fall semester

#### ASET 121. Engine Repair. (3 Credits)

This course covers the theory, construction, inspection, diagnosis and repair of internal combustion engines and related systems. Topics include fundamental operating principles of engines and diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students should be able to perform basic diagnosis/repair of automotive engines using appropriate tools, equipment, procedures, and service information. Prerequisite: ASET 113 3 credits (128 hours combined lecture and laboratory), spring semester

#### ASET 122. Electrical & Electronic System. (4 Credits)

This course covers electrical theory and electronic systems, wiring diagrams, test equipment, and diagnosis/repair/replacement of electrical and electronic systems problems including networks and multiplexing. Upon completion, students should be able to use digital volt-ohm meters, oscilloscopes, Ford IDS test equipment, and repair automotive electrical and electronic components and systems. Prerequisite: ASET 113 4 credits (128 hours combined lecture and laboratory), spring semester

#### ASET 125. ASSET Cooperative Training I. (1 Credit)

A supervised field work program with the students' sponsoring Ford or Lincoln dealer under the supervision of an experienced technician that is certified in the specialties area covered during the previous semester. Work experience to take place during break between fall and spring semesters. Prerequisite: ASET 112,113 1 credit (2-3 weeks of combined experience), spring semester

#### ASET 160. Applied Electricity & Electron. (3 Credits)

The student will learn the rules governing basic direct current circuits and passive components, as well as the methods of measuring these properties. Fundamental analysis of basic automotive series and parallel circuits, and measurement with digital meters and oscilloscopes will be covered. Simple controlling elements such as basic relays, diodes and transistors used as switches will be examined. Practical troubleshooting using digital meters and oscilloscopes (voltage drops, current testing, and resistance checks) are covered. Prerequisite: ASET 112 or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### ASET 211. Climate Control. (2 Credits)

This course covers the theory of refrigeration and heating, electrical/ electronic/ pneumatic controls, and diagnosis and repair of climate control systems. Topics include diagnosis/repair of climate control components and systems, recovery/ recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to describe the operation, diagnose, and safely servicing of climate control systems using appropriate tools, equipment, and service information. Prerequisite: ASET 122 2 credits (64 hours combined lecture and laboratory), fall semester

#### ASET 212. Steering/Suspension Systems. (3 Credits)

This course covers principles of operation, types, and diagnosis/repair of suspension and steering systems to include steering geometry. Topics include wheel alignment angles and their dynamic properties, manual steering, hydraulically assisted power steering, electronic power assisted steering systems along with standard and electronically controlled suspensions. Upon completion, students should be able to service and repair various steering and suspension components, check and adjust various alignment angles, perform NVH diagnosis and balance wheels. Prerequisite: ASET 122 3 credits (96 hours combined lecture and laboratory), fall semester

#### ASET 213. Manual Transmission/Drive Trn. (3 Credits)

This course covers the operation of and diagnosis/repair of manual transmissions/transaxles, clutches, drive shafts, axles, and final drives. Topics include theory of torque, power flow, and manual drive train service and repair using appropriate service information, tools, and equipment. Upon completion, students should be able to explain operational theory and diagnose and repair manual transmissions and drive trains. Prerequisite: ASET 122 3 credits (80 hours combined lecture and laboratory), fall semester

#### ASET 215. ASSET Cooperative Training 2. (4 Credits)

A supervised fieldwork program with students' sponsoring Ford or Lincoln dealer under the supervision of an experienced technician that is certified in the specialties area covered during the previous semester. Work experience to take place during break between spring and fall semesters. Prerequisite: ASET 121 and 122 4 credits (10-12 weeks of combined experience), fall semester

#### ASET 221. Automatic Transmissions. (4 Credits)

This course covers operation, diagnosis, service and repair of automatic transmissions/transaxles. Topics include hydraulic, mechanical, and electrical/ electronic operation of automatic transmissions and transaxles and the use of appropriate service tools and equipment. Upon completion, students should be able to explain operational theory and diagnose and repair automatic transmissions and transaxles. Prerequisite: ASET 122 4 credits (128 hours combined lecture and laboratory), spring semester

#### ASET 222. Engine Performance. (4 Credits)

This course covers the principles of fuel delivery/management, exhaust/ emission systems, electronic engine control and procedures for diagnosing and restoring engine performance using appropriate test equipment. Topics include procedures for diagnosis and repair of fuel delivery/management and emission systems, Ford GTDI injection, basic Ford diesel performance and using appropriate service information and equipment to aid in diagnosis. Upon completion, students should be able to describe, diagnose, and repair engine fuel delivery/management and emission control systems using appropriate service information and diagnostic equipment. Prerequisite: ASET 121 and 122 4 credits (128 hours of combined lecture and laboratory), spring semester

#### ASET 225. ASSET Cooperative Training 3. (1 Credit)

A supervised field work program with students' sponsoring Ford or Lincoln dealer under the supervision of an experienced technician who is certified in the specialties area covered during the previous semester. Work experience to take place during break between fall and spring semesters. Prerequisite: ASET 211, 212, 213 1 credit (2-3 weeks of combined experience), spring semester

### **General Education (GNED)**

#### GNED 100. First Year Experience. (1 Credit)

Provide opportunities for students to engage in discussions about selfadvocacy, wellbeing, sustainability, respect, living in a diverse community, and using college resources. The course helps students learn how to have productive conversations across different viewpoints, reflect on and navigate College services, and develop foundational skills to find both academic and social success. Course programming is intended to align to student activities and events. 1 credit (1 lecture hour), fall and spring

#### GNED 102. Practical Study Skills. (1 Credit)

Instruction and practice in study skills. The emphasis is on thinking about time management, reading texts, mnemonics, note taking, test taking, use of the library, and writing research papers. 1 credit, (15 contact hours, 5-week course), graded S/F

#### GNED 103. Reading Comprehension. (1 Credit)

Introduces the student to the importance of reading and ways to understand the reading process. Emphasis is on the use of literal, interpretive and critical skills. 1 credit (15 contact hours, 5-week course), graded S/F

#### GNED 104. Critical Information Literacy. (1 Credit)

Designed to cultivate information savvy students and citizens, this course will help students develop lifelong skills to become confident and independent consumers and creators of information. Students will learn how to formulate their information needs, and how to locate, evaluate, and effectively use information. Other topics will include identifying and avoiding plagiarism, document styles, searching for and retrieving information in both library and open web environments, and becoming conscientious participants in information creation and dissemination in a variety of information sharing venues. 1 credit (5 weeks) fall/spring semester1 credit (15 contact hours, 150 minutes for 5 weeks, lecture, recitation, laboratory), fall semester

#### GNED 106. Essentials for Mathematics. (1 Credit)

Identify learning styles, implement time management strategies, examine group dynamics, build effective study habits, develop test taking skills, and navigate course resources in the learning management system. Concepts will be applied to Pre-Algebra topics with students integrating effective math note taking and organization of math support work. This course DOES NOT satisfy the SUNY General Education Requirement for Mathematics. 1 credit (1 lecture hour)

#### GNED 107. Foundations of Writing. (1 Credit)

Build a writing foundation and gain essential skills for success in college-level writing and later courses through developing details and arguments into paragraphs, connecting arguments, and well-developed and supported thesis arguments. 1 credit (1 lecture hour)

#### GNED 110. College&Career Planning Skills. (1 Credit)

A group learning experience to assist students in maximizing their success. Through a variety of learning modes this course will address reasons for going to college, staying in college, academic and personal coping skills, curriculum and career choice, factors affecting success in college and occupational settings, techniques for self-exploration, sources of personal/educational/career information, and decision-making skills as they relate to personal planning. 1 credit (15 contact hours, 5-week course), graded S/F

#### GNED 111. Coll Skills For Mature Adults. (3 Credits)

Instruction and practice in the reading, mathematical and study skills needed by college students. Emphasis on improving speed and comprehension in reading, mastering basic mathematical skills, and improving skills in reading textbooks and taking lecture notes. For adults who have been out of school for some time. 3 credits (3 lecture hours)

#### GNED 112. Comm Skills For Leadership Dev. (1 Credit)

Basic interpersonal communication experience with practical application to leadership concepts and functions. Leadership concepts, communication skills, problem solving techniques, management of time, assertiveness and confrontation techniques, conflict resolution techniques, program planning techniques and referral resources. Didactic and experiential instruction techniques, with heavy emphasis on experiential activities. Limited to Resident Assistants. 1 credit (S/F option), 10-week class

#### GNED 120. College Success - Cont Student. (3 Credits)

This course open only by permission of instructor or the school dean to first- year students returning for their second semester. Working in teams and in close coordination with the instructor, students will complete an inventory of their academic strengths and weaknesses, and based on that feedback, develop a program of study for their remaining time at Morrisville State College and plans for possible transfer. The ability to reflect realistically on the student's academic career, to find and evaluate relevant educational information and to nurture intellectual curiosity will be stressed. Prerequisite Permission of instructor or dean only. 3 credits. (3 lecture hours) fall or spring

#### GNED 203. Peer Tutor Training I. (1 Credit)

This course is designed to train students to become peer tutors. It introduces students to the theory and practice of tutoring. Such topics as the definition of tutoring, tutor responsibilities, basic tutoring guidelines, techniques for beginning and ending a session, learning theory, handling difficult students, role modeling, goal setting and planning, communication skills, active listening and paraphrasing, referral skills, study skills, critical thinking skills, ethics, and problem solving skills will be covered. Satisfactory completion of this course meets the tutor training requirements for the College Reading and Learning Association (CRLA) Level I Peer Tutor Certification. Prerequisite: Completion of 12 college-level credits, grade of 'B' or better in course(s) to be tutored, and permission of instructor. 1 credit (15 week hybrid course), fall and spring semesters

#### GNED 204. Peer Tutor Training II. (1 Credit)

A continuation of GNED 203, this course provides additional training to students who want to continue to develop their peer tutoring skills. The course will begin with a review of GNED 201 training topics and then proceed to the exploration of questioning skills, brain dominance learning, cultural awareness and inter-cultural communications/diversity, identifying and using resources, tutoring in specific skill/subject areas, and assessing or changing study behaviors. Satisfactory completion of this course meets the tutor training requirements for the College Reading and Learning Association (CRLA) Level II Peer Tutor Certification. Prerequisite: minimum of C in GNED 203 and permission of instructor 1 credit (15 week hybrid course), fall and spring semesters

### **Geography (GEOG)**

#### GEOG 101. Intro World Regional Geography. (3 Credits)

This course introduces basic geographical concepts and an overview of the geography of the world. Students examine the world's major cultural regions, with emphasis on geographical aspects of contemporary economic, environmental, social and political relationships with the physical environment. Broader themes include connections among local and global ways of life in various world regions and the persistence of traditional cultures in the face of increasing socioeconomic and political interdependency. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness.

# Health Care Office Coordinator (HCOC)

#### HCOC 116. Medical Keyboarding. (2 Credits)

HCOC 116 - MEDICAL KEYBOARDING This course covers development of basic keyboarding techniques, including learning the keyboard by touch, learning to operate the computer and its menus, icons, and functions, and developing proper stroking techniques. Students learn the proper formatting of various medical documents including Chart Notes, X-Ray Reports, Consent Forms, History/Physical Forms, Single- Page and Two-Page Letters, and Two-Page Assessments and Referrals. 2 credits (2 lecture hours)

#### HCOC 117. Healthcare Office Orientation. (1 Credit)

HCOC 117 – HEALTHCARE OFFICE ORIENTATION This course is for all incoming Healthcare Office Coordinator majors only. Topics include researching occupational skills required for today's healthcare office administrative assistant, attending Career Fairs, preparing for Portfolio Day, discussing key items to prepare for upcoming internships, and understanding philosophies that are helpful to keeping your job once companies downsize and/or merge. Students also receive thorough instruction within Outlook, customer service techniques, telephone etiquette, resume writing, Blackboard participation. Lectures will review career opportunities in a wide range of healthcare office professions with the help of many invited guest speakers and shadowing opportunities. 1 credit (3 lecture hours)

#### HCOC 200. Medical Coding. (3 Credits)

This is a beginning medical coding course designed to provide students with the essential information and working knowledge of health care coding systems used in billing insurance companies for medical services to ensure optimum reimbursement. The course offers practical and easy-to-follow instructions on how to code procedures and diagnoses using the CPT, ICD-10 and HCPCS systems. Other aspects of healthcare reimbursement will be covered such as HIPAA guidelines, abstracting information from patient records for correct placement on claim forms, inpatient and outpatient health care settings, and third-party reimbursement issues. Prerequisite: HCOC 250 or OFFT 250 3 credits (3 lecture hours)

#### HCOC 201. Outpatient Billing. (2 Credits)

The course will focus on outpatient billing and accounting software. The student will learn to enter data into a computerized patient billing system, manage data, enter patient and case information, process transactions, process claims, create statements and produce reports. Prerequisite: HCOC 250 or OFFT 250 2 credits (2 lecture hours)

#### HCOC 202. Inpatient Billing. (2 Credits)

This course is designed to introduce the student to the basics of hospital billing and correct completion of the required claim form(s). Computer application is done using MediSoft's Just Claims software. Prerequisite: HCOC 250 or OFFT 250 2 credit hours – (2 lecture hours, 2 laboratory hours)

#### HCOC 216. Healthcare Office Simulation. (3 Credits)

HCOC 216 - HEALTHCARE OFFICE SIMULATION This course allows students to work in a computerized professional healthcare office. Students experience handling telephone calls, incoming mail, transcription, correspondence, spreadsheet and database applications, records management, coordinating travel and conference plans and preparing reports. The topics include a brush up on English and keyboarding skills and career information. Students create a personalized employment portfolio. Prerequisites: OFFT 116 or HCOC 116, OFFT 120, and OFFT 220, or permission of the instructor. 3 credits (4 laboratory hours)

#### HCOC 218. Electronic Health Records Mgmt. (3 Credits)

HCOC 218 – ELECTRONIC HEALTH RECORDS MANAGEMENT This course is designed to introduce students to the variety of tasks and skills required for an administrative assistant in a medical setting. Students will be able to understand medical ethics, bioethics, etiquette, legal responsibilities of the physicians, use computer software to schedule appointments, create and maintain patients' medical records, bill and collect payment, and understand method the method of scheduling appointments. The procedures of banking and payroll are introduced as part of being an administrative assistant in the medical field. Prerequisite: HCOC 116 or OFFT 116 3credits (3 lecture hours)

#### HCOC 235. Medical Transcription. (3 Credits)

This is a beginning medical transcription course designed to provide students with a working knowledge of the transcription of medical documents, including x-ray reports, chart notes, history and physical reports, consultations, office procedures notes, progress notes and letters. The goal of this course is to develop transcribing speed and accuracy, gain skills in editing and proofing documents, and increase knowledge of medical terminology. Prerequisites: HCOC 116 or OFFT 116, OFFT 135, and HCOC 250 or OFFT 250 or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours)

#### HCOC 250. Medical Terminology. (3 Credits)

This is a full semester course designed to instruct students in the various medical terminology used in medical environments today. Students learn how to pronounce and spell medical terms correctly, understand "root" words, as well as prefixes and suffixes of various terms and also recognize and define terms pertaining to the sciences of the human body and fields of medicine. 3 credits (3 lecture hours)

#### HCOC 291. Healthcare Office Internship I. (1 Credit)

HCOC 291 – HEALTHCARE OFFICE INTERNSHIP I All Healthcare Office Coordinator students are strongly encouraged or required to participate in this internship opportunity. Students must complete 45 hours within a medical office environment. Many of the offices that participate in this internship are on campus; however, students may also work off campus. The focus of this internship opportunity is not only to give students a greater understanding of working within a professional organization, but also to open doors for the students if an opening occurs in their internship office after graduation. Monitoring occurs during the 45hour, one-credit internship experience whereby the Healthcare Office Coordinator faculty meets with both student and the internship site supervisor at the office where the student is interning. Prerequisite: Healthcare Office Coordinator sophomore student status and BSAD 140 1 credit (45 hours per semester), fall and spring semester

#### HCOC 292. Healthcare Office Intern II. (1 Credit)

HCOC 292 – HEALTHCARE OFFICEINTERNSHIP II Similar to HCOC 291 this is an additional one-credit hour course (another 45 hours required) and is taken after a student has successfully completed HCOC 291. HCOC 292 allows a student an additional credit, and subsequently, additional working experience. Pre or Co-requisite: HCOC 291 or OFFT 291 1 credit (45 hours per semester), fall and spring semester

#### HCOC 301. Advanced Medical Coding. (3 Credits)

This course is designed to utilize the student's previous learning experience to the variety of tasks and skills required for an administrative medical assistant dealing with coding. Students will be able to work on cases that are coded with service codes (CPT and HCPCS) and diagnosis codes (ICD-9-CM) in the outpatient settings of the clinic and outpatient departments of the hospital for both the physician and facility services. Prerequisite: OFFT 200-Medical Coding or HCOC 200-Medical Coding. 3 credits (3 lecture hours).

#### HCOC 335. Advanced Medical Transcription. (3 Credits)

This is an advanced medical transcription course whereby students gain competence in transcribing the advanced materials provided in the textbook, which more closely resemble on-the-job tasks than in the initial stages of learning medical transcription. This course has strong emphasis on editing and critical thinking activities. Prerequisite: OFFT 235 Medical Transcription or HCOC 235 Medical Transcription and OFFT 250 Medical Terminology or HCOC 250 Medical Terminology, or permission of the instructor. 3 credit hours (2 lecture hours, 2 laboratory hours), fall semester.

# History (HIST)

#### HIST 100. Current Events. (1 Credit)

Explore and discuss the nature, context, and significance of current world events. Expand media literacy by critically evaluating evidence and sources. Students will examine contemporary world events to develop broad themes through reading and discussion. 1 credit (1 seminar hour)

#### HIST 101. United States History to 1800. (3 Credits)

This course is a survey of American history from its beginnings through the colonial, revolutionary and into the early national period, with emphasis on the development of our political, constitutional, economic, social and cultural institutions. 3 credits (3 lecture hours) fall and spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History and US History and Civic Engagement.

#### HIST 102. U.S. History 1800 to 1900. (3 Credits)

This course is a survey of American history from the Jeffersonian Era to the Era of Good Feeling, the Reform Movement, the Old South and Slavery, the Civil war and Reconstruction and ending with the rise of the Industrializing Age, with emphasis on the development of our political, constitutional, economic, social and cultural institutions. 3 credits (3 lecture hours) fall and spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History and US History and Civic Engagement

#### HIST 103. U.S. History from 1900-Present. (3 Credits)

This course is a survey of American History from the Progressive Era through Great Depression, the two World Wars, the Cold War, the social political and cultural changes of the 60' and 70's and into Reagan and the post Reagan Era, with emphasis on the development of our political, constitutional, economic, social and cultural institutions. 3 credits (3 lecture hours) fall and spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History and US History & Civic Engagement.

#### HIST 151. World History to 1600. (3 Credits)

This course is an introductory survey of Ancient World History to 1600 C.E. It explores how human societies developed an increasingly complex set of socio- economic and political systems in response to physical and cultural challenges. It begins with the development of agriculture as a key event and then focuses on the nature of early world civilizations. The course then studies the civilizations of representative cultures from all areas of the world including the Americas, Africa, East and South Asia, the Middle East, and Europe, demonstrating the way each society ad-dressed key problems through its economic, political, and religious institutions. 3 credits (3 lecture hours), fall semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness. Students may not receive credit for both SOCS 103 and HIST 151.

#### HIST 152. World History from 1500. (3 Credits)

This course is an introductory survey of Modern World History from 1500 C.E. It explores the development and collapse of the great early modern empires. It then focuses upon political and economic modernization in Western Europe and the impact of that modernization on representative non-European societies between 1800 and 1945 including those in the Americas, Africa, East and South Asia, the Middle East, and Europe. Finally, the course highlights some of the issues faced by post-WWII non-European societies seeking to modernize in the shadow of Cold War conflict. 3 credits (3 lecture hours), spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness. Students may not receive credit for both SOCS 104 and HIST 152.

#### HIST 161. European History to 1648. (3 Credits)

This course is an introductory survey of European History to 1648. It explores the key institutions of Western culture beginning with its origins in the Mediterranean region. The course focuses on the development of Western civilization into a set of competing states and the political, economic, and intellectual/religious institutions that bound these states together into a common civilization. 3 credits (3 lecture hours), fall semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization and World History & Global Awareness. Students may not receive credit for both SOCS 103 and HIST 161.

#### HIST 162. European History from 1500. (3 Credits)

This course is an introductory survey of European History from 1500. It explores the development of a unique modern culture in Western Europe between 1500 and 1850 and the impact of this culture upon the world in the late 19th and early 20th Centuries. The course also discusses the Russian alternative to modern Western culture and how the two societies came into conflict during the Cold War in the late 20th Century. The course ends by describing the Cold War conflict and its legacy in the 21st Century. 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization and World History & Global Awareness. Students may not receive credit for both SOCS 104 and HIST 162.

#### HIST 171. Environmental History. (3 Credits)

A world history of human action and interaction in the natural world. Explains changing populations, technological and economic developments in geographical and ecological terms. Attention given to the history of religious and philosophical ideas concerning the place of humans in nature. Also considered is the history of modern environmental ideas concerning the human impact on the environment. 3 credits (3 lecture hours), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness.

#### HIST 172. Latin American Caribbean Histo. (3 Credits)

This course surveys the broad sweep of Latin American and Caribbean history from Amerindian cultures before Columbus to the 21st century. The volatility of the multicultural societies of these lands, spilling over sometimes into fractious violence and brilliant creativity, will be a recurrent theme. Emphasis may vary between key personalities, social change, culture, conflict or gender. Students will be exposed to the main themes of Latin American and Caribbean history. 3 credits (3 lecture hours), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness.

#### HIST 181. History of Technology to 1800. (3 Credits)

This course is a general survey of the history of technology from prehistoric times up to the Industrial Revolution. The course focuses on technology as a means to solve human problems, real or perceived, and the unexpected and unintended side-effects of technology in such areas as: agriculture, energy, communications, navigation, construction and transportation. 3 credits (3 lecture hours), fall semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness.

#### HIST 182. History Technology From 1750. (3 Credits)

This course is a general survey of the history of technology from the Industrial Revolution to the present. The course focuses on technology as a means to solve human problems, real or perceived, and the unexpected and unintended side-effects of technology in such areas as: energy, communications, economics, health care, and transportation. 3 credits (3 lecture hours), spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization and World History & Global Awareness.

#### HIST 220. African American History. (3 Credits)

This course will focus on tracing African American history from its African origin through the experience of slavery to the present condition in the United States. Some of the objectives will be: to explore the rich African traditions and culture that were in place before slavery; to provide the analytical tools necessary to fully appreciate the Black struggle in its various dimensions; to critically assess the contributions of African Americans to American society from an economic, political and social viewpoint. Prerequisite: HIST 101, 102, or 103 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History and US History & Civic Engagement.

#### HIST 221. History of the Vietnam War. (3 Credits)

Analysis and survey of the history, personalities and events that lead to United States involvement in Vietnam from 1945 to the present. The course is an overview of early Vietnamese history and its impact on the twentieth century French and American wars in Indochina. It will seek to answer the questions: why was the US in Vietnam? What was accomplished? What are the lessons of Vietnam? Prerequisite: Any 100-level HIST course, or permission of Instructor 3 credits (3 lecture hours) fall or Spring Semester This course satisfies the Liberal Arts and Sciences requirement.

#### HIST 225. Women in the United States. (3 Credits)

This course will explore and analyze the role of women in the U.S. from 1607 to the present. It will critically assess women's experiences and contributions to our nation—politically, socially, economically, and culturally using the tools of social science and historical analysis. Prerequisite: HIST 101, 102, 103 or SOCI 101 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History and US History & Civic Engagement.

#### HIST 320. History of New York State. (3 Credits)

This course includes the social, political and economic history of New York State from Colonial times through the twentieth century. Topics may vary from semester to semester but will include: The Iroquois and Algonquians, the Dutch and English in Colonial New York, Slavery, the Revolutionary War, the Erie Canal, the Underground Railroad, Women's Rights, The Shakers, The Mormons, The Abolitionist Movement, The Oneida Community, The Civil War, the Gilded Age, the World Wars and New York after World War II. Special attention is given to regional and Central New York History. Prerequisite: One of the following courses: HIST 101, HIST 102 or HIST 103 or permission of instructor 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for American History and US History & Civic Engagement.

#### HIST 351. The World Since 1914. (3 Credits)

This is an advanced topics courses focused on the history of the non-Western world from 1914 to the present. The course will examine global economic, political, and cultural trends of the period with an emphasis on their impact on the non-Western world. Topics include: imperialism, decolonization, economic development and globalization, and cultural movements like Pan-Africanism, women rights, and religious fundamentalism. Prerequisite: COMP 101 (grade of 'C' or better). 3 credits (3 lecture hours). This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilizations and World History & Global Awareness.

#### HIST 371. The World Wars. (3 Credits)

This is a general topics course covering the origins, events, and legacy of the First and Second World Wars. The course examines the nature of the wars including political and military strategy in the major theaters of each war. It discusses significant shifts in the balance of power between the great military powers of the world before, during, and after each conflict. Prerequisite: COMP 101 (grade of 'C' or better). 3 credits (3 lecture hours), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization and World History & Global Awareness.

#### HIST 372. The Cold War. (3 Credits)

This is a general topics course covering the origins, events, and legacy of the Cold War. The course discusses the Cold War as an ideological, military, and economic struggle between the United States and the Soviet Union. It also looks at the struggle from the point of view of the so-called Third World countries including countries those in Latin America and the newly independent societies of Africa and Asia. Prerequisite: COMP 101 (grade of 'C' or better). 3 credits (3 lecture hours), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization and World History & Global Awareness.

#### HIST 375. Russian History. (3 Credits)

This is an advanced topics course exploring the history of Russia. It emphasizes the time period from 1800 to the present, including the histories of the various societies of the region including: Imperial Russia, the Soviet Union, and the Post-Soviet Republics. The course traces key themes in Russian history including clashes with Western European culture and the drive to keep up with Western societies as well as exploring the role of Russia as a world power and its role in the cultural, political, and economic conflicts of the last two centuries. Prerequisite: COMP 101, "C" or better. 3 credits (3 lecture hours) Offered in rotation with other 300-level Western/World courses. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness.

#### HIST 380. History of Science Medicine. (3 Credits)

This is an advanced topics course focusing on the history of science and medicine. The course surveys human understandings of the nature of the universe and of human beings, beginning with the Neolithic peoples and continuing through ancient cultures such as the Chinese and Greeks and on into the early development of modem science in Europe. It ends with a discussion of the broad developments in science and medicine occurring in the past 200 years of human history. This course can be taken for credit only once as either HIST 380 or STS 380. Prerequisite: COMP 101 "C" or better. 3 credits (3 lecture hours) fall or spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization.

### Horticulture (HORT)

#### HORT 100. Introduction to Horticulture. (3 Credits)

A dual-credit course with designated high schools to acquaint selected high school students with horticulture basics such as: plant processes, function, reproduction, and growth. Lab activities include plant propagation and greenhouse growing of various ornamental plants. Lectures will review career opportunities in a wide range of horticultural professions. 3 credits (2 lecture hours, 1 recitation hour), fall semester

#### HORT 101. Plant Materials. (3 Credits)

The identification and landscape characteristics of woody plants commonly found in landscapes of Northeastern United States. Part of each weeks labs include an outdoor plant walk to view various specimens in the landscape. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### HORT 102. Intro to Floral Design. (2 Credits)

Introduction to the principles, elements, and basic construction techniques of commercial floral design. Hands-on labs include: corsages, bud vases, assorted arrangements, dried flowers, wreaths, and holiday designs. 2 credits (1 lecture hour, 2 laboratory hours), fall semester

#### HORT 103. Landscape Planning & Design I. (3 Credits)

This course is an introduction to the design process, principles and vocabulary used in landscape architecture. The course content addresses landscape planning and design specifically as it applies to residential site design. Students gain creative problem-solving skills and explore effective methods of graphic, written and oral communication in a series of design projects. The semester culminates in a final design project in which students develop a landscape design solution for an actual residential site. 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### HORT 105. Landscape Planning & Design II. (3 Credits)

This is a sequential course to Landscape Planning and Design I with emphasis on advanced landscape design skills and techniques. The course is organized around several studio design projects that vary in context, complexity, and scale. Students continue to apply the phases of the planning and design process and to strengthen their design knowledge, graphics, and communication skills. Fieldwork and field trips are required. Prerequisite: HORT 103 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### HORT 106. Floral Design. (3 Credits)

A general overview of the sympathy flower industry. Topics will include: consultation, sales, traditions, and servicing funeral orders. Casket sprays, standing sprays, baskets, vases, and more will be featured in lab. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### HORT 108. Herbaceous Plant Materials. (2 Credits)

Identification, culture, and landscape use of annuals, perennials, and tropical foliage plants. Emphasis on plants that are commercially common to the Northeast. 2 credits (1 lecture hour, 2 lab hours), spring semester

#### HORT 109. Landscape & Turf Management. (3 Credits)

This course addresses the principles and practices of landscape installation, maintenance and management. The lectures focus on a range of topics such as the value of landscape management, the landscape industry, site analysis and preparation, soils, plant selection, water management, pest and weed management. Lab activities are organized around hands-on campus and community projects. Successful completion of this course could qualify a student to sit for the NYS Certified Nursery and Landscape Professional exam sponsored by the CNY Nursery and Landscape Association. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### HORT 110. Horticulture Practices I. (2 Credits)

Horticulture Practices is a series of courses designed to engage students in a wide range of horticulture practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. HORT 110 is a freshman-level course that introduces students to basic science, production procedures, and entrepreneurial skills of horticulture. 2 credits (1 lecture hour, 2 laboratory hours), fall semester.

#### HORT 112. Intro to Horticultural Science. (3 Credits)

This course is organized to cover a broad range of topics about the principles and practices of horticultural science. These topics focus on the fundamentals of horticulture in terms of plant science, the culture of outdoor and indoor plants, and the industries within the field of horticulture. In addition to the two lectures per week, students will be involved in several hands-on horticultural practices during a weekly two-hour lab at the greenhouse. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### HORT 150. Fruit & Vegetable Production. (3 Credits)

This course will cover the biology of fruits and vegetables. Emphasis will be placed on introducing students to soils, nutrition, botany as it relates to fruits and vegetables, site selection, planting, fruit and vegetable quality factors, pests (entomological, mycological, bacteriological, etc...), Integrated Pest Management (IPM) strategies, horticultural production practices, marketing strategies, and career opportunities. Students will gain a greater understanding of fruit and vegetable production industry, an increased knowledge of the variety of vegetables, and knowledge of the specific cultural needs of the common vegetable species. Reasons and principles for establishing crop production models, and hands-on application of scientific concepts. 3 credits (2 lecture hours, 2 lab hours) spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### HORT 200. Greenhouse Management. (3 Credits)

Lecture topics include greenhouse and nursery design, construction, structure, machinery, production methods, and operation. Laboratory exercises will include soil, media, nutrition, plant growth modification, and the identification and control of pests. Students are expected to grow a variety of commercial floriculture crops, including poinsettia. Participation in outdoor activities associated with field and container production of trees and shrubs is required. 3 credits (2 lecture hours, 2 lab hours), fall semester

#### HORT 201. Plant Propagation. (3 Credits)

This course involves the evaluation, analysis, and application of the scientific theoretical and technical practices of sexual and asexual plant propagation. The concepts to be explored utilizing observation and experimentation include division and separation, layering, grafting, budding, cuttings, micropropagation, and seed propagation. Prerequisite: BIOL 102 or permission of instructor 3 credits (2 lecture hours, 2 lab hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### HORT 202. Greenhouse Production. (3 Credits)

A greenhouse crop growing course. Lecture topics include crop scheduling, propagation, cultural procedures, pest/disease identification and control, and plant marketing. All major and minor ornamental crops common to commercial greenhouses will be discussed. Lab crop assignments will emphasize growing Easter lilies, pot mums, and bedding plants. Prerequisite: HORT 200 or permission of the instructor. 3 credits (2 lecture hours, 2 laboratory hours), spring semester.

#### HORT 204. Horticultural Business Mgt. (3 Credits)

This course will focus on establishing and operating a small horticultural business. Topics to be covered include, getting a business started, laws and legal issues, marketing and advertising, professional selling, buying, pricing, wholesale sales, retail sales, financing, and ownership. Individual special units will focus on florist, nursery, greenhouse, and garden center issues. Students will be expected to participate in Horticulture Department entrepreneurial activities. 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### HORT 206. Sustainable Landscapes. (3 Credits)

This course addresses the principles and practices of sustainable landscapes and the current policies & guidelines used to achieve them. Areas of focus include: soils; water & energy conservation; biodiversity; permeable pavement; native plant species; alternatives to invasive plants; and construction material selection. 3 credits (3 lecture hours), spring semester

#### HORT 210. Horticultural Practices II. (2 Credits)

Horticulture Practices is a series of courses designed to engage students in a wide range of horticulture practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. HORT 210 is a sophomore-level course which continues to introduce students to the basics while adding advanced production skills and technology. The level of student's crop and entrepreneurial responsibilities will also increase. 2 credits (1 lecture hour, 2 laboratory hours), spring semester.

#### HORT 211. Horticulture Practices II. (2 Credits)

Horticulture Practices is an on-going series of courses designed to engage students in a wide range of horticulture practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. HORT 211 is a sophomore -level course which continues to introduce students to the basics while adding advanced production skills and technology. The level of students' crop and entrepreneurial responsibilities will also increase. 2 credits (1 lecture hour, 2 laboratory hours per credit), spring semester.

#### HORT 240. Landcadd. (3 Credits)

In this course students gain a basic proficiency in computer-aided drafting and design skills. The course covers software programs commonly used by professionals in the design fields such as AutoCAD, Google SketchUp, and Adobe Design Suite. Students are expected to apply this technical knowledge as a design tool in a series of projects that range in type & scale. Prerequisites: CAD 181 or permission of the instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### HORT 241. Plant Protection. (3 Credits)

HORT 241 is an interdisciplinary introduction to the study of pest management. This course involves the application, evaluation, and analysis of ecological, biological, and economic principles from each of the following disciplines: entomology, nematology, plant pathology, and weed science. Reasons and principles for establishing pest management programs will be explored using observation, evaluation of evidence, and hands-on employment of data. Prerequisite: BIOL 102 or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### HORT 245. Landscape Architecture Design. (3 Credits)

Conducted in a studio format, this capstone course is designed as a sequence of projects in which students apply and reinforce some of the most fundamental skills required in landscape architecture. Students are challenged and expected to expand their capacity for abstract & analytical thinking as it relates to the relationship of mass and space. A main focus is on translation of 2D compositions into 3D volumes. The projects will vary in scale and context to cover research, abstract and analytical thinking, aesthetic appreciation, drawing, design, and model making. Fieldwork and field trips may be required. Prerequisites: HORT 103, HORT 105, or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### HORT 250. Internship In Horticulture. (4 Credits)

The 160-hr internship provides the student with experience in an approved job in the horticulture industry. Final requirements include; a summary report oral presentation and employer and faculty evaluations. Prerequisites: Completion of one semester and permission of instructor 4 credits (160 hours of supervised employment), fall, spring, or summer semester

#### HORT 310. Horticultural Practices III. (2 Credits)

Horticulture Practices is a series of courses that is designed to introduce, educate, and reinforce a wide range of horticultural practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. The goal of HORT 310 is to develop a broad base of horticultural skills and knowledge. Students will continue to develop mastery of basic skills while assuming managerial responsibilities of horticulture institute, horticulture students, and departmental projects. Advanced technology and skills will be added with each semester and credit hour. Prerequisites: HORT 110, HORT 210, or permission of instructor 2 credits (2 lecture hours), fall semester

#### HORT 311. Horticultural Practices III. (3 Credits)

Horticulture Practices is an on-going group of courses that is designed to introduce, educate, and reinforce a wide range of horticultural practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. The goal of this course is to develop a broad base of horticultural skills and knowledge. Students will continue to develop mastery of basic skills while assuming managerial responsibilities of horticulture institute, horticulture students, and departmental projects. Advanced technology and skills will be added with each semester and credit hour. Prerequisites: HORT 111, HORT 211, or permission of instructor 2 credits (2 lecture hours), spring semester

#### HORT 320. Horticulture Internship Orient. (1 Credit)

Horticulture Internship Orientation prepares students for a horticulture industry internship and assists them with the process of employment and career development. The course helps students meet internship requirements such as goal definition, industry sponsor identification, job application and report writing. It formalizes internship planning and preparation to ensure that internships are conducted in a professional manner, follow guidelines, and satisfy the goals and objectives of students, faculty advisors, and industry sponsors. Prerequisite: Junior status or permission of instructor 1 credit (1 lecture hour), fall or spring semester

HORT 335. SPPR Upper Level Hort 1. (1 Credit)

HORT 336. SPPR in Upper Level Hort II. (1 Credit)

HORT 337. SPPR Upper Level Hort III. (1 Credit)

#### HORT 400. Hort Production Management. (3 Credits)

Horticulture Production Management provides a solid grounding for managing a wholesale nursery. Nutritional, IPM, chemical, physical, biological, and economic principles and practices will be emphasized. Prerequisites: BIOL 102, HORT 200, HORT 201, and HORT 202 or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### HORT 403. Planting Design. (4 Credits)

This course addresses the theory and practices of the landscape planting design process. Topics will be covered in lectures using textbook readings, Power Point presentations, and class discussions. The lab component is designed as a sequence of both studio and outdoor projects that will involve the student in applying the knowledge gained from the lectures and readings. The projects vary in type and scale to cover client relationships, site study, aesthetic, functional, and ecological plant uses, plant selection criteria, design process and vocabulary, design principles & elements, design graphic tools & techniques, planting plan drawings and models. A basic understanding of design, drafting and ornamental horticulture is needed to complete the assignments for the class. A semester-long sketchbook assignment and a design portfolio documenting student's projects and creative process are required. Prerequisites: HORT 101, 103, or permission of instructor 4 credits (2 lecture hours, 4 lab hours/week), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### HORT 410. Horticulture Practices IV. (2 Credits)

Horticulture Practices is an on-going group of courses that is designed to introduce, educate, and reinforce a wide range of horticultural practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. Horticulture 410 students are expected to direct a wide range of activities performed by underclassmen in various horticultural disciplines. Advanced technology, skills, and responsibilities will be added with each semester and credit hour. Prerequisites: HORT 110, HORT 210, HORT 310, or permission of instructor 2 credits (2 lecture hours), fall semester

#### HORT 411. Horticulture Practices IV. (3 Credits)

Horticulture Practices is an on-going group of courses that is designed to introduce, educate, and reinforce a wide range of horticultural practices. These practices include methods acceptable by both commercial and research sectors of the Green Industry. Horticulture 411 students are expected to direct a wide range of activities performed by underclassmen in various horticultural disciplines. Advanced technology, skills, and responsibilities will be added with each semester and credit hour. Prerequisites: HORT 111, HORT 211, HORT 311, or permission of instructor 3 credits (1 lecture hour or 2 laboratory hours per credit), spring semester

#### HORT 420. Horticulture Internship. (5 Credits)

Horticulture Internship is a 200 hour supervised, professional experience appropriate to a professional position in the horticulture field. Students will be involved in a wide range of on-the-job work experiences in their chosen career field. Final requirements include: portfolio, journal, supervisor evaluation, summary report and oral presentation. Prerequisite: permission of instructor 5 credits (200 hours of supervised internship employment)

#### HORT 430. Horticulture Business Develop. (3 Credits)

Horticulture Business Development is the capstone course of the Horticultural Business Management BT curriculum. This course is designed to combine horticultural and business knowledge that has been presented during the previous three years. Special emphasis will be placed on the link between product development, branding, and sales. Current green industry trends will be closely examined with case studies and profiles of successful horticulture entrepreneurs. Prerequisite: Senior status or permission of instructor 3 credits (3 lecture hours per week), spring semester

#### HORT 440. Hort Business Internship. (15 Credits)

This required internship is a supervised, professional experience appropriate for an entry-level position in a horticultural business or related field. Prior to the start of the internship, the student must develop and submit an internship proposal that includes contact information, job description, goals, objectives, activities, and outcomes for the internship. The student, sponsor and faculty advisor must agree to the written plan in a signed contract. The on-site experience is about 15 weeks or 600 hours in length. In addition to agency supervision, each intern is advised and monitored by a faculty advisor on a regular basis. Final course requirements include: portfolio, journal, interim reports, mid-term assessment, supervisor evaluation, summary report and oral presentation. Prerequisites: HORT 320 Horticulture Internship Orientation; Min. 2.0 GPA; Permission of the instructor 15 credits, (600 hours of supervised internship employment), fall, spring, or summer semester

### Human Services (HUMS)

#### HUMS 100. Careers in Helping Professions. (1 Credit)

This course is designed to assist students wishing to pursue careers in helping professions. Focus will be on researching the breadth of positions available as well as salary range and educational requirements. Attention will also be given to specific concerns associated with professional helpers such as boundaries, interpersonal skills, and appropriate conduct in both the professional and personal settings. Special attention will be given to supporting the student in their first internship, HUM 141, during this course. Co-requisite: HUMS 141 1 credit (1 lecture hour/week), fall and spring semesters

#### HUMS 101. Introduction to Human Services. (3 Credits)

This course provides an introduction to the human service field and helping professions, including the theoretical systems for understanding human behavior, modalities of intervention, counseling skills, social policy, professional ethics and standards, and an historical perspective on the human service field. 3 credits (3 lecture hours), fall or spring semester

#### HUMS 125. Mental Health & Wellness. (1 Credit)

HUMS 125, Mental Health and Wellness, is a one-credit course that will address the intrapersonal, social and environmental risk and protective factors influencing mental health and wellness. The course will provide targeted topics, information and resources to promote mental health and wellness. Students will engage in activities that promote human flourishing directed at emotional, social and cognitive growth and development of individuals, groups and families across a variety of settings. 1 credit (1 lecture hour), fall or spring semester.

#### HUMS 141. Internship in Human Services I. (1 Credit)

A 45-hour field-based internship experience providing social science majors an opportunity to combine theories and skills learned in the classroom with practical experiences in a human service setting. Students will be required to combine their internship experience with written work to process their experience. Co-requisite: HUMS 100; or permission of instructor 1 credit for each unit, fall or spring semester [Offered at Norwich Campus]

#### HUMS 142. Internship Human Services II. (1 Credit)

A 45-hour field-based internship experience providing social science majors an opportunity to deepen their internship experience in a human service setting. Students will be required to combine their internship experience with reflection and written work to process their experience. HUMS 142 and HUMS 143 are taken together for a total of a 90-hour internship experience. Co-requisite: HUMS 143 Prerequisite: HUMS 100; HUMS 101, HUMS 141 or permission of instructor 1 credit for each unit, fall or spring semester [Offered at Norwich Campus]

#### HUMS 143. Internship Human Services III. (1 Credit)

A 45-hour field-based internship experience providing social science majors an opportunity to combine their internship experience in a human service setting. Students will be required to combine their internship experience with written work to process their experience. HUMS 142 and HUMS 143 are taken together for a total of a 90-hour internship experience. Co-requisite: HUMS 142 Prerequisite: HUMS 100; HUMS 101, HUMS 141 or permission of instructor 1 credit for each unit, fall or spring semester [Offered at Norwich Campus]

#### HUMS 150. Special Topics: Human Services. (1 Credit)

Explores a new topic each semester based on current issues occurring within the human services profession through addressing critical practice, policy and research topics in the human services field as they emerge. 1 credit (1 lecture hour/week), fall and spring semester.

#### HUMS 200. Helping Proc./Crisis Inter.. (3 Credits)

This course will provide students with the skills and techniques necessary for effective helping. Students will be introduced to the role of the helper as well as the process of helping. Students will gain knowledge and understanding of multicultural practices and helping skills as well as the theories associated with helping. Student will also learn a range of theories, skills and strategies related to crisis intervention Prerequisites: HUMS 101 3 credits (3 lecture hours/week), fall semester

#### HUMS 201. Counseling & Case Management. (3 Credits)

This course will provide an applied foundation to interviewing and counseling techniques. Students will examine strategies pertaining to intentional interviewing and effective interventions. Focus will be given to human strength and resilience. Attention will also be given to the foundations of case management and the importance of this role as a human service provider. Cultural consideration will be integrated into both aspects of this course. Prerequisites: HUMS 101 3 credits (3 lecture hours/week), spring semester

#### HUMS 202. Hum. Svcs. Mgt. & Admin.. (3 Credits)

This course will focus on the practices and skills vital to the management and administration of human service delivery. The course will provide an overview of topics associated with human service management such as: the functions of human service management, program development and evaluation, community collaboration, organizational theory, and supervisory skills. Students will gain an understanding of technology utilized in the storing and managing of data and finances pertaining to human service administration. Prerequisites: HUMS 101 3 credits (3 lecture hours/week), spring semester

#### HUMS 250. Human Service Practicum. (3 Credits)

This is the final required course for the Human Services AAS degree program. This course is designed to provide human services students with an opportunity to integrate and assimilate previous learning experiences with human service delivery. Practical field experience combined with lecture and self-reflection enable students to critically assess their personal, professional, and social values as well as practice interpersonal skills in a learning environment. Course assignments and class discussion will enable students to examine influences of organizational structure, funding sources hiring and training of personnel, as well as other agency policies and procedures on the delivery of services. Students will spend 125 hours at a negotiated human services site, 16 hours in a structured classroom setting, and will complete a Capstone presentation to faculty and practicum supervisors. Successful completion of this course will require a grade of B or better since this course is intended to evaluate the readiness of graduates to participate in human service employment. Prerequisite: Senior status 3 credits (3 lecture hours/week), spring semester

#### HUMS 302. Principles of Supervision. (3 Credits)

This course will provide students with the skills and strategies necessary for the supervision of human service programs, nonprofit organizations and social services agencies. This includes supervision of individuals, groups and multi-disciplinary teams. The course will look at supervision from an organizational learning perspective with emphasis on the relationship between supervisory skills, organizational structure and staff and client outcomes. Prerequisite: HUMS 202 or PSYC 304 with a grade of C or better 3 credits, fall or spring semester

#### HUMS 398. Adv Topics in Human Services. (3 Credits)

Advanced Topics in Human Services is an elective that will feature a new topic each semester based on current issues occurring within the human services field. Students will be required to take minimum of 3 credits in HUMS 398 and are allowed to take up to total of 9 credits. The mode of delivery will change based on the topics. Prerequisite: HUMS 202 with a grade of C or better, or permission of the instructor is required. 3 credits (3 lecture hours).

#### HUMS 402. Soc Policy Govt Rel Nonprofits. (3 Credits)

This course will provide current and future human service leaders with a clear understanding of the historical, economic and legal forces that have shaped the relationship between federal, state and local governments and the not-for-profit sector. This will provide students with the knowledge of how to become effective nonprofit leaders in increasingly challenging policy environments. Prerequisite: SOCI 201 and HUMS 203 with a grade of C or better, or permission of the instructor. 3 credits (3 lecture hours).

#### HUMS 420. Grant Writing & Contract Mgmt. (4 Credits)

This course will provide students with the foundational knowledge of grants and contracts in the nonprofit business sector. This will include introducing students to the principles of business plan development, grant-writing and contract management at both the micro and macro levels. This course will use a lab format so that students will work together in teams to learn how to develop social entrepreneurship enterprises, build business plans, write grant proposals and manage funding contracts. Prerequisite: HUMS 302 with a grade of C or better or permission of the instructor. 4 credits (3 lecture hours, 2 lab hours).

#### HUMS 449. Human Service Lead Intern Prep. (2 Credits)

This course will prepare students for the full time human services leadership internship experience of HUMS 450. In addition to assisting interns in securing an internship placement opportunity, the course will also support students' application of their leadership skills and the development of their professional portfolio. Prerequisite: Major in Human Services Leadership; successful completion of at least 90 credit hours or permission of the instructor; usually taken in the semester prior to HUMS 450. 2 credits (2 lecture hours).

#### HUMS 450. Human Service Lead Internship. (12 Credits)

This course involves placement of students at an internship in a human services agency or business organization. Students will be involved in a planned learning experience under direct supervision of a site supervisor. Students' experiences will also be monitored by a Human Services internship coordinator. In addition to participation in professional experiences, students will address their learning goals through journals, a special project, supervisory evaluation and a final presentation. Prerequisite: Grade of C or better in HUMS 449 (Human Services Leadership Internship Preparation) and completion of Human Services Leadership coursework. 12 credits (540 internship hours).

# Humanities (HUMN)

#### HUMN 210. The Film Experience. (3 Credits)

This is an introductory course on films with emphasis on film both as an art form and as a shaper of social values. Viewing of key full-length dramatic features, experimental and other short films with related discussions, lecture and independent investigation. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### HUMN 220. Introduction to Islam. (3 Credits)

This course examines the way of life known as Islam. Students are introduced to cultural and religious aspects of life for more than one billion Muslims and Islamic principles of faith and practice, the Quran, Muslim cultural traditions and religious laws. Students will also explore the lifestyles of women, polygamy, the representation of Muslims in the media and shared similarities of Islam with Christianity and Judaism. Prerequisite: C grade or better in COMP 101 3 credits (3 lecture hours), offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness.

#### HUMN 230. Rural Studies. (3 Credits)

This interdisciplinary course will introduce students to the study of rural life in American history. Through an exploration of historical, literary, and cultural sources, students will examine the idea and reality of rural "life on the farm" in America's past and present. Grades will be based on class discussion, formal and informal writing assignments, exams and collaborative assignments. Prerequisite: C or better in COMP 101 and C or better in HIST 101, HIST 102, HIST 103, POLI 101, POLI 111 or SOCI 101 3 credits (3 lecture hours), offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### HUMN 231. Native American Studies. (3 Credits)

Native American history, culture, philosophy, worldview, religion, and art through its oral, written and visual literature. Students will be introduced to the oral tradition, and learn about tribal bio-regions and their cultures and traditions through their literature. Prerequisite: "C" or better in COMP 101 3 credits\* (3 lecture hours), spring semester even years This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness.

#### HUMN 241. Diversity & Hum: Special Topic. (3 Credits)

Explore a topic within the dynamic field of diversity and humanities. Students will read a variety of texts, including films, music, and/or the arts and discuss what impact the work has on our lives and the world around us. In order to know the specific topic, please see the subtitle and unique course description available on the college website's course listings page and in the scheduling tools. These will be available prior to registration. Course is repeatable for credit up to 3 times when content is unique. This course is cross-listed with HUMN 341. Students can choose to take the course as a 200 level or 300 level course; different work will be required and expected for each level. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education requirement for The Humanities and Diversity: Equity, Inclusion, and Social Justice as well as the SUNY General Education Core Competency requirement for Critical Thinking and Reasoning. Pre- or Corequisite: A letter grade of "C" or higher in COMP 101 or COMM 105. 3 credits (3 lecture hours), fall or spring semester.

#### HUMN 261. Games, World Build, Story. (3 Credits)

This class seeks to understand contemporary storytelling through a discussion of video game theory, creative writing, and literary theory. To provide us with some direction in this endeavor, we will be exploring a chosen genre in several forms-video games and fiction, poetry, drama, and/or film. We will also explore how narrative choices affect audience, character, and writer by creating our own fictional world together and developing stories within that world. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Humanities.

#### HUMN 341. Diversity & Hum: Special Topic. (3 Credits)

Explore a topic within the dynamic field of diversity and humanities. Students will read a variety of texts, including films, music, and/or the arts and discuss what impact the work has on our lives and the world around us. In order to know the specific topic, please see the subtitle and unique course description available on the college website's course listings page and in the scheduling tools. These will be available prior to registration. Course is repeatable for credit up to 3 times when content is unique. This course is cross-listed with HUMN 241. Students can choose to take the course as a 200 level or 300 level course; different work will be required and expected for each level. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education requirement for The Humanities and Diversity: Equity, Inclusion, and Social Justice as well as the SUNY General Education Core Competency requirement for Critical Thinking and Reasoning and Information Literacy. Prerequisite: A letter grade of "C" or higher in COMP 101 or COMM 105. 3 credits (3 lecture hours), fall or spring semester.

## Journalism (JOUR)

#### JOUR 101. Intro to Mass Communication. (3 Credits)

Survey of the mass media to present vocational opportunities, to familiarize students with leading newspapers, magazines, broadcasting, and other communication media, to explore the media's place in American history, and to examine some of the major issues confronting the press and mass media today. Introduction to communication theory. 3 credits (3 lecture hours), fall semester. This course satisfies the Liberal Arts and Sciences requirement.

#### JOUR 111. News Writing & Reporting. (3 Credits)

Fundamentals of news writing, the techniques of gathering news, and the elements of writing style that make a good reporter. Elements of the news story including the lead, style and structure of news stories, copy editing, news sources, and types of news stories. Pre or Co-requisite: COMP 101 or permission of instructor. 3 credit hours (2 lecture, 2 lab hours), fall semester. This course satisfies the Liberal Arts and Sciences requirement.

#### JOUR 112. News Writing II. (3 Credits)

In-depth study of reporting and writing news, details of government, politics, courts, education and science writing. Prerequisite: Grade of "C" or better in JOUR 111 3 credits (2 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement.

#### JOUR 114. News Editing. (3 Credits)

Principles of editing for print, broadcast and Internet copy focusing on style, grammar, syntax. Introduction to CART (Computer-Assisted Reporting Techniques) and ethical considerations applied through the editing process. Prerequisite: Grade of "C" or better in JOUR 112 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### JOUR 121. Principls of Press Photography. (3 Credits)

An introduction to the use of photography in delivering the news. The course includes an introduction to basic camera functions, the rules of photographic composition, the use of digital manipulation software and storytelling through images. 3 credits (2 lecture hours, 2 laboratory hours) spring semester

#### JOUR 122. Advanced Photojournalism. (3 Credits)

Intensive study of photography and photographic equipment with emphasis on photojournalism and techniques of the freelance photographer. \$40 lab fee, \$40 rental fee, \$50 refundable deposit. Prerequisite: JOUR 121 3 credits (2 lecture hours, 2 laboratory hours), spring semester, alternate years

#### JOUR 126. Broadcast Writing & Editing. (3 Credits)

Broadcast Writing & Editing is designed to provide Journalism majors an introduction to the writing formats and editing styles used to deliver news content clearly and conversationally in the form of radio and Internet broadcasts (podcasts), television packages or stories, and commercial promotions used by a variety of businesses and organizations worldwide, to gain public attention for events and happenings as well as products and services. Students will research, write and format scripts for broadcast stories on deadline, including content for news, sports, in-depths, packages, mini-documentaries, as well as commercial, entertainment and promotional news. A highlighted component to this course is Resourceful Exercises, in which students will be sent breaking news assignments during a 24/7 period, have to research the topic and submit the proper broadcast formatted script on deadline. Pre/Correquisite: COMP 101 3 credits (3 lecture hours) Spring semester

#### JOUR 185. Production Lab I. (1 Credit)

Work experience in one of the following publications or publicationsrelated activities: college newspaper, radio station, or photography. Deadline pressures, layout and format techniques, staff composition and problems, and FCC and print ethics. 1 credit (2 laboratory hours), fall semester

#### JOUR 186. Production Lab II. (1 Credit)

Continuation of JOUR 185. 1 credit (2 laboratory hours), spring semester

#### JOUR 187. Production Lab WCVM Media I. (1 Credit)

Production Lab in WCVM Media I and II JOUR 287/288 Production Lab in WCVM Media III and IV JOUR 387/388 Production Lab in WCVM Media V and VI JOUR 487/488 Production Lab in WCVM Media VII and VIII This series of production laboratory experiences provide the student operational staff necessary to keep the campus broadcast center, WCVM Media, functional for a 10-week period. WCVM is composed of an AM radio station, Internet radio station, Cable TV channel, and a digital video production unit. Depending on the laboratory experience for which the participant is enrolled, student may work a minimum of 5 to 9 hours per week (1 credit hour = 45 hours) as content producers. While these labs are degree requirements for the B.S. in Videojournalism Communication, students from all campus majors are eligible to participate for academic credit toward graduation. Prerequisite: Permission of instructor required JOUR 187/188 (1 credit; 1 credit hour), fall/spring JOUR 287/288 (1 credit; 1 credit hour), fall/spring JOUR 387/388 (2 credits; 2 credit hours), fall/spring JOUR 487/488 (1 credit; 1 credit hour), fall/spring

#### JOUR 188. Production Lab WCVM Media II. (1 Credit)

Production Lab in WCVM Media I and II JOUR 287/288 Production Lab in WCVM Media III and IV JOUR 387/388 Production Lab in WCVM Media V and VI JOUR 487/488 Production Lab in WCVM Media VII and VIII This series of production laboratory experiences provide the student operational staff necessary to keep the campus broadcast center, WCVM Media, functional for a 10-week period. WCVM is composed of an AM radio station, Internet radio station, Cable TV channel, and a digital video production unit. Depending on the laboratory experience for which the participant is enrolled, student may work a minimum of 5 to 9 hours per week (1 credit hour = 45 hours) as content producers. While these labs are degree requirements for the B.S. in Videojournalism Communication, students from all campus majors are eligible to participate for academic credit toward graduation. Prerequisite: Permission of instructor required JOUR 187/188 (1 credit; 1 credit hour), fall/spring JOUR 287/288 (1 credit; 1 credit hour), fall/spring JOUR 387/388 (2 credits; 2 credit hours), fall/spring JOUR 487/488 (1 credit; 1 credit hour), fall/spring

#### JOUR 201. Sports Writing. (3 Credits)

This course provides an introduction to the specialized skills required for reporting and writing about sports for newspapers, magazines and the Web. Game coverage, advances, wraps, features and non-contest reporting are also covered. Prerequisite: Minimum grade of B in JOUR 111 or permission of instructor. 3 credits, (2 lecture hours, 2 laboratory hours), spring semester

#### JOUR 211. Feature Writing. (3 Credits)

Investigative and interpretative reporting through extensive use of the news conference. Students will develop interviewing, research, and feature-writing skills. Prerequisite: JOUR 112 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### JOUR 214. Specialized Writing. (3 Credits)

Writing and preparing for publication of columns, interpretative articles and feature pieces for newspapers or magazines. Prerequisite: JOUR 112 3 credits (2 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement.

#### JOUR 220. Mass Media and Society. (3 Credits)

An investigation of the effects of mass media on society and social systems. This course examines the processes of mass media and their influences on their audiences, with emphasis on the majority and minority voices and viewpoints it creates and promotes. Specific topics will include race, class and gender in mass media, gate-keeping and agendasetting in media content, news media, entertainment media, feedback and control, audience analysis, and developing skills in critical media literacy. Prerequisite: SOCI 101 with a C+ or better, or permission of instructor 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement.

#### JOUR 261. Graphics of Mass Communication. (2 Credits)

Advanced newspaper layout and design. Introduction to magazine layout and design. Visual aspects of advertising, such as the use of color to sell a product, plus a unit on promotional material, i.e., brochures, campaigns, including instruction on paper selection and mailing. Prerequisite: JOUR 114 2 credits (1 lecture hour, 2 laboratory hours), fall semester

#### JOUR 270. Desktop Publishing. (3 Credits)

Provide the basic skills of Desktop Publishing to those already familiar with word processing. It is designed to facilitate control of the publishing process- editing, typesetting, design, graphic production, and page makeup from one's own personal desktop. Includes Web page design. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### JOUR 272. Public Relations Publicity Mgt. (3 Credits)

This course will cover essentials for public relations practitioners, including a brief theory-based discussion of the origins of P.R. at the turn of the century and its evolution into a leading industry in today's world. Students will learn first- hand how to identify target audiences and will go through exercises in drafting, producing, and distributing a wide range of P.R. messages to those publics using mass media and emerging communications technologies. Special topics will include crisis public relations, speech writing, and conducting press conferences and other media briefings. This class is open to non-majors with permission from the instructor. 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement.

#### JOUR 280. Broadcast Mgt, News, Promotion. (3 Credits)

This class offers a "work to show" class where students learn the business of broadcasting including: management and marketing techniques, sales and promotion strategies, and non-linear video editing production. Professionals in the local and regional broadcasting markets guest lecture, as well as host students through field trip visits. Prerequisite: Permission of instructor 3 credits, fall semester

#### JOUR 285. Production Laboratory III. (1 Credit)

Allows seniors to earn credit for supervisory publication work. CHIMES and photography workers learn editors' functions while WCVM staff learn management and FCC training. 1 credit (2 laboratory hours), fall semester

#### JOUR 286. Production Laboratory IV. (1 Credit)

Continuation of JOUR 285. 1 credit (2 laboratory hours), spring semester

#### JOUR 287. Production Lab WCVM Media III. (1 Credit)

JOUR 187/188 Production Lab in WCVM Media I and II JOUR 287/288 Production Lab in WCVM Media III and IV JOUR 387/388 Production Lab in WCVM Media V and VI JOUR 487/488 Production Lab in WCVM Media VII and VIII This series of production laboratory experiences provide the student operational staff necessary to keep the campus broadcast center, WCVM Media, functional for a 10-week period. WCVM is composed of an AM radio station, Internet radio station, Cable TV channel, and a digital video production unit. Depending on the laboratory experience for which the participant is enrolled, student may work a minimum of 5 to 9 hours per week (1 credit hour = 45 hours) as content producers. While these labs are degree requirements for the B.S. in Videojournalism Communication, students from all campus majors are eligible to participate for academic credit toward graduation. Prerequisite: Permission of instructor required JOUR 187/188 (1 credit; 1 credit hour), fall/spring JOUR 287/288 (1 credit; 1 credit hour), fall/spring JOUR 387/388 (2 credits; 2 credit hours), fall/spring JOUR 487/488 (1 credit; 1 credit hour), fall/spring

#### JOUR 288. Production Lab WCVM Media IV. (1 Credit)

JOUR 187/188 Production Lab in WCVM Media I and II JOUR 287/288 Production Lab in WCVM Media III and IV JOUR 387/388 Production Lab in WCVM Media V and VI JOUR 487/488 Production Lab in WCVM Media VII and VIII This series of production laboratory experiences provide the student operational staff necessary to keep the campus broadcast center, WCVM Media, functional for a 10-week period. WCVM is composed of an AM radio station, Internet radio station, Cable TV channel, and a digital video production unit. Depending on the laboratory experience for which the participant is enrolled, student may work a minimum of 5 to 9 hours per week (1 credit hour = 45 hours) as content producers. While these labs are degree requirements for the B.S. in Videojournalism Communication, students from all campus majors are eligible to participate for academic credit toward graduation. Prerequisite: Permission of instructor required JOUR 187/188 (1 credit; 1 credit hour), fall/spring JOUR 287/288 (1 credit; 1 credit hour), fall/spring JOUR 387/388 (2 credits; 2 credit hours), fall/spring JOUR 487/488 (1 credit; 1 credit hour), fall/spring

#### JOUR 290. Advertising Strategies. (3 Credits)

An overview of advertising theory and practice which covers advertising's place in society, its relation to marketing and communications, its forms of media, and its creative elements-art and copy. Students create an entire production advertising campaign for a client. Prerequisite: Permission of instructor 3 credits (3 lecture hours)

#### JOUR 313. Broadcast Scriptwriting. (3 Credits)

Broadcast Script writing will provide students with weekly news and entertainment producing seminars designed to tailor their abilities to research, write and format, and critique in-depth journalistic writings appropriate for use in any communications profession, but specific to projects related to radio, television (including Internet video streaming), and film script writing. Lecture meetings, as well as independent research and individual consultation sessions, are an integral part of the story origination and execution process for programming related to both the news and entertainment industries. Prerequisites: "C" or better in COMP 101 and 102, or permission of instructor 3 credits (3 lecture hours) fall or spring semester

#### JOUR 315. Online Writing & Production. (3 Credits)

Adapting written, audio, and video files for the Internet, incorporating style and format changes to accommodate online audiences. Writing assignments for news and marketing content. Examination of the elements of print and broadcast writing styles that contribute to online content. A thorough review of the differences and similarities that mark the era of media convergence in journalism. Prerequisites: JOUR 214 with a C+ or better 3 credits (2 lecture hours, 2 laboratory hours)

#### JOUR 317. Writing Nonfiction Magazines. (3 Credits)

Introduction to the specialized skills required for finding, researching and writing non-fiction stories for magazines. Students will learn how to target potential publication sites, write pitch letters, and negotiate publishing contracts. Prerequisite: "C" or better in COMP 101, submission of writing portfolio and permission of instructor. 3 credits (2 lecture hours, 2 lab hours), spring semester only

#### JOUR 326. Videojourn Producing & Editing. (3 Credits)

Videojournalism I (Production/Editing) is designed so students emulate the world of videojournalists or "news content producers" in the field. These producers determine what broadcast news is, how to best present it to a specific audience, and how to best technically gather information on deadline within a business model. Students will learn the technical parameters of digital video cameras, audio and video editing, and basic field production. Broadcast writing formats and editing protocol are integral components of this course. Prerequisite: "C" or better in JOUR 126 Broadcast Writing & Editing. 3 credits (3 lecture hours), fall or spring semester

#### JOUR 327. Content Producing Media Platfo. (3 Credits)

This course provides students a variety of broadcast platforms to perform video shooting, technical editing for audio and video, file conversion, and infographics production. Students will also independently research story themes, visually create, and technically convert audio and video content for use across diverse media platforms including, but not limited to, television, Internet websites, podcasts, and cell phone video. Chromakey use, multi-source video production as well as computer graphics and video editing software will play an integral role in the content conceptualization and production processes of visual storytelling. Prerequisites: "C" or better in JOUR 326 Videojournalism I (Producing/Editing) 3 credits (3 lecture hours) spring

#### JOUR 328. Ethical/Legal Issues Content. (3 Credits)

This course provides students with numerous case studies focusing on First Amendment issues, industry codes of conduct, the Federal Communications Commission, media access, copyright law, confidential sources, labor law, freedom of information, defamation of character, Internet legalities, and current industry topics in the news. Videojournalism III offers students detailed information to keep themselves and their content legal, while best trying to educate the audience they pledge to serve. Prerequisite: Permission of instructor. 3 credits (3 lectures per week) fall

#### JOUR 345. Web Content Design. (3 Credits)

Instruction in basic Web design, with the emphasis on the development of skills related to online journalism. Students will be able to edit Web pages for clarity and appearance that enhances readability and access. Students will learn principles of Web design, getting started with Dreamweaver software, and developing a Web site. The course features step-by-step instructions and in-depth explanations of the features of Macromedia Dreamweaver and Flash. Instruction includes working with text and graphics, links, animations and tables. In addition, students will understand and create cascading style sheets and page formatting. Prerequisites: JOUR 270 and JOUR 315 with a C or better, or permission of instructor 3 credits (2 lecture hours and 2 lab hours per week), fall or spring semester.

#### JOUR 385. Production Lab in JCOM I. (1 Credit)

Students will produce the online version of the CHIMES newspaper, updating content on a daily basis and maintaining close contacts with the print CHIMES staff. It is expected that students will take increasingly prominent roles as editors in the laboratory. The course includes instruction on intermediate Web authoring and online editing. Prerequisite: JOUR 286 – CHIMES Production Lab or permission of the instructor 1 credit (2 laboratory hours)

#### JOUR 386. Production Lab in JCOM II. (1 Credit)

Students will produce the online version of the CHIMES newspaper, updating content on a daily basis and maintaining close contacts with the print CHIMES staff. It is expected that students will take increasingly prominent roles as editors in the laboratory. The course includes instruction on intermediate Web authoring and online editing. Prerequisite: JOUR 385 or permission of the instructor 1 credit (2 laboratory hours)

#### JOUR 387. Production Lab WCVM Media V. (2 Credits)

JOUR 187/188 Production Lab in WCVM Media I and II JOUR 287/288 Production Lab in WCVM Media III and IV JOUR 387/388 Production Lab in WCVM Media V and VI JOUR 487/488 Production Lab in WCVM Media VII and VIII This series of production laboratory experiences provide the student operational staff necessary to keep the campus broadcast center, WCVM Media, functional for a 10-week period. WCVM is composed of an AM radio station, Internet radio station, Cable TV channel, and a digital video production unit. Depending on the laboratory experience for which the participant is enrolled, student may work a minimum of 5 to 9 hours per week (1 credit hour = 45 hours) as content producers. While these labs are degree requirements for the B.S. in Videojournalism Communication, students from all campus majors are eligible to participate for academic credit toward graduation. Prerequisite: Permission of instructor required JOUR 187/188 (1 credit; 1 credit hour), fall/spring JOUR 287/288 (1 credit; 1 credit hour), fall/spring JOUR 387/388 (2 credits; 2 credit hours), fall/spring JOUR 487/488 (1 credit; 1 credit hour), fall/spring

#### JOUR 388. Production Lab WCVM Media VI. (2 Credits)

JOUR 187/188 Production Lab in WCVM Media I and II JOUR 287/288 Production Lab in WCVM Media III and IV JOUR 387/388 Production Lab in WCVM Media V and VI JOUR 487/488 Production Lab in WCVM Media VII and VIII This series of production laboratory experiences provide the student operational staff necessary to keep the campus broadcast center, WCVM Media, functional for a 10-week period. WCVM is composed of an AM radio station, Internet radio station, Cable TV channel, and a digital video production unit. Depending on the laboratory experience for which the participant is enrolled, student may work a minimum of 5 to 9 hours per week (1 credit hour = 45 hours) as content producers. While these labs are degree requirements for the B.S. in Videojournalism Communication, students from all campus majors are eligible to participate for academic credit toward graduation. Prerequisite: Permission of instructor required JOUR 187/188 (1 credit; 1 credit hour), fall/spring JOUR 287/288 (1 credit; 1 credit hour), fall/spring JOUR 387/388 (2 credits; 2 credit hours), fall/spring JOUR 487/488 (1 credit; 1 credit hour), fall/spring

#### JOUR 401. Legal Ethical Issues Mass Comm. (3 Credits)

Students will research several case studies that represent various legal and ethical issues past and present, including freedom of speech, publishing by authority, alien and sedition laws, libel and slander, bias and prejudice and conflicts of interest in reporting, right to privacy, professional codes of conduct, shield laws, FCC regulation of broadcast entities, and the emerging debate over censorship if the Internet. Current related issues in the news will also be explored as available. Prerequisite: JOUR 214 or permission of instructor This course satisfies the Liberal Arts and Sciences requirement.

#### JOUR 409. Pre-Internship Seminar. (1 Credit)

Prepares students in the B.S. in Journalism & Communication for Online Media degree program for the 6-credit internship in the following semester. Integrates rules and regulations from the work place with academic and professional standards for performance, conduct, and communication within an organization. Students will also use this course to prepare solicitations for, and secure, their internship sites for the following semester. Prerequisite: JOUR 315 – Online Writing & Production – With a grade of C+ or better 1 credit (One seminar hour per week)

#### JOUR 410. Internship in JCOM. (12 Credits)

In this course, students will work in a professional business setting either in person or on campus through online and phone correspondence —to establish and maintain a professional Web site for that business. Eligible businesses may or may not be related to journalism. Students will utilize writing skills learned in previous courses to generate content appropriate to the client and to prepare that content for uploading on a daily or weekly basis as appropriate. Students will work collaboratively with client employees and will be expected to conduct themselves in a manner consistent with high professional standards. Prerequisites: JOUR 409 – Pre-Internship Seminar 12 credits (A minimum of 400 hours in an internship setting plus 40 hours with the instructor, including all assignments)

#### JOUR 411. Capstone Course in JCOM. (3 Credits)

This course draws together all the elements of the B.S. degree in Journalism & Communication for Online Media, including technical applications, writing skills, liberal arts and elective courses and internship experience. Students will be required to meet in lecture, seminar and laboratory settings, and to discuss common and individual experiences from their internship and other applied academic activities. Emphasis will be on the examination of specific skills sets as well as students' problem-solving skills, goal setting, self-assessment, and oral and written communication skills. Students will perform a community-service project in which they will provide Web content for a local nonprofit agency. They will also prepare a report of their activities in the form of a capstone presentation to be delivered to a campus audience at the end of the semester. Prerequisite: JOUR 410 – Internship in Journalism & Communication for Online Media 3 credits (1 lecture hour, 1 seminar hour, 2 laboratory hours)

#### JOUR 426. Remote Broadcast Production. (3 Credits)

This work-to-show class enables students to produce live remote broadcasts for radio, television, and the Internet – news, sports, special event meetings, plays, and more. Students will learn the real world challenges and rewards of "live content producing" - planning, site surveying, budgeting, executing, and evaluating the production process. Many of the productions will be researched and produced independently by a team of Videojournalism producers. Prerequisite: JOUR 327 Videojournalism II (Content Producing Across Media Platforms); permission of instructor 3 credits (3 lecture hours) spring

#### JOUR 428. Videojournalism Internship. (12 Credits)

This 12-credit, in-field experience offers students preparation for fulltime employment. Students work collaboratively in a professional work environment with an on-site mentor, who will assign duties and responsibilities similar to those of on-staff videojournalists or content producers. Prerequisite: 'B' or better in JOUR 427 Video Portfolio 12 credits (2 credit hours) spring

#### JOUR 485. Production Lab in JCOM III. (1 Credit)

Students will produce the online version of the CHIMES newspaper, updating content on a daily basis and maintaining close contacts with the print CHIMES staff. It is expected that students will take increasingly prominent roles as editors in the laboratory. The course includes instruction on intermediate Web authoring and online editing. Prerequisite: JOUR 386 or permission of the instructor 1 credit (2 laboratory hours)

#### JOUR 486. Production Lab in JCOM IV. (1 Credit)

Students will produce the online version of the CHIMES newspaper, updating content on a daily basis and maintaining close contacts with the print CHIMES staff. It is expected that students will take increasingly prominent roles as editors in the laboratory. The course includes instruction on intermediate Web authoring and online editing. Prerequisite: JOUR 485 or permission of instructor 1 credit (2 laboratory hours)

#### JOUR 487. Production Lab WCVM Media VII. (1 Credit)

JOUR 187/188 Production Lab in WCVM Media I and II JOUR 287/288 Production Lab in WCVM Media III and IV JOUR 387/388 Production Lab in WCVM Media V and VI JOUR 487/488 Production Lab in WCVM Media VII and VIII This series of production laboratory experiences provide the student operational staff necessary to keep the campus broadcast center, WCVM Media, functional for a 10-week period. WCVM is composed of an AM radio station, Internet radio station, Cable TV channel, and a digital video production unit. Depending on the laboratory experience for which the participant is enrolled, student may work a minimum of 5 to 9 hours per week (1 credit hour = 45 hours) as content producers. While these labs are degree requirements for the B.S. in Videojournalism Communication, students from all campus majors are eligible to participate for academic credit toward graduation. Prerequisite: Permission of instructor required JOUR 187/188 (1 credit; 1 credit hour), fall/spring JOUR 287/288 (1 credit; 1 credit hour), fall/spring JOUR 387/388 (2 credits; 2 credit hours), fall/spring JOUR 487/488 (1 credit; 1 credit hour), fall/spring

#### JOUR 488. Production Lab WCVM Media VIII. (1 Credit)

JOUR 187/188 Production Lab in WCVM Media I and II JOUR 287/288 Production Lab in WCVM Media III and IV JOUR 387/388 Production Lab in WCVM Media V and VI JOUR 487/488 Production Lab in WCVM Media VII and VIII This series of production laboratory experiences provide the student operational staff necessary to keep the campus broadcast center, WCVM Media, functional for a 10-week period. WCVM is composed of an AM radio station, Internet radio station, Cable TV channel, and a digital video production unit. Depending on the laboratory experience for which the participant is enrolled, student may work a minimum of 5 to 9 hours per week (1 credit hour = 45 hours) as content producers. While these labs are degree requirements for the B.S. in Videojournalism Communication, students from all campus majors are eligible to participate for academic credit toward graduation. Prerequisite: Permission of instructor required JOUR 187/188 (1 credit; 1 credit hour), fall/spring JOUR 287/288 (1 credit; 1 credit hour), fall/spring JOUR 387/388 (2 credits; 2 credit hours), fall/spring JOUR 487/488 (1 credit; 1 credit hour), fall/spring

# Literature (LITR)

#### LITR 203. American Literature to 1900. (3 Credits)

This course surveys the voices of North America up to and beyond the Civil War. It covers Indians, explorers, slaves and pioneers. Students are introduced to philosophical and political pondering, the birth of the short story, and the forging of the North American character. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 204. American Lit 1900 to Present. (3 Credits)

Step into a time machine and witness the unfolding of Modern America, from the 1870's to the 1970's and beyond. This course surveys the writers who influenced and echoed the culture that shapes our times. Meet immigrants, flappers, beatniks and more, in poems, stories, etc. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 205. English Literature to 1800. (3 Credits)

This survey course brings to life monsters, dragons, knights, poets, angels and actors from English literature and culture of the eighth through eighteenth centuries. Watch Beowulf fight Grendel, take a journey to Canterbury with Chaucer's pilgrims, see a Shakespearean play at the Globe Theatre, gasp as Milton's angels fall from heaven, visit exotic lands with Gulliver, and more. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 206. English Lit 1800 to Present. (3 Credits)

Murderers, monsters, lovers and lunatics stalk the pages of British literature since the eighteenth century. This survey starts with the revolutionary ideas of Wordsworth, Coleridge, and other Romantics. The Victorian period that follows reveals surprising contrasts such as Tennyson's practical analysis of issues and Morris's artistic rejection of meaning. Finally, the survey shows how modern authors such as Yeats and Pinter build upon or reject the heritage of the past. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 207. Western World Literature. (3 Credits)

This is a Western literature course which examines literature in translation from South, Central and North America, as well as the Caribbean and from Africa and Europe. Students will research, read, discuss, and write about early and modern texts from countries within the western bioregion, such as Italy, France, Russia, Chile, Argentina, Cuba, Canada, Ghana, Nigeria, South Africa, and others. Students will be introduced to a broad survey of literature that will provide a window on the culture, history, and geography of the regions in their texts. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 208. Eastern World Literature. (3 Credits)

This is a world literature survey course that examines literature in translation from the Middle East, Asia, Australia and the Eastern Pacific Basin. Students will read, discuss, and write about early, middle period, and modern text selections from regions including Israel, Palestine, Saudi Arabia, India, Tibet, China, Japan, Korea, Vietnam, Singapore, Australia, New Zealand, and Samoa. Students will be introduced to a broad survey of literature that will provide a window on the culture, history, and geography of the regions in the texts. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities and Other World Civilization and World History & Global Awareness.

#### LITR 211. Black American Writers. (3 Credits)

Chronological survey of the contribution of the Black American writer from the days of slavery to the present. Slave narratives, novels, plays, short stories, and poems. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 221. Literature of Gender. (3 Credits)

Reading, discussion, and written analysis of literature emphasizing the significance of changing gender roles portrayed in various genres, in different cultures and in different eras. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 231. Modern Literature. (3 Credits)

Reading, discussion, and written analysis of 20th century novels, short stories, poetry, plays, and nonfiction with a multicultural emphasis. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 232. Major American Novels. (3 Credits)

Reading and discussion of novels which have had an impact in American literature, of their authors, and of the changes in American literature as evidenced through these novels. Concepts of the novel explored through criticism and explication. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 233. Literature and the Environment. (3 Credits)

A chronological survey of North American writers on the environment from the Colonial period to the present. Special attention is paid to H.D. Thoreau, Aldo Leopold, Rachel Carson, Edward Abbey, Barry Lopez, and others. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 234. Aspects of Contemporary Lit. (3 Credits)

Reading, discussion, and writing about fiction, drama, poetry, and nonfiction produced since World War II. Emphasis on developments in literary genres and criticism, as well as on social and cultural developments as reflected in the texts. Prerequisite: C or better in COMP 101 3 credits (3 lecture hours), offered on a rotating basis This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 241. Diversity in Literature - Spec. (3 Credits)

Explore a topic within the dynamic field of diversity and humanities. Students will read a variety of texts, including films, music, and/or the arts and discuss what impact the work has on our lives and the world around us. In order to know the specific topic, please see the subtitle and unique course description available on the college website's course listings page and in the scheduling tools. These will be available prior to registration. Course is repeatable for credit up to 3 times when content is unique. This course is cross-listed with LITR 341. Students can choose to take the course at the 200 level or 300 level; different work will be required and expected for each level. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education requirement for Humanities, the SUNY General Education requirement for Diversity: Equity, Inclusion, and Social Justice, and the SUNY Core Competency requirement for Critical Thinking and Reasoning, Pre- or Co-requisite: A letter grade of "C" or higher in COMP 101 or COMM 105. 3 credits (3 lecture hours). Fall or Spring.

#### LITR 243. Biology & Literature. (3 Credits)

This course explores topics in the biological sciences trough their use as themes in literature. Students will examine major themes in literature by applying their understanding of the Scientific Method and current biology and technology topics. Through writing and discussion they will analyze the influence of the biological sciences on literature, culture and the world. This course is primarily for non-science majors and topics change each semester. Not repeatable for credit. Prerequisite: A letter grade of "C" or higher in COMP 101. 3 credits (3 lecture hours), fall or spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 270. Mythology. (3 Credits)

Return to the old names: Achilles. Hector. Paris. Helen. Odysseus. Explore the influence ancient, classical, and world mythology has had on literature by exploring major repeating patterns, motifs, archetypes, and themes such as Creation, the Flood, the Classical Hero, the Heroine, and the Trickster figures. Exploration will include reading various representations of these myths and tales, and discussion will include their influence on literature, religion, culture, and their place in the modern world. Discussion will also focus on the motifs of divinity, humanity, nature, civilization, war, gender, passion, rebellion, diversity, and social justice. This course fulfills the General Education requirement for Humanities. Co-requisite: COMP 101 or COMM 105. 3 credits (3 lecture hours), fall or spring.

#### LITR 271. Adventures in Mythology. (3 Credits)

Adventure into the connection that works of contemporary literature share with stories from myth, legend, fairy tale, folklore, and religious texts. This connection explores how contemporary works have been inspired by these works of the past by sharing repeating patterns, motifs, archetypes, and themes, but also how these modern works form a modern mythology of their own. Course topics may include Disney films, Star Wars, Tolkien & C.S. Lewis, Harry Potter, and A Game of Thrones. This course fulfills the General Education requirement for Humanities. Prerequisites: "C" or better in COMP 101 or COMM 105. 3 credits (3 lecture hours), fall or spring.

#### LITR 272. Mythology & Social Justice. (3 Credits)

Explore how writers for ages have used the stories of myth to advocate for the marginalized, the outsider, and the less fortunate in society through their art, evoking the sympathy of audiences and often being the vehicle for social change. Take for example, The Iliad, a poem that sings the glory of war, but also evokes the empathy of the audience by presenting very human characters and struggles on both sides of the conflict. In this course, participants will consider the ways that stories of myth- both past & present- teach us valuable lessons of empathy, diversity, and social justice. This course fulfills the General Education requirement for Humanities & Diversity: Equity, Inclusion, and Social Justice. Co-requisite: COMP 101 or COMM 105. 3 credits (3 lecture hours), fall or spring.

#### LITR 341. Diversity in Literature - Spec. (3 Credits)

Explore a topic within the dynamic field of diversity and literature. Students will read a variety of fiction, poetry, non-fiction and/or other forms of the literature and discuss what impact the work has on our lives and the world around us. In order to know the specific topic, please see the subtitle and unique course description available on the college website's course listings page and in the scheduling tools. These will be available prior to registration. Course is repeatable for credit up to 3 times when content is unique. This course is cross-listed with LITR 241. Students can choose to take the course as a 200 level or 300 level course: different work will be required and expected for each level. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education requirement for Humanities and Diversity: Equity, Inclusion, and Social Justice, as well as the SUNY General Education Core Competency requirement for Critical Thinking and Reasoning and Information Literacy. Prerequisite: A letter grade of "C" or higher in COMP 101 or COMM 105. 3 credits (3 lecture hours), fall or spring.

#### LITR 342. Science Fiction. (3 Credits)

This course will cover the scope and definition of a huge genre relating to many aspects of current life and interest. Topics will cover all levels of the area from horror to time and space literature. Emphasis will be on the rich and classis history which includes movement from books to television and movies. The literary elements and rationale for such writing will also be discussed along with an opportunity to begin understanding of the many choices and future of this writing. Prerequisite: Grade of C or better in COMP 101 or COMM 105; COMP 102 recommended. 3 credits (3 lecture hours). This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### LITR 370. Mythology. (3 Credits)

Return to the old names: Achilles. Hector. Paris. Helen. Odysseus. Explore the influence ancient, classical, and world mythology has had on literature by exploring major repeating patterns, motifs, archetypes, and themes such as Creation, the Flood, the Classical Hero, the Heroine, and the Trickster figures. Exploration will include reading various representations of these myths and tales, and discussion will include their influence on literature, religion, culture, and their place in the modern world. Discussion will also focus on the motifs of divinity, humanity, nature, civilization, war, gender, passion, rebellion, diversity, and social justice. This course fulfills the General Education requirement for Humanities. Prerequisite: "C" or better in COMP 101 or COMM 105 3 credits (3 lecture hours), fall or spring

#### LITR 371. Adventures in Mythology. (3 Credits)

Adventure into the connection that works of contemporary literature share with stories from myth, legend, fairy tale, folklore, and religious texts. This connection explores how contemporary works have been inspired by these works of the past by sharing repeating patterns, motifs, archetypes, and themes, but also how these modern works form a modern mythology of their own. Course topics may include Disney films, Star Wars, Tolkien & C.S. Lewis, Harry Potter, and A Game of Thrones. This course fulfills the General Education requirement for Humanities. Prerequisites: "C" or better in COMP 101 or COMM 105. 3 credits (3 lecture hours), fall or spring.

#### LITR 372. Mythology & Social Justice. (3 Credits)

Explore how writers for ages have used the stories of myth to advocate for the marginalized, the outsider, and the less fortunate in society through their art, evoking the sympathy of audiences and often being the vehicle for social change. Take for example, The Iliad, a poem that sings the glory of war, but also evokes the empathy of the audience by presenting very human characters and struggles on both sides of the conflict. In this course, participants will consider the ways that stories of myth- both past & present- teach us valuable lessons of empathy, diversity, and social justice. This course fulfills the General Education requirement for Humanities & Diversity: Equity, Inclusion, and Social Justice. Prerequisites: "C" or better in COMP 101 or COMM 10. 3 credits (3 lecture hours), fall or spring.

### Mandarin Chinese (CHIN)

#### CHIN 101. Beginning Mandarin Chinese I. (3 Credits)

This course is an introductory first course to the Mandarin Chinese language. It presupposes no prior knowledge of Mandarin Chinese. Using communicative approach, students will explore basic phonetic system of Chinese (Pin-yin), basic character writing, sentence structure and Chinese culture through activities. Students will learn to listen, speak, write and read at a beginning level. Note: This course is not designed for heritage learners, or students who have taken 3 or more years of Mandarin Chinese in high school. A student with more than a beginner level of proficiency in Mandarin Chinese should meet with the instructor prior to registration to determine the correct level of Chinese course to take. 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language and World Languages.

#### CHIN 102. Beginning Mandarin Chinese II. (3 Credits)

This course is a continuation of CHIN 101, with continuous concentration on communicative approach of the Mandarin Chinese language. By exploring daily conversational topics, this course includes study of the Chinese phonetic system (Pinyin), character writing, sentence structure, and expanded knowledge of Chinese culture. Further acquisition of language skills in listening, speaking, reading, and writing is emphasized. Prerequisite: CHIN 101 at Morrisville with a C grade or better, 2-3 years of high school Chinese, or placement in CHIN 102. 3 credits (3 lecture hours). This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language and World Languages.

### **Manufacturing (MFG)**

#### MFG 110. Dimensional Metrology. (2 Credits)

Utilization of the principles of the science of measurement to first give the necessary laboratory experience to show linear calibration to 10 millionths of an inch with various measurement instruments. Secondly to demonstrate the necessity of metrology in regards to national and international manufacturing and trade. 2 credits (1 lecture hour, 3 laboratory hours), spring semester

#### MFG 206. CNC Machining. (3 Credits)

Students will be instructed about the capabilities and limitations of computer numerical control (CNC) 4-axis machining center and 2-axis turning center. Students will write programs using g-code for a FANUC controller and produce parts in the laboratory from their programs. Prerequisite: MECH 101 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### MFG 207. Quality Control. (2 Credits)

A fundamental, yet comprehensive coverage of the basic principles and applications of quality control. Topics covered include: statistical process control (SPC), data collection and analysis, control charts for variables and attributes, acceptance sampling, reliability, total quality management (TQM) and ISO systems. Prerequisite: MATH 102 2 credits (1 lecture hour, 3 laboratory hours), spring semester

#### MFG 208. CAM - Mastercam. (2 Credits)

Introduction to Computer-Aided Manufacturing (CAM) utilizing Mastercam Software and Computer Numerical Controlled (CNC) machinery. Students will generate 2D and 3D drawing files and use the software to program various 2 and 3 axis CNC machining toolpaths. These programs will then be used to machine projects on our 4-axis machining center Prerequisites: CAD 186 and MFG 206 2 credits (1 lecture hour, 3 laboratory hours), spring semester

#### MFG 221. Manufacturing Processes 1. (3 Credits)

Examination of materials and processes in the manufacturing environment - theoretically and in the laboratory. Prerequisites: MECH 101 and MECH 120 3 credit hours (2 lecture hours, 3 lab hours), fall semester

#### MFG 240. Design/Manufacture Capstone. (3 Credits)

This course is a project-based culmination of design and manufacturing studies applied to a formal product design challenge. Students will work in teams to conceptualize, plan, define, prototype, optimize, and manufacture their solution to a real-world design problem. Emphasis is placed on creativity, communication and documentation skills, time management and individual responsibility for project success. A final project portfolio will include both written and graphical documentation of the product design process. Prerequisites: DRFT 252, MFG 221 3 credits (1 lecture hour, 4 laboratory hours), spring semester

# Massage Therapy (MAST)

#### MAST 100. CPR for Healthcare Providers. (1 Credit)

This course introduces students to the skills and techniques necessary to provide the initial emergency care to sustain life support to victims of accidents and illness. Students will be eligible to become certified in CPR for the Healthcare Provider by satisfying the requirements established by the American Heart Association. This course is open to Massage Therapy students and Human Performance and Health Promotion students or by permission of the instructor. 1 credit (lecture), 5 weeks, fall and spring semester
#### MAST 101. Eastern Anatomy & Physiology. (3 Credits)

Focus is on the nature and distribution of energy throughout the body. This course introduces the philosophical principles of Eastern medicine as well as an in-depth study of the channel system and the distribution of energy and areas of influence. The course introduces the concepts of the organs and viscera and their functions related to energy development and utilization. The principles of energy and Taoist Cosmology will be discussed from ancient to modern viewpoints. Pre or Co-requisites: BIOL 150 and 150L; BIOL 135 and MAST 102 3 credits (3 lecture hours), fall semester

#### MAST 102. Western Massage I. (4 Credits)

Presents western massage techniques including the history of massage, the fundamental principles, physiological effects, and precautions for use. The appropriate use of oils, equipment and draping techniques will be introduced. This course provides the knowledge base of western massage therapy theory and techniques. Pre or Co-requisites: BIOL 150 and 150L; BIOL 135 and MAST 101 4 credits (3 lecture hours, 3 laboratory hours), fall semester

#### MAST 103. Western Massage II. (2 Credits)

This course focuses on the further development of western massage techniques and the precautions for all practitioners. The student will learn more advanced hand manipulations, direction of pressure and pressure points as well as review western massage principles. Prerequisites: MAST 102, BIOL 150 and 150L (each with C or better required) Pre or Co-requisites: BIOL 151 and 151L; BIOL 136 and MAST 104 2 credits (1 lecture hour, 3 laboratory hours) spring semester

#### MAST 104. Eastern Massage. (2 Credits)

This course focuses on the development of understanding regarding the location of the Primary Meridians and the Extra Channels used in Eastern massage. Various eastern massage techniques will be presented as practical applications of theoretical knowledge. Use of acupoints will be thoroughly examined. Students will learn a variety of Eastern massage manipulations and exercises. Prerequisites: MAST 101, BIOL 150 and 150L (each with C or better required) Pre or Co-requisites: BIOL 151 and 151L; BIOL 136, MAST 103 2 credits (1 lecture hour, 3 laboratory hours), spring semester

#### MAST 201. Western Medical Massage. (4 Credits)

Presents western massage techniques and precautions for its use. The student is introduced to acute and chronic health conditions appropriate to treat with Western massage. Situations requiring a referral to medical health care providers will be identified. Fifty hours are devoted to pathology. Prerequisites: MAST 103, BIOL 151 and 151L (each with C or better required) Pre or Co-requisites: MAST 202: BIOL 137; MAST 203; 4 credits (2 lecture hours, 6 laboratory hours) fall semester

#### MAST 202. Eastern Medical Massage. (4 Credits)

This course presents applications of Eastern massage techniques. Eastern massage theory and practice will be applied to chronic and acute health conditions. Students will learn to utilize the Primary Meridians and the Eight Extra Channels to facilitate therapeutic client response. Students will develop a cohesive strategy for client evaluation using Five Element Theory, Eight Principles and four evaluations as well as procedures to develop effective treatment strategies. Students will learn to identify situations that require referral. Fifty hours will focus on pathology. Prerequisites: MAST 104, BIOL 151 and 151L (each with C or better required) Pre or Co-requisites: MAST 201 and 203; BIOL 137; 4 credits (2 lecture hours, 6 laboratory hours) fall semester

#### MAST 203. Professional Issues. (1 Credit)

Topic areas include regulation of the profession and code of ethics and issues of boundaries in relation to body work, interpersonal communications and therapeutic relationships. Introduces students to the Rules of the Board of Regents on Unprofessional Conduct, Section 6509 of Title VIII, and professional ethics and standards. Prerequisites: MAST 104, BIOL 151 and 151L (each with C or better required) Pre or Corequisites: MAST 201, MAST 202, BIOL 137 1 credit (2 lecture hours), first half of spring semester

#### MAST 204. Massage Clinical Experience. (5 Credits)

This course provides the student with the opportunity to apply the knowledge and techniques acquired in all previous massage therapy courses and to become more proficient with client assessment and treatments. Students will become familiar with reading a prescription, developing a plan of treatment and charting methods. This course is offered in a simulated office situation and students must apply massage therapy techniques to another individual for 150 hours under the onsite supervision of a licensed massage therapist. Students will be evaluated applying therapy techniques to a variety of clients using pre-established evaluation criteria. Prerequisites: MAST 201, MAST 202 and BIOL 137 (each with C or better required) Pre or Co-requisites: MAST 100, MAST 205, MAST 206, COMP 110 or COMM 111 5 credits (150 laboratory hours), spring semester

#### MAST 205. Senior Seminar. (3 Credits)

This course is designed to assist the student's transition into professional practice. The course examines independent contractor/selfemployment and paid employee opportunities. Professional standards of practice are reviewed with a focus on legal issues and trends. Aspects of establishing and maintaining an individual practice will be examined including small business planning, business finances, bookkeeping, and marketing/promotions. Prerequisites: MAST 201, MAST 202 and MAST 203 (each with C or better required) Pre or Co-requisites: MAST 204, MAST 100, MAST 206, COMP 110 or COMM 111 3 credits (3 lecture hours), spring semester

#### MAST 206. Professional Practice Issues. (2 Credits)

This course assists the development of professional practice through the discussion of case studies and/or actual client health needs presented in the massage therapy clinic setting. The seminar format allows for discussion of client situations, pathologies and practice issues. This course accompanies MAST 204 which is the clinical component for the Massage Therapy degree. Pre or Co-requisite: MAST 204 and MAST 205 2 credits (2 lecture hours), spring semester

# **Mathematics (MATH)**

#### CHOOSING YOUR FIRST MATHEMATICS COURSE

It is important that you begin your mathematics sequence at the appropriate level for which you are qualified. You need to know your initial mathematics placement and exit requirement for your program. If you do not know your initial placement, contact Mary Stella Van Waes, the mathematics liaison. Following are the different options if you have been placed at, below, or above your program's mathematics exit requirement.

- If you have been placed at your program's exit requirement, then take that mathematics course as specified in the college catalog.
- If you have been placed below your program's exit requirement, then take that mathematics course and then progress through the mathematics sequence to the mathematics course listed as the exit requirement.

• If you have been placed above your program's exit requirement, then work with your academic advisor to find an appropriate course for your major and mathematics ability.

#### SUNY GENERAL EDUCATION

Students who successfully complete any course with the MATH subject code will fulfill the SUNY General Education requirement for Mathematics and Quantitative Reasoning.

Mathematics Pathways

#### Algebra: SKLS 091/MAGN 101/MATH 102/MATH 103

**Calculus:** MATH 147/MATH 161/MATH 162/MATH 261/MATH 262 OR MATH 151/MATH 152

#### Quantitative Reasoning: SKLS 091/MAGN 107/MATH 127

Statistical Reasoning: SKLS 091/MAGN 101/MATH 123 OR SKLS 091/ MAGN 107/MATH 123

The above information does not include mathematics electives. Unless otherwise noted, a student must complete a course with a C or better to meet the pre-requisite for the next course in the sequence. Any student who passes a math course with a C or better may not take a course lower in the sequence to receive mathematics credit. If a student elects to take a mathematics course as Pass/Not Pass, a grade of pass does not imply that a student is able to progress in the sequence. In order to progress in the sequence, the numeric grade will be used to determine if the student has met the prerequisite.

### MATHEMATICS COURSE ELECTIVES

MATH 123 Elementary Statistics: Prerequisite: MAGN 101 (C or better) or MAGN 106 (C or better) or MAGN 107 (C or better) or placement into MATH 102 or higher

MATH 141 Statistics: Prerequisite: MATH 102 (C or better) or placement into MATH 103 or higher

MATH 145 Discrete Mathematics: Prerequisite: MATH 102 (C or better) or placement into MATH 103 or higher

MATH 149 Elementary Linear Algebra: Prerequisite: MATH 103 (C or better) or placement into MATH 147 or higher

#### **Transfer/Placement Information**

Transfer credit: College mathematics courses taken at other institutions are evaluated and will be awarded transfer credit when appropriate.

# How students are initially placed in a mathematics course

All incoming students are required to take a mandatory placement exam.\* In addition to the result on the placement exam, other factors that may be considered include: high school grade point average, high school mathematics grades, examinations (regents, state, SAT, or ACT), the number of attempts necessary to successfully complete high school mathematics courses, and the time elapsed since a student's last mathematics course.

In some cases, college mathematics courses taken at other institutions and successfully transferred for credit may be considered in lieu of the placement exam.

#### How to find a student's mathematics placement/other questions

If a student's mathematics placement is needed, or if students or advisors have any other questions about mathematics placement, please contact the math liaison.

#### **Changes to Placement**

If a student feels their math placement is not correct, they may schedule a meeting with the math liaison during the first week of classes to have their placement reevaluated.

#### SKLS 091 - PRE-ALGEBRA

(see Skills Courses)

#### MATH 102. Intermediate Algebra w Trig. (3 Credits)

Topics include: Exponents, roots, and radicals; Functions and their graphs; Solving and graphing quadratic equations and applications; Solving, radical, equations; Equations in quadratic form; General angle trigonometry; Solving systems of linear equations in two or three variables and applications. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Prerequisite: MAGN 101 (C or better required) or MAGN 107 (B or better required) or equivalent, or placement into MATH 102 or MATH 127. 3 credits (online or lecture format), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 103. College Algebra w/ Trig. (3 Credits)

Topics include: Complex fractions; Evaluation and combinations of functions, inverse functions, exponential, and logarithmic functions, including applications; General angle trigonometry in radian measure; Graphs of basic trigonometric functions; Transformations of sine and cosine functions; Trigonometric identities and equations; Law of sines and law of cosines, including applications. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Prerequisite: MATH 102 (C or better required) or equivalent, or placement into MATH 103. 3 credits (3 lecture hours), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 123. Elementary Statistics. (3 Credits)

Topics include: Study design and Sampling methods; Graphical representation of data; Descriptive statistics; Normal distribution; Hypothesis testing; Confidence intervals; Nonparametric techniques; t-tests; Correlation and regression. Chi-Square Applications in the healthcare and life science professions will be emphasized. Excel will be used for calculations and analysis. Students may not take MATH 123 if credit has been received for MATH 141, or equivalent, without permission from instructor. Prerequisites: MAGN 101 (C or better), MAGN 106 (C or better), or MAGN 107 (C or better) or equivalent, or placement into MATH 102, MATH 103, MATH 127, MATH 147, or MATH 151. 3 credits (hybrid or lecture format). This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 127. Mathematical Reasoning. (3 Credits)

This course will explore various applications of mathematics in the social, finance, health, and environmental fields with a focus of developing informational, technological, logical, and visual reasoning skills. Topics from numeracy, probability and statistics, finance, mathematical modeling with linear, statistical, and exponential functions, and other areas of mathematics will be covered. (TI-30XII calculator required). Prerequisite: MAGN 101 (C or better), MAGN 106 (C or better), or MAGN 107 (C or better) or placement into MATH 102, MATH 103, MATH 127, MATH 147, or MATH 151. 3 credits, (3 lecture hours) fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 141. Statistics. (3 Credits)

Topics include: Graphical representations, Measures of central tendency and dispersion; Probability; Normal distribution; Central limit theorem; Hypothesis testing; Confidence intervals; Regression-correlation. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Students may not take MATH 141 if credit has been received from MATH 123. Prerequisite: MATH 102 (C or better required) or equivalent, or placement into MATH 103, MATH 147, or MATH 151. 3 credits (online or lecture format), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 145. Discrete Mathematics. (3 Credits)

Primarily for students in Computer Science and Computer Information Systems curricula or others with permission. Topics include: Logic; Set theory; Introduction to combinatorics; Relations and functions; Introduction to graph theory. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Prerequisite: MATH 102 (C or better required) or equivalent, or placement into MATH 103, MATH 147, or MATH 151. 3 credits (3 lecture hours), fall semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 147. Selected Topics In Precalculus. (3 Credits)

Topics include: Functions and their inverse; Polynomial functions; Operations on complex numbers; Rational functions and their graphs; Trigonometric identities; Inverse trigonometric functions; Trigonometric equations. Emphasis on calculator solutions. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Prerequisite: MATH 103 (C or better required) or equivalent, or placement into MATH 147. 3 credits (3 lecture hours), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 149. Elementary Linear Algebra. (3 Credits)

Basic elements of linear algebra, an area of mathematics with applications in a wide variety of fields. Topics include: Systems of linear equations including matrix solution using Gauss-Jordan elimination; Matrix operations; Inverse; Computations via calculator; Determinants; The vector space, linear combinations and independence, span, basis; Dot and cross product; Eigenvalues and eigenvectors. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Prerequisite: MATH 103 (C or better required) or equivalent, or placement into MATH 147 or MATH 151. 3 credits (3 lecture hours), spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 151. General Calculus A. (3 Credits)

Topics include: Introduction to limits and continuity; Derivatives of algebraic functions: definition and notation, differentiation rules, implicit differentiation; Applications of the derivative: slope, velocity and acceleration, rate of change, related rates, curve sketching, and optimization; Integration: notation and terminology, definite and in-definite integrals; The Fundamental Theorem of Calculus; Applications Integration by substitution. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Prerequisite: MATH 147 (C or better required) or equivalent, or placement into MATH 151. 3 credits (3 lecture hours), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 152. General Calculus B. (3 Credits)

Topics include: Differentiation and integration of logarithmic, exponential and inverse trigonometric functions; Applications including growth and decay, finding areas, volumes, centroids, fluid pressure, work, and arc length; Techniques of integration; Indeterminate forms with L'Hopital's Rule; Improper integrals. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Prerequisite: MATH 151 (C or better required) or equivalent 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

#### MATH 153. Business Calculus. (3 Credits)

This course is an introduction to differential and integral calculus with particular emphasis on applications in business and related areas. Topics include Functions (polynomial, rational, exponential and logarithmic); Continuity; Limits; Derivatives and differentiation techniques; Marginal analysis; Curve sketching techniques; Optimization; Interest, Integrals and integration techniques; Fundamental Theorem of Calculus; Area between curves; Future value of a continuous income stream. (TI-83 plus or TI-84 plus required, TI-Nspire or similar calculator is not allowed.) Prerequisite: MATH 147 (C or better required) or equivalent, or placement into math 151 or higher (If credit has been received for MATH 151, or equivalent, then permission must be obtained by instructor to register for MATH 153.) 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

#### MATH 161. Calculus I. (4 Credits)

Topics include Review of algebra and analytic geometry; Concepts of limit and derivative of a function; Differentiation and integration of functions including trigonometric, exponential, logarithmic functions and inverse trigonometric functions; Applications to engineering. (TI-83 plus or TI-84 plus required.) Prerequisite: MATH 147 (C or better required) or placement into MATH 151. 4 credits (4 lecture hours), fall semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics (and Quantitative Reasoning).

#### MATH 162. Calculus II. (4 Credits)

Topics include: Applications of integration and integration techniques; Infinite series; Parametric equations and polar coordinates; Applications to engineering. (TI-83 plus or TI-84 plus required.) Prerequisite: MATH 161 (C or better required) 4 credits (4 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

#### MATH 252. Analytic Geometry&Calculus IV. (3 Credits)

#### MATH 261. Calculus III. (4 Credits)

Topics include: Vectors in the plane and in three dimensional space; Vector functions; Functions of several variables; Partial derivatives and multiple integration; Vector calculus; Applications to engineering. (TI-83 plus or TI-84 plus required.) Prerequisite: MATH 162 (C or better required) 4 credits (4 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

#### MATH 262. Differential Equations. (4 Credits)

Topics include ordinary differential equations and their solutions; Classical solutions of linear differential equations; Solutions by use of series and by Laplace transforms; Matrix procedures with solutions to linear systems of differential equations using eigenvalues; Introduction to partial differential equations; Applications in the field of chemistry, physics and engineering. (TI- 83 plus or TI-84 plus required.) Prerequisite: MATH 261 (C or better required) 4 credits (4 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Mathematics

### **Mathematics General (MAGN)**

#### MATHEMATICS

#### CHOOSING YOUR FIRST MATHEMATICS COURSE

It is important that you begin your mathematics sequence at the appropriate level for which you are qualified. You need to know your initial mathematics placement and exit requirement for your program. If you do not know your initial placement, contact Mary Stella Van Waes, the mathematics liaison. Following are the different options if you have been placed at, below, or above your program's mathematics exit requirement.

- If you have been placed at your program's exit requirement, then take that mathematics course as specified in the college catalog.
- If you have been placed below your program's exit requirement, then take that mathematics course and then progress through the mathematics sequence to the mathematics course listed as the exit requirement.
- If you have been placed above your program's exit requirement, then work with your academic advisor to find an appropriate course for your major and mathematics ability.

#### SUNY GENERAL EDUCATION

Students who successfully complete any course with the MATH subject code will fulfill the SUNY General Education requirement for Mathematics and Quantitative Reasoning.

**Mathematics Pathways** 

Algebra: SKLS 091/MAGN 101/MATH 102/MATH 103

Calculus: MATH 147/MATH 161/MATH 162/MATH 261/MATH 262 OR MATH 151/MATH 152

#### Quantitative Reasoning: SKLS 091/MAGN 107/MATH 127

Statistical Reasoning: SKLS 091/MAGN 101/MATH 123 OR SKLS 091/ MAGN 107/MATH 123

The above information does not include mathematics electives. Unless otherwise noted, a student must complete a course with a C or better to meet the pre-requisite for the next course in the sequence. Any student who passes a math course with a C or better may not take a course lower in the sequence to receive mathematics credit. If a student elects to take a mathematics course as Pass/Not Pass, a grade of pass does not imply that a student is able to progress in the sequence. In order to progress in the sequence, the numeric grade will be used to determine if the student has met the prerequisite.

### MATHEMATICS COURSE ELECTIVES

MATH 123 Elementary Statistics: Prerequisite: MAGN 101 (C or better) or MAGN 106 (C or better) or MAGN 107 (C or better) or placement into MATH 102 or higher

MATH 141 Statistics: Prerequisite: MATH 102 (C or better) or placement into MATH 103 or higher

MATH 145 Discrete Mathematics: Prerequisite: MATH 102 (C or better) or placement into MATH 103 or higher

MATH 149 Elementary Linear Algebra: Prerequisite: MATH 103 (C or better) or placement into MATH 147 or higher

### **Transfer/Placement Information**

Transfer credit: College mathematics courses taken at other institutions are evaluated and will be awarded transfer credit when appropriate.

# How students are initially placed in a mathematics course

All incoming students are required to take a mandatory placement exam.\* In addition to the result on the placement exam, other factors that may be considered include: high school grade point average, high school mathematics grades, examinations (regents, state, SAT, or ACT), the number of attempts necessary to successfully complete high school mathematics courses, and the time elapsed since a student's last mathematics course.

In some cases, college mathematics courses taken at other institutions and successfully transferred for credit may be considered in lieu of the placement exam.

#### How to find a student's mathematics placement/other questions

If a student's mathematics placement is needed, or if students or advisors have any other questions about mathematics placement, please contact the math liaison.

#### **Changes to Placement**

If a student feels their math placement is not correct, they may schedule a meeting with the math liaison during the first week of classes to have their placement reevaluated.

#### SKLS 091 - PRE-ALGEBRA

(see Skills Courses)

#### MAGN 101. Elementary Algebra. (3 Credits)

Topics include: Review of basic arithmetic skills. Properties of the real number system, terminology, and vocabulary; Solving linear equations and inequalities in one variable; Literal equations and applications of algebra; Integer exponents; Operations on Polynomials; Factoring; Operations on Rational expressions; Graphing linear equations. TI-30 required. Prerequisite: SKLS 091 or SKLS 092 (C or better) or equivalent, or placement into MAGN 101 or MAGN 107. 3 credits (hybrid or lecture format), fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement.

#### MAGN 106L. Real-World Mathematics. (3 Credits)

#### MAGN 107. Mathematical Literacy. (3 Credits)

This course focuses on mathematics for everyday life. It integrates fluency with numbers, proportional reasoning, data interpretation, algebraic reasoning, modeling, and communicating quantitative information. Mathematical concepts are investigated through group problems and class discussions based on real-life contexts of citizenship, personal finances, medical literacy, healthcare fields, and the environment. (TI-30SII calculator required). Students may not take MAGN 107 if they have earned a grade of C or better in MAGN 106. Prerequisite: SKLS 091 or SKLS 092 (C or better) or equivalent, or placement into MAGN 101 or MAGN 107. 3 credits (online or lecture format) fall or spring semester. This course satisfies the Liberal Arts and Sciences requirement.

### **Mechanical Design (MECH)**

#### MECH 101. Machine Tools. (3 Credits)

Basic principles, capabilities and limitations of machine tools, theory of single and multiple point cutting tools and metal removal. Machine operations and setup, measuring devices, safety and use of hand tools. Co-requisite: MAGN 101 and MFG 110 or permission of instructor 3 credits (2 lecture hours, 3 laboratory hours), spring semester

#### MECH 103. Machine Shop Practices. (1 Credit)

Types of tools used in machine shops, with hands-on experience. Machining of several simple small parts, with methods of machining being more important than accuracy, surface finish, etc. 1 credit (1 lecture hour, 3 laboratory hours), 8 weeks, fall semester

#### MECH 120. Engineering Materials. (3 Credits)

A study of material properties, limitations, processing, testing, and specification. Course includes plastics, metals, ceramics, composites, cements and other important engineering materials. 3 credits (2 lecture hours, 3 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### MECH 211. Analytical Mechanics (Statics). (3 Credits)

Development of the various analytical methods to determine force acting on a particle of rigid body at rest, in a plane or in space. Determination of forces in transmission lines, cables, trusses, machine components and structures. Forces introduced as a result of friction and location of first and second moments. Spreadsheet of software applications. Prerequisite: PHYS 107 (C or better required) Co-requisite: MATH 103 3 credits (2 lecture hours, 1 recitation hour), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### MECH 212. Mechanical Design. (4 Credits)

Study of translation and rotation plane motion of machine elements. Graphical kinematic analysis including absolute and relative velocities, with CAD and spreadsheet applications. Mechanical component analysis and selection to include cams, gears, chain drives, and belt drives. Prerequisites: CAD 186, MECH 211 4 credits (3 lecture hours, 2 laboratory hours), spring semester

#### MECH 213. Strength of Materials. (4 Credits)

Physical properties of engineering materials including relationships between stress and strain, beam design, riveted joints, torsion of shafts, column buckling and the impact loading of mechanical elements. Laboratories in tensile, shear and bending tests as well as the use of electrical strain gages. Prerequisite: MECH 211 (C or better required) 4 credits (3 lecture hours, 2 laboratory hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### MECH 233. Fluid Power and Control. (4 Credits)

A study of incompressible power systems. Including topics in power transmission, controls, circuit design and efficiency, applications, as well as electrohydraulic control of discrete components and programmable systems. Prerequisites: MATH 103, CAD 184 and PHYS 107 4 credits (3 lecture hours, 3 laboratory hours), spring semester

### **MOPAR Career Auto Program (MCAP)**

#### MCAP 101. Fundamentals of MOPAR. (1 Credit)

This class will act as an introduction to the MOPAR apprentice program covering the level 0 core curriculum with the basic skills necessary to become an entry-level technician in a MOPAR dealership. Topics will include understating your role as a dealership technician, service information on line resources, scan tool operation and new vehicle preparation. 1 Credit (2 lecture hrs. per week) Fall Semester

#### MCAP 102. MOPAR Level 1 Technologies. (3 Credits)

This class will act as the second class introduction to the MOPAR apprentice program covering the level 0-1 core curriculum with the basic skills necessary to become an entry-level technician in a MOPAR dealership. Topics will include understating your role as a dealership technician in how to perform service and repair on MOPAR vehicles. 3 credits (Hybrid class, 2 lectures, 3hr lab), spring semester

#### MCAP 103. MOPAR Core Skills Level 2 Tech. (3 Credits)

This class will act as the third class in the MOPAR apprenticeship program covering the level 1-2 curriculum with the skills necessary to become a technician in a MOPAR dealership. Topics will include understating your role as a dealership technician in how to perform service and repair on MOPAR vehicles. 3 credits (Hybrid, 2 lectures, 3hr lab) fall semester

#### MCAP 104. MOPAR New Tech & Updates. (3 Credits)

This class will act as the forth class in the MOPAR apprenticeship program covering the level 2 curriculum with the skills necessary to become a technician in a MOPAR dealership. Topics will include understating your role as a dealership technician in how to perform service and repair on MOPAR vehicles. 3 credits (Hybrid, 2 lectures, 3hr lab) spring semester

# Music (MUSI)

#### MUSI 101. Introduction To Music & Art. (3 Credits)

An overview of the stylistic and cultural elements of the great epochs of western civilization as expressed through its art and music. 3 credits\* (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### MUSI 102. History Of Jazz. (3 Credits)

A study of styles, backgrounds, playing and techniques in the different eras of jazz history from the 1890s to the present. 3 credits\* (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts and the SUNY General Education Requirement for Humanities.

#### MUSI 150. Ensemble. (1 Credit)

Credit for successful participation in pep band, jazz lab, jazz singers or concert band. Tryout may be required. MUSI 155, MUSI 160, MUSI 165 are for subsequent semesters. 1 credit, fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts. Note: At least three credits from the following courses will satisfy the SUNY General Education requirement for "The Arts."

#### MUSI 155. Ensemble. (1 Credit)

Credit for successful participation in pep band, jazz lab, jazz singers or concert band. Tryout may be required. 1 credit, fall or spring semester

#### MUSI 160. Ensemble. (1 Credit)

Credit for successful participation in pep band, jazz lab, jazz singers or concert band. Tryout may be required. 1 credit, fall or spring semester

#### MUSI 165. Ensemble. (1 Credit)

Credit for successful participation in pep band, jazz lab, jazz singers or concert band. Tryout may be required. 1 credit, fall or spring semester

# **Natural Resources (NATR)**

#### NATR 100. Intro to Forestry and NR. (3 Credits)

Field identification of important forest trees and shrubs, their growth characteristics and uses are introduced. Basic instruction is provided in forest management problems, forest measurement, utilization, forest ecology, silviculture, forest wetlands, natural resources recreation, wildlife conservation, urban forestry and natural resource organizations. Several field forestry exercises are used to provide students with practical experience. 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### NATR 101. General Ecology. (3 Credits)

Interrelationships among living organisms and their environment. Examines the nature of diversity, niche dimensions, species' roles and habitats, organism adaptations, life histories, population dynamics, symbiotic relationships, and biome and landscape ecology. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 103. Natural Resources Equipment Op. (2 Credits)

Operation, safety and preventative maintenance of natural resource equipment including chainsaws, log skidder, log loader, dump truck, bulldozer, forklift, skid steer loader, backhoe, and flatbed trailer is practiced. Included in this course is the instruction and hands-on operation of chainsaws, which with additional training in adult first aid/ CPR and environmental concerns will qualify students for New York State Logger certification. This course has an additional lab fee. 2 credits (1 lecture hour, 2 laboratory hours), fall or spring semester

#### NATR 110. Natural Resources Measurements. (3 Credits)

Measurements of forest and wildlife resources, statistical analysis of data and presentation of results. Includes mapping, timber inventories, wildlife population surveys, and report writing. Pre-requisite or Co-requisite: MAGN 101 or equivalent or by permission from the instructor. 3 credits (2 lecture hours, 3 laboratory hours), spring semester

#### NATR 113. Intro toGlobal Positioning Sys. (1 Credit)

This course provides an introduction to-the global positioning system (GPS). The basic principles of GPS are covered with emphasis on field applications in the natural resources and renewable energy areas. The course will also provide a brief introduction to the geographic information system (GIS) with emphasis being placed on data viewers and online GIS applications. Students will be expected to conduct field surveys using both handheld and real-time differential GPS units as well as incorporate those within GIS data viewers. The course will also familiarize the students with the high-end, open-source and commercial GIS software used within the geospatial technology courses offered within the environmental sciences curricula at the 200-, 300-, and 400-levels. 1 credit (1 lecture hour, 2 laboratory hours), seven weeks, fall semester

#### NATR 115. Forest Ecology. (3 Credits)

Physical and biological factors that affect the forest community are discussed. Emphasis is placed on forest ecosystem dynamics and establishing a scientific basis for the cultural treatment of forest stands. Forest community interactions are discussed in detail. Specific types of old growth, wetland, and eastern mesophytic forest communities are analyzed. Prerequisite: NATR 100 or permission of instructor 3 credits (2 lecture hours, 3 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 120. Intro To Recreation Area Mgmnt. (3 Credits)

Basic principles of outdoor recreation and use of leisure time as applied to the development and management of park and recreation areas. Observations and analyses of local recreation areas, trail development and improvement activities. 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### NATR 130. North American Waterfowl. (1 Credit)

Identification, life histories, production areas, nuisance issues, and management of North American ducks, geese, swans and shorebirds. Course includes extensive field observation and maintaining field journals. This course is a certified NYS DEC Waterfowl ID Course and students may opt to take the exam to receive the certificate required to get an access permit for select National Wildlife Refuges and state lands open to waterfowl hunting. Pre-requisite or Co-requisite: NATR 101 or by permission from the instructor. 1 credit (1 lecture hour) spring semester.

#### NATR 140. Geology. (3 Credits)

Nature and origin of minerals and rocks, and the development of land formations with special emphasis on plate tectonics and associated phenomena. Agents of erosion with resulting land formations. 3 credits (2 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 142. Plane Surveying I. (3 Credits)

The principles of plane surveying are explored. Investigation is made of elementary field techniques and office procedures with emphasis on agricultural and conservation applications. Familiarization with various modern surveying instruments, analysis of error and survey computation is emphasized. Field work includes taping, profile and differential leveling, traversing and topographic mapping. Prerequisite: MAGN 101 or equivalent 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### NATR 144. Seminar/Environmental Resc I. (1 Credit)

Designed to inform the freshman Environmental Science student with the various options of study within the department and the career opportunities for each. Other presentations will deal with such topics as enhancing your classroom success, the pre-registration process, ethics, placement, letters of applications, resumes, interviewing techniques and meeting professionals from various environmental fields. Required for all freshman in the Environmental Sciences majors. 1 credit (1 hour recitation), fall semester

#### NATR 145. Intro Environmental Technology. (3 Credits)

A study of the basic concepts of water pollution control, air pollution control, and solid waste management. Review of regulations relating to Environmental Protection and waste minimization/pollution prevention activities are covered. This is a hybrid course: online lectures with inperson laboratory. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science. 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### NATR 150. Aquaculture. (3 Credits)

An introduction to the husbandry of aquatic organisms. Course places emphasis on rearing unit theory and management, stock inventory, growth projections, and water quality management. Laboratory exercises feature visits to state and commercial hatcheries, and hands-on activities at the Morrisville State College Aquaculture Center. This course has an additional laboratory fee. 3 credits (2 lecture hours, 4 laboratory hours), fall semester

#### NATR 152. Fish Reproduction. (2 Credits)

This course explores fish reproductive strategies and their management implications; topics include: modes and requirements of reproduction, embryology, induced spawning techniques, genetics, hybridization and genetic engineering. Laboratories include manual spawning of salmon and trout, and egg inventory. This course has an additional laboratory fee. Prerequisites: NATR 150, NATR 252 2 credits (1 lecture hour, 2 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 153. Marine Biology. (3 Credits)

Introductory course to marine ecology, marine ecosystems, and survey of marine animal phyla. Course will cover the basic processes of marine ecosystems such as tides, currents, and general oceanography. Course will provide a survey of marine ecosystems (coral reefs, estuaries, mangroves, seagrass beds, kelp forests, intertidal and pelagic zones) and their processes. Course will cover marine animal phyla and biodiversity from Cnidarian to Pinnipeds (jellyfish to seals). 3 credits (3 lecture hours) fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 156. Aquaculture Practicum I. (1 Credit)

Hands-on experience in aquaculture facility management with emphasis on daily routine and records keeping. Care of cultured fish and plants, facility maintenance, including fish stock inventory, water quality management, and shipping and transporting fish. Prerequisite: NATR 150 or permission of instructor 1 credit fall or spring semester

#### NATR 158. Fish Nutrition. (2 Credits)

Introduction to the nutritional requirements of fish. Emphasis is placed on natural and artificial feeding of fishes, digestive physiology and anatomy, nutritional requirements and deficiencies, and feed formulation. Laboratories include hands-on study of fish digestive anatomy, and the calculation of feed rations. This course has an additional lab fee. Prerequisite: MAGN 101, NATR 150 Co-requisite: NATR 252 2 credits (1 lecture hour, 3 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 160. Principles of Arboriculture. (2 Credits)

Introduction to the art, science and technology of woody plant health care. Emphasis on the care of landscape trees and shrubs in residential, campus and municipal settings. Major topics include tree mechanics, pruning and training trees; cabling; risk tree management; site evaluation and tree planting and establishment. Co-requisite: NATR 161 2 credits (2 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science (and Scientific Reasoning).

#### NATR 161. Practices of Arboriculture. (1 Credit)

Practical education and experience in the establishment and care of trees and shrubs in the landscape. Emphasis on individual and small groups of plants in residential, campus and municipal settings. Students work in teams under close supervision. Major activities include pruning, climbing with rope and saddle, and risk tree evaluation. This course has an additional laboratory fee. Co-requisite: NATR 160 1 credit (3 laboratory hours), fall semester

#### NATR 210. Dendrology. (3 Credits)

Field study, identification, taxonomy and natural history of more than 100 important forest trees and shrubs of North America. 3 credits (2 lecture hours, 3 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science (and Scientific Reasoning).

#### NATR 211. Forest Protection. (3 Credits)

Overall view of the agents damaging to the forest and their management: meteorology, insects, disease causing organisms, beneficial organisms, IPM, fire behavior and control, and invasive species. Hybrid course: online lectures with in-person laboratory. Pre or Co-requisite: NATR 101 General Ecology or permission from the instructor. 3 credits (2 lecture hours, 3 laboratory hours), spring semester

#### NATR 213. Basics Geospatial Technology. (2 Credits)

This course involves a basic introduction to geospatial technology with focus on the practical applications of geographic information (GIS) and global positioning systems (GPS) in mapping natural and renewable resources. The basic principles of GIS and GPS are discussed with emphasis on computer- assisted mapping. Focus will be on running ArcGIS and its application in a number of assigned class projects. Students are also expected to understand how to conduct surveys using both standard and real-time differential GPS as well as generate thematic maps. GPS measurements and digital orthoimages are utilized in creating geographically-referenced, spatial data. Prerequisite: NATR 113, or permission of instructor 2 credit (1.5 lecture hour, 2 laboratory hours), 10week course, spring semester

#### NATR 215. Practices Of Silviculture. (3 Credits)

Application is made of silvicultural techniques for tending the forest stand in order to meet the goals and objectives of the forest landholder utilizing the principles of forest ecology. Emphasis is on understanding the forest ecosystem and the impact of cultural practices such as thinning, harvest cutting, timber stand improvement and stand regeneration. Prerequisites: NATR 110 and NATR 115. Pre- or corequisite: NATR 213. 3 credits (2 lecture hours, 3 laboratory hours), spring semester.

#### NATR 221. Invasive Species Management. (3 Credits)

Biology, impact and management of invasive species found in or threatening New York State. Terrestrial and aquatic plants, animals (including insects), and diseases are discussed. Classroom focus is on pathways, factors leading to invasion, impact, management and control strategies, and restoration options. Laboratories will involve hands-on surveying and management efforts. Prerequisite: NATR 101 or similar, or by permission from the instructor. 3 credits (2 lecture hours, 3 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science (and Scientific Reasoning).

#### NATR 232. Wildlife Ecology & Management. (3 Credits)

A study of the art and science of wildlife management, including topics pertinent to understanding wildlife populations, their habitats, their ecology and management. Laboratories emphasize identification and life histories of principle North American mammals and game birds, specimen preparation, collection techniques, cover mapping, and habitat manipulation. Prerequisite: NATR 101 or permission of the instructor. Preor co-requisite: NATR 213. 3 credits (2 lecture hours, 3 laboratory hours), spring semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 242. Environmental Law. (3 Credits)

#### NATR 246. Internship Natural Resources. (1-4 Credits)

The purpose of this course is to encourage students to gain experience relative to their major area of study. Students work at an approved internship site in the natural resources field. While working, students maintain a log of activities and progress towards individually established goals. Upon completion, students compile a written report of their internship work and the success of their goals. Prerequisite: Completion of one semester in Natural Resources Conservation or a related major and permission of faculty. 1-4 credits

#### NATR 250. Aquatic Ecology. (3 Credits)

AA study of the physical, chemical and biological interactions of freshwater environments throughout Central New York. Includes ecology, origins, communities and populations of lakes, streams, wetlands, and estuaries. Laboratories include identification of aquatic plants, invertebrates, reptiles and amphibians, habitat assessment, wetland delineation, and the use of bioindicators. Field studies are conducted on local streams, lakes and wetlands. Prerequisite: NATR 101 3 credits (2 lecture hours, 3 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 252. Fish Ecology and Management. (3 Credits)

A study of the morphology, biology, ecology, behavior, and taxonomy of fishes. Strong emphasis is placed on the identification of New York's common freshwater and estuarine fish species. Other topics include systematics, reproductive ecology, population dynamics, fisheries management, and the application of seines, trap nets, gill nets, and electroshocking fishing gear. Pre or co-requisite: NATR 101 or permission of the instructor 3 credits (2 lecture hours, 3 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 254. Fish Health Management. (3 Credits)

Capstone course in the Aquaculture series, dealing with the development and maintenance of hygienic culture facilities. The course progresses from disease and diagnostic theory, through pathogenic and parasitic agents, to chemical and cultural means of disease prevention and eradication. Laboratory exercises include necroptic and microbiologic techniques, pathogen and parasite identification, and chemotherapeutic treatments. This course has an additional lab fee. Prerequisites: NATR 150 and NATR 252, or permission of instructor 3 credits (2 lecture hours, 3 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### NATR 256. Aquaculture Practicum II. (1 Credit)

A continuation of the Aquaculture Practicum series, addressing advanced methods in aquaculture, including fish handling, incubation and early-rearing of fish stocks, feed ration calculations, grow out projections, and harvesting and shipping of fish. Prerequisite: NATR 156, MAGN 101 Corequisite: NATR 158 1 credit, fall or spring semester

#### NATR 257. Aquaculture Practicum III. (1 Credit)

In this continuation of the Aquaculture Practicum series, the student assumes the role of a fish hatchery crew supervisor. In supervising the daily routine of work crews, the student develops mentoring and leadership skills. Additional competency is developed in grow-out, harvesting, fish sales, and delivery. Prerequisite: NATR 256 1 credit, fall or spring semester

#### NATR 258. Aquaculture Practicum IV. (1 Credit)

Final course in the Aquaculture Practicum series. Students will continue to develop and apply mentoring and leadership skills in the management of the Morrisville State College Aquaculture Center. AP IV students will plan and implement work schedules of AP I-III students, conduct performance evaluations, determine feed orders and supply budgets, and develop long-range strategic plans for the AQ Center. Prerequisite: NATR 257 1 credit, fall or spring

#### NATR 260. Principles of Zoology. (4 Credits)

An integrated lecture and laboratory course that presents an introduction to the study of vertebrate and invertebrate animals. Emphasis on zoological organization, identification, diversity, evolution, behavior, form and function, physiology and reproduction. 4 credits, Fall

#### NATR 261. Advanced Arboriculture Practic. (1 Credit)

This course will include advanced arboriculture knowledge and skills associated with hazard tree identification, tree pruning, climbing with a rope and saddle, and use of tree pruning equipment. Students will additionally gain leadership skills by mentoring NATR 161 students by acting as crew leaders for projects, assisting them with skill development, and demonstrating arboriculture skills. Prerequisite: B or higher in NATR 160 and NATR 161 or with instructor's permission. 1 credit (2 laboratory hours), fall semester

#### NATR 280. Herpetology. (3 Credits)

Herpetology is a course designed to investigate the thermal physiology, taxonomy, distribution and natural history of reptiles and amphibians. Emphasis is placed on local forms. Techniques of field identification, collection and preservation are covered in the laboratory component. Prerequisite: Grade of 'C' or better in BIOL 120, or General Ecology NATR 101. 3 credits (2 lecture hours, 4 laboratory hours) fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### NATR 288. Research in Aquatic Science I. (1 Credit)

This course provides the ground work for developing and initiating a research project in the aquatic sciences. Students will progress through the steps of conceiving and conducting background research, formulating research objectives, developing a research methodology, and initiating data collection. The efforts of this course will culminate in NATR 289 Research in Aquatic Science II. Prerequisites: Aquaculture and Aquatic Science major AND permission of instructor 1 credit (approximately 4 hours/week independent research, 60 hours total), fall or spring semester

#### NATR 289. Research Aquatic Science II. (1 Credit)

This course provides the continuation of the research project initiated in research in aquatic science I. Students will progress through the steps of data collection and analysis, data description and summarization, synthesis of conclusion and presentation of results. The course will culminate in an oral, conference-type research presentation. Prerequisite: Research in Aquatic Science I and permission of the instructor 1 credit (approximately 4 hours/week independent research, 60 hours total), fall or spring semester

#### NATR 310. Urban Forest Management. (3 Credits)

Urban Forest Management will introduce students to urban forest ecosystems and their management. Topics include the benefits and uses of urban trees and forests, tree inventory, tree appraisal, tree establishment, urban forest and open space planning and management, street tree maintenance, and program coordination and funding. Course includes a semester long data collection and analysis project. Prerequisite: NATR 101 or BIOL 102 or permission of instructor. 3 credits (2 lecture hours, 2 laboratory hours).

# Nursing (NURS)

#### NURS 101. Academic Skills for Nursing. (1 Credit)

This course will address effective study skills focusing on time management. Other topics include test taking strategies and study habits for nursing students, including the use of library resources and the application of technology. The demonstration of proper use of math concepts as applied to drug calculations specifically use in the health care profession will also be required. 1 credit hour (2 lecture hours per week for 7 weeks), fall/spring semester

#### NURS 120. Fundamentals of Nursing. (7 Credits)

This course provides the theoretical foundation for nursing education and practice including the nursing process with emphasis on the assessment phase. Theories of therapeutic communication techniques and basic human needs across the lifespan are correlated to general knowledge of the biologic sciences and humanities. Standards for professional nursing practice are defined. The concept of critical thinking as it applies to health care is introduced. Particular attention is given to the care of geriatric individuals. Students learn nursing procedures and skills in a campus laboratory setting utilizing medical technology to complete accurate nursing assessment. Pre or Co-Requisite: BIOL 150 (with a C + grade or better), PSYC 101, COMP 101 7 credits (4 lecture hours, 3 laboratory hours, 5 clinical hours per week), fall semester

#### NURS 150. Care of Common Health Problems. (10 Credits)

This course provides the theoretical foundation for nursing knowledge that supports care of individuals with common health and psychiatric problems across the life span. Students will develop cognitive, affective and psychomotor skills in the campus laboratory setting and implement these skills in acute health care settings. Critical thinking skills which are applied to all phases of the nursing process are developed. Students learn to incorporate the general knowledge of growth and development, cultural and psychosocial needs into the care of individuals. Students utilize professional standards of practice while participating as a member of the health care team by practicing personal professional accountability. Communication skills utilized to effectively report and document nursing care. Technology is utilized to research and access nursing and medical information to deliver health care to individuals and families. Prerequisites: NURS 120 (with a C+ grade or better), Corequisite: NURS 152, Pre-or Co- Requisites BIOL 151 (with a c+ or better) and PSYC 211 10 credits (4 lecture hours, 9 clinical hour per week, 2 college laboratory hours), spring semester

#### NURS 152. Pharmacology I. (1 Credit)

This first course in the series presents concepts of the study of drugs used for the prevention, treatment, and diagnosis of disease and symptoms associated with common health alterations. Principles of action, uses, and side effects are discussed to facilitate the student's learning in the clinical environment. Information is presented by integrating pharmacology into the nursing process. Specific drug information is discussed in relation to assessment, nursing diagnosis, client monitoring, and interventions of safe and effective drug therapy. The concepts presented will focus on the common health problems and psychiatric health problems encountered across the lifespan. Specific nursing responsibilities related to drug administration, including real world dosage calculations across the life span, are emphasized. Some specific topics discussed in this course will include the pharmacological treatment used for psychiatric disorders, cancer, infection, common respiratory, gastrointestinal and genitourinary disturbances, and diabetes. Pre-requisite- NURS 120 (with a C+ or better grade), Co-requisite-NURS 150 1 credit (1 lecture hour), spring semesters

#### NURS 200. Clinical Simulation. (2 Credits)

This hybrid clinical simulation course is designed to incorporate the student's previous knowledge of disease processes, nursing theory and nursing skills for diverse simulated patient care experiences. Emphasis is placed on developing the knowledge, skills and attitudes the student would need to deliver safe, holistic, evidence-based and competent care to the patient. Critical thinking skills are applied to all phases of the nursing process to develop cognitive, affective, and psychomotor skills. The student will collect, analyze and interpret patient data in an environment where mistakes can occur without adverse consequences to the patient. At the conclusion of each simulation scenario participants are provided with the opportunity to review their experiences during a debriefing/ self-reflection session to obtain feedback from their peers and faculty. Prerequisite: NURS 150 (with a grade of C+ or better) 2 credits (6 lecture hours, 6 lab hours), 5 week course, fall and spring semesters.

#### NURS 210. Care - Complex Health Problems. (8 Credits)

This course provides the theoretical foundation for nursing knowledge that supports the care of individuals across the life span with common complex health problems and of families in a variety of practice settings including acute care, obstetric and community health agencies. Students apply critical thinking skills to design, implement and evaluate nursing care with a particular focus on patient education to individuals and families. Therapeutic communication skills are enhanced through a variety of interactive learning strategies. Technology is applied to the research process as well as the delivery of care. Prerequisite: NURS 150 and NURS 152 and BIOL 150 and BIOL 151 (with a C+ or better), Corequisite: NURS 212, Pre or Co-Requisites: BIOL 285 (with a C- or better) 8 credits (4 lecture hours, 9 clinical laboratory hours per week), fall semester

#### NURS 212. Pharmacology II. (1 Credit)

This second course in the series presents concepts of the study of drugs used for the prevention, treatment, and diagnosis of disease and symptoms associated with complex common health alterations. Principles of action, uses, side effects, and client education are discussed to facilitate the student's learning in the clinical environment. In-formation is presented by integrating pharmacology into the nursing process. Specific drug information is discussed in relation to assessment, nursing diagnosis, client monitoring, and interventions of safe and effective drug therapy. Client education takes on an increased focus to facilitate the student's ability to convey application of concepts to the public. The concepts presented will focus on the complex common health problems across the lifespan and obstetric care. Specific nursing responsibilities related to drug administration, including real world dosage calculations across the life span, continue to be emphasized. Some specific topics discussed in this course include the pharmacological treatment used for eyes, ears, obesity, electrolyte and acid/base imbalances, various cardiac issues, male and female reproductive disorders, labor, delivery, postpartum, and newborn care. Pre-requisite NURS 150 and NURS 152 (with a C+ or better), Co-requisite NURS 210 1 credit (1 lecture hour), fall semester

#### NURS 220. Nursing Clinical Externship. (2 Credits)

Enhance your clinical skills by taking this elective clinical externship course that will be offered in conjunction with an affiliated, acute care health facility. The clinical externship will provide selected students with an opportunity to gain additional clinical experience by working side by side with an experienced RN preceptor to provide care to a select group of patients. Grading is pass/fail. 2 credits. Prerequisite: NURS150 (with a C+ or better) or completion of equivalent nursing coursework at another college.

#### NURS 250. Multiple Common Complex Probs. (8 Credits)

This course provides the theoretical foundation for nursing knowledge that supports the holistic care of individuals with multiple complex common health problems across the life span. Students are afforded the opportunity to manage the care of groups of individuals with multiple complex needs in the acute care practice setting. Critical thinking skills are applied to the design, implementation and evaluation of holistic care. Students participate in learning experiences that enhance team building and conflict resolution skills. Students participate in activities that support lifelong learning through the development and evaluation of self-learning needs assessment and learning contracts, and peer review. Own transportation required for the last 8 weeks. Prerequisites: NURS 210 and NURS 212 (with a C+ or better), BIOL 285 (with a C- or better), Corequisites: NURS 251 and NURS 252 8 credits (4 lecture hours, 9 clinical laboratory hours for six weeks and a 64 hour preceptorship, spring semester

#### NURS 251. Transition into Practice. (1 Credit)

This course will include concepts that will enable the learner to deliver effective, safe, and high quality nursing care. It focuses on concepts associated with the contribution of the professional nurse in today's society. Topics include resume writing, professional development, and leadership styles. Additional content includes nursing informatics, effective communication, just culture and self-care. Through the use of Kaplan resources students will identify strengths and weaknesses, engage in analysis and comprehend the use of remediation as being integral for their successful computation of the NCLEX – RN Exam. Prerequisites: NURS 210 and NURS 212 (with a C+ or better) Corequisite: NURS 250 & NURS 252 1 credit: Hybrid, spring semester

#### NURS 252. Pharmacology III. (1 Credit)

This final course continues to present concepts of the study of drugs used for the prevention, treatment, and diagnosis of disease and symptoms associated with multiple complex common health alterations. Principles of action, uses, side effects, and client education are discussed to facilitate the student's learning in the clinical environment. Information is presented by integrating pharmacology into the nursing process. Specific drug information is dis-cussed in relation to assessment, nursing diagnosis, client monitoring, interventions, and client education. Evaluation of medication use and administration is incorporated to expand the knowledge of care of the client. The concepts presented will focus on multiple complex common health problems encountered across the lifespan. Specific nursing responsibilities related to drug administration, including real world dosage calculations across the life span continue to be emphasized. Some specific topics discussed in this course will include the pharmacological treatment used for critical care needs, autoimmune disorders, renal disorders and dialysis, HIV/ AIDS, infectious, and degenerative neurological disorders, seizures, headaches, pancreatic and liver disorders, burns, endocrine disorders, respiratory, cardiac and hematological disorders. Pre-requisite NURS 210 and NURS 212 (with a C+ or better), Co-requisite: NURS 250 & NURS 251 1 credit (1 lecture hour), spring semesters

#### NURS 256. Pharmacology in Nursing Care. (2 Credits)

This elective course presents concepts of the study of drugs used for the prevention, treatment, and diagnosis of disease and symptoms associated with health alterations. Principles of action, uses, side effects and client education are discussed to facilitate the student's learning in the clinical environment. Information is presented by integrating pharmacology into the nursing process. Specific drug information is discussed in relation to assessment, nursing diagnosis, client monitoring, interventions, client education and evaluation of safe and effective drug therapy.. Specific nursing responsibilities related to drug administration, including actual dosage calculations across the lifespan are emphasized. Pre-Requisites: NURS 150 with a grade of a C+ or better 2 credits (2 lecture hours), fall or spring

#### NURS 305. Nursing Informatics. (3 Credits)

The purpose of this course is to enable RN students to access information from a variety of sources to support decision making in practice. Baccalaureate nurses manage data, information, knowledge, and technology to communicate effectively and provide safe and effective patient care. The use and understanding of data sources to manage, produce and disseminate evidence-based nursing knowledge is examined. Ethical issues related to data security, regulatory requirements, confidentiality, and clients' right to privacy will be explored. 3 credits (online), fall semester

### NURS 310. Conceptual Foundations for Professional Practice. (3 Credits)

This course engages the learner in exploring the progression of the professional nursing role, focusing on teamwork and collaboration, communication, leadership, quality improvement, and safety. These competencies are essential for nursing, providing a solid foundation for a successful career. Pre or co-requisite: NURS 305 with a B or better 3 credits (online) fall semester

NURS 330. Health Assessment Across the Life Span. (3 Credits) This course assists the learner in broadening and refining health assessment and physical assessment skills in both individual and group learning experiences. Students will: differentiate normal and abnormal assessment findings; conduct and document a complete physical examination; use group learning experiences to broaden knowledge of the cultural determinants of health; use therapeutic communication techniques, evidence-based practice, and the principles of patient centered care to complete a culturally sensitive and developmentally appropriate client history. Documented practice sessions in the campus laboratory are required. This course is offered in an asynchronous format using scheduled virtual meeting for health assessment demonstration. Pre/co requisite: NURS 305 and NURS 310 with a B or better 3 credits (2 lecture hours: online); 1 laboratory hour at 2:1 ratio: online (30 laboratory hours online) fall semester

#### NURS 361. Health Promotion Across the Life Span. (3 Credits)

In this course the learner will engage in learning activities with peers, faculty and the broader learning community, to develop new knowledge of the concepts of health literacy, health promotion and disease prevention across the lifespan and for all levels of care. Topics include a range of determinates of health including psychosocial, physical, spiritual, cultural, and political factors. The learner will use a healthiness model based on human strengths to design and implement patient- centered health promotion and disease prevention interventions. The concepts that guide the teaching and learning process for nursing practice will be explored in depth. Nursing informatics concepts are used throughout the course to assist in the development of population specific profiles and learning tools. Integration of knowledge will be demonstrated through a service learning project. Pre/Co-requisite: NURS 305 and NURS 310 with a B or better 3 credits (online) spring semester

# NURS 381. Leadership & Management for Professional Practice. (3 Credits)

The focus of this course is to provide the learner with foundational concepts, elements, and practices of the con-temporary nursing leader. Current issues in healthcare leadership are studied within a context of the program's five core concepts. Reflection and critical thinking strategies are used to explore and/or resolve leadership and/or management issues related to patient care and healthcare teamwork. Collaboration with interdisciplinary colleagues in healthcare organizations is stressed. The service learning project for this course involves leadership for planned change in your community of choice. Prerequisite: NURS 305 and NURS 310 with a B or better 3 credits (3 lecture hours: online) spring semester

NURS 430. Nursing Research & Evidence-based Practice. (3 Credits) The focus of this course is to provide the learner with the resources and learning activities to develop the skills needed to identify and critically appraise scientific evidence to evaluate the quality and applicability to clinical practice. The course content includes an overview of research concepts, ethical issues, literature searches and reviews, quantitative and qualitative research methods and designs, data collection, analysis and interpretation techniques. The learner will gain an understanding of the research process and the role of research in evidence-based practice for the use of quality improvement, and practical application. Prerequisite: all NURS 305 and NURS 310 with a B or better Pre/Co-requisite: BIOL 302 and MATH 123 with a B- or better 3 credits (online), fall semester

#### NURS 431. Healthcare Policy, Issues & Trends. (3 Credits)

In this course the learner will explore current issues in healthcare, trends, public and social policies, and politics on the local, national and global level. While investigating the influence of economics, and regulatory bodies on the healthcare system. Individual and group learning will assist the learner to prepare themselves to engage in the economic, political, and policy dimension of healthcare. The student will learn to identify opportunities for political action in the workplace, communities and nursing organizations. Prerequisite: NURS 305, NURS 310 with a B or better 3 credits (online) spring semester

NURS 450. Public, Community and Family Health Nursing. (5 Credits) This course examines nursing and public health theory to identify factors that promote or act as barriers to health across the lifespan. Nursing's role in planning, directing and coordinating evidence-based health promotion and illness prevention activities that incorporate safety, epidemiology, cultural competence, quality and cost-effective measures will be explored. Integration of knowledge is demonstrated theorem the explored theorem.

through service-learning project that will provide opportunities to develop and implement interdisciplinary holistic health promotion strategies with a population-centered focus. This course is offered in an asynchronous online format with 67.5 hours of internship experience required. Prerequisites: All 300 level nursing courses with a B or better, Pre/Co-requisite: BIOL 302 with a B- or better 5 credits (2 public health/ community lecture hours: online; 2 family lecture hours: online; 1 practical experience hours at 3:1 ratio (67.5 internship experience), fall semester

#### NURS 481. Seminar in Professional Nursing. (4 Credits)

This is the capstone course for the SUNY Morrisville RN-BS Nursing Program. The learner will integrate the knowledge of nursing leadership and management, nursing informatics, and evidence-based practice to design and implement a patient-centered care quality improvement project. Professionally, the learner will collaborate and work in teams with peer colleagues, faculty, nurse preceptors, and expert clinicians. For the Capstone Quality Improvement Project a target population and healthcare setting will be selected by the learner with approval from faculty. This course is offered in an asynchronous online format with 90 hours of seminar required. Pre/Co-requisite: All 300 level nursing courses with a B or better 4 credits (1 lecture hour: online); 3 practical experience hours at a 3:1 ratio (90 hours seminar), spring semester

### **Nutrition (NUTR)**

#### NUTR 108. Basic Nutrition. (3 Credits)

Fundamentals of human nutrition including biological pathways of nutrients from digestion to metabolism. Computer analysis of personal nutrient intake. Emphasis on nutrition and consumer trends as well as personal wellness and fitness. 3 credits (3 lecture hours), fall and spring semester

#### NUTR 110. Nutrition I. (3 Credits)

Nutrient and food energy needs of the human biological system. Body processes in the digestion, absorption and utilization of nutrients. Dietary guides for planning nutritionally balanced menus. Prerequisite: Admission into the Exercise Science or Nursing programs, or permission of the instructor, is required. 3 credits (3 lecture hours), fall and spring semester.

#### NUTR 250. Sports Nutrition. (3 Credits)

Application of basic nutrition principles in the development of a total wellness and fitness program and the impact of nutrition on physical activity. Assessment of levels of physiological fitness and nutritional well-being. Prescriptive requirements for nutritional intervention in a total fitness program. Nutrient needs for fitness through the life cycle. Evaluation of current research data regarding nutrition intervention and practices for total health and physical well-being. Prerequisite: C or better in NUTR 108 or 110 3 credits (3 lecture hours), spring semester

### **Office Technology (OFFT)**

#### OFFT 100. Introduction to MS Word. (1 Credit)

This hands-on course introduces the concept of using MS Word to create letters, memos, reports and other documents in a timely manner. Documents will be created with graphs, charts, and tables to make it easier to convey information. The course will also cover using borders, shading, bullets, spell check, and creating envelopes and labels. Window explorer is used to help students organize their files. MS Word software required. 1 credit (3 lecture hours), five weeks

#### OFFT 106. Personal Computer Keyboarding. (1 Credit)

The module includes learning the keyboard by touch, learning the use of computer features, and developing proper stroking techniques. Basic letter and report formatting are included. This course is directed to nonoffice technology majors. 1 credit (2 lecture hours), five weeks

#### OFFT 108. Introduction to MS Outlook. (1 Credit)

This hands-on course introduces the concepts of using MS Outlook personal management software as a management tool to organize and manage personal and business information. This tool consists of creating e-mail messages, signatures, distribution lists, contacts, calendar, tasks, notes, and journal. MS Outlook Software required. 1 credit (3 lecture hours), five weeks

#### OFFT 109. Introduction to MS PowerPoint. (1 Credit)

This hands-on course introduces the concepts of using MS PowerPoint presentation software to communicate effectively with an audience. The course will cover the basics of creating a presentation, using the design templates, adding text, tables, graphs, transition and animation to slides, formatting and printing of the presentation to be used as handouts. MS PowerPoint software required. 1 credit (3 lecture hours), five weeks

#### OFFT 110. Introduction to MS Excel. (1 Credit)

This hands-on course introduces the concept of using MS Excel spreadsheet software to create spreadsheets, lists, charts, formulas, and more. In addition, the course will cover working with multiple worksheets, formatting data and charts, vlookup, IF statements, and more. Spreadsheets provide the tools needed to manage, present and analyze numeric data for personal or business use. MS Excel software required. 1 credit (3 lecture hours), five weeks

#### OFFT 111. Keyboarding 1-A. (1 Credit)

Development of basic keyboarding techniques on computers, including learning the keyboard by touch, learning the use of the computer features/commands and developing proper techniques. Basic letter formatting is included. 1 credit (2 lecture hours), fall and spring semesters, eight weeks.

#### OFFT 112. Keyboarding 1-B. (1 Credit)

This course covers the development of computer keyboarding skills as well as speed and accuracy. Basic business/personal letters from text copy and script with envelopes, memos and tables are also covered. Students will also develop proofreading skills and use Macintosh software. Prerequisite: OFFT 111 with minimum grade of C or permission from instructor for OFFT majors; minimum grade of D for all other majors 1 credit (2 lecture hours), fall and spring semesters, eight weeks

#### OFFT 113. Keyboarding 2-A. (1 Credit)

Development of computer keyboarding skills in the production of diverse business letters and memo forms, complex tabulations, reports and manuscripts are covered in this course. Further development of speed and accuracy on production and straight-copy typing is also covered. Word software is used. Prerequisite: OFFT 112 with minimum grade of C or permission from instructor for OFFT majors; minimum grade of D for all other majors 1 credit (2 lecture hours), spring semester, eight weeks

#### OFFT 114. Keyboarding 2-B. (1 Credit)

The development of computer keyboarding skills in the production of business forms and templates such as purchase orders, form letters, business, standard and academic reports are covered in this course. Word software is used in this course, which also covers further development of speed and accuracy on production and straight-copy typing. Prerequisite: OFFT 113 with minimum grade of C or permission from instructor for OFFT majors; minimum grade of D for all other majors 1 credit (2 lecture hours), spring semester, eight weeks

#### OFFT 118. Intro to Database Software. (1 Credit)

The course provides an applied introduction to database concepts using MS Access software within the Windows environment. Topics include: relational database management system (DBMS) concepts, the creation and maintenance of MS Access databases, the creation of tables, forms, reports and queries, with data integration with MS Excel worksheets as time permits. Campus-wide elective. MS Access software required. 1 credit, five weeks.

#### OFFT 120. Introduction to MS Office I. (3 Credits)

This full semester course combines 8 weeks of MS Word with 5 weeks of MS PowerPoint and 2 weeks of MS Outlook - emphasizing formatting, punctuation, spelling and proofreading within both applications. In MS Word, topics such as development of complex tabulations, report formatting, column writing, designing letterhead, and developing a variety of marketing documents used in today's business are covered. Many Microsoft shortcuts/commands are emphasized to increase the productivity of the student. In Microsoft PowerPoint, the course will cover the creating of a presentation, using the design templates, adding text, tables, graphs, transition and animation to slides, formatting and printing of the presentation to be used as handouts. MS Outlook covers e-mail management, digital calendar, and utilizing the task list. MS Word, MS PowerPoint, and MS Outlook software required. 3 credits (2 lecture hours, 2 laboratory hours) Required of all Healthcare Office Coordinator Majors; can be used as an elective to other majors.

#### OFFT 130. Data Entry. (1 Credit)

Operating features of a microcomputer with practical business applications. Speed development of 10,000 key-strokes per hour. Campus-wide elective. 1 credit

#### OFFT 135. Machine Transcription. (2 Credits)

Integration of keyboarding skills with the operation of a transcription machine. Reinforcement of basic English skills, including spelling, punctuation, grammar, paragraphing, sentence construction, and proofreading skills. Mailable transcripts required for successful completion of the course. Prerequisite: Successful completion of OFFT 116 or HCOC 116 or permission of instructor 2 credits

#### OFFT 203. Introduction to MS Word II. (1 Credit)

This hands-on course introduces concepts using intermediate features of MS Word software to create form letters using mail merge, mailing labels, newsletters, reference documents, table of contents, an index, and an online form template. Course will also cover document collaboration, integration, and charting tools. Campus-wide elective. MS Word Software required. 1 credit, five weeks. Prerequisite: OFFT 100 (or permission from instructor)

#### OFFT 205. Introduction to MS Excel II. (1 Credit)

This intermediate MS Excel software course further analyzes basic spreadsheets to assist in a variety of problem solving scenarios using calculated field and other formula auditing functions. It assists with forecasting based on data presented within workbooks using a variety of Trendline charts, queries and other PowerTool reporting options. Campuswide elective. MS Excel software required Prerequisite: OFFT 110 or permission from instructor 1 credit, five weeks

#### OFFT 210. Admin Secretarial Support Proc. (3 Credits)

Exploration of office operations and procedures, new developments in office information technology and equipment, communication transmittal systems, records management, and administrative office skills and responsibilities. Students will gain experience with voice digital recordings, facsimile, copy machines and telephones to better enhance their skill set. Prerequisite: OFFT 112 3 credits (3 lecture hours), fall semester

#### OFFT 220. Introduction to MS Office II. (3 Credits)

This course involves learning MS Excel and MS Access skills. It includes topics such as merge, sort, charts, filtering, pivot tables, queries, designing your own table, etc. Students gain experience and understanding of versatility within the databases. MS Excel and MS Access software required. 3 credits (4 laboratory hours)

#### OFFT 251. Office Management. (3 Credits)

A study of the operations, controls, problems, systems, and human relations in the changing electronic office age are included in this course. Topics include introduction of office management, human relations management, building an understanding of the management of office services, building an understanding of office systems, building an office management vocabulary, seeking employment as a supervisor/manager. Operation of office equipment, including word processors required. Prerequisites: OFFT 112, and OFFT 120 and OFFT 220, or permission of instructor. 3 credits (3 lecture hours), spring semester

#### OFFT 301. Advanced Medical Coding. (3 Credits)

This course is designed to utilize the student's previous learning experience to the variety of tasks and skills required for an administrative medical assistant dealing with coding. Students will be able to work on cases that are coded with service codes (CPT and HCPCS) and diagnosis codes (ICD-9-CM) in the outpatient settings of the clinic and outpatient departments of the hospital for both the physician and facility services. Prerequisite: OFFT 200- Medical Coding 3 credits (3 lecture hours)

#### OFFT 335. Advanced Medical Transcription. (3 Credits)

This is an advanced medical transcription course whereby students gain competence in transcribing the advanced materials provided in the textbook, which more closely resemble on-the-job tasks than in the initial stages of learning medical transcription. This course has strong emphasis on editing and critical thinking activities. Prerequisite: OFFT 235 Medical Transcription and OFFT 250 Medical Terminology, or permission of the instructor 3 credit hours (2 lecture hours, 2 laboratory hours), fall semester

# Philosophy (PHIL)

#### PHIL 201. Introduction To Philosophy. (3 Credits)

This course is an introductory study of both historical and contemporary approaches to the basic philosophical issues of knowledge, values, reality, matter, mind, soul, God. 3 credits (3 lecture hours), fall or spring semester (second-year students only) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### PHIL 211. Modern Ethics. (3 Credits)

Examines problems of human conduct and reflective choices such as right and wrong, duty and conscience. Study and discussion center on human values, questions of morality versus legality, situation ethics and whether ends can justify means. 3 credits (3 lecture hours) fall or spring semester (second-year students only) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### PHIL 311. Professional Ethics. (3 Credits)

The objective of this course is to provide students with a realistic working model for ethical decision making in their professional field. Students will identify their existing set of moral values. From this basis, students will develop, refine, and evaluate their ethical stance based on the study of ethical theorists. The workable nature of their ethical approach will be tested through case studies, in-class discussion and written assignments. Prerequisites: C or better in COMP 101 or COMM 105, junior or senior standing and either PHIL 201 or PHIL 211, or consent of instructor. 3 credits (3 lecture hours). This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

#### PHIL 320. Contemporary Issues in Agricul. (3 Credits)

Explores the history of agriculture and its impact on civilization, investigates current topics impacting the agricultural industry and discusses different viewpoints in a debate setting. How food is produced in the United States informs many political discussions and debates. This course brings students with diverse backgrounds together to discuss modern agriculture and food production and its impact on society and the environment, and involves a critical evaluation of the aspects of modern agricultural production, and its impact on society and the environment. This course is cross-listed as AGSC 320. Prerequisite: C or better in COMP 101 or COMM 105 This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education requirements for Humanities and Diversity, Equity, Inclusion and Social Justice 3 credits (seminar), fall or spring semester

# **Physics (PHYS)**

#### PHYS 107. Introductory Physics I. (4 Credits)

An introduction into the concepts and methods of scientific inquiry illustrated using elements of classical mechanics complemented with laboratory experiments. Topics include translational and rotational motions of particles and rigid bodies, analyzed using simple algebrabased Newtonian kinematics, dynamics and statics, and conservation of energy and momentum. Pre- or Co-requisite: MATH 102 or equivalent 4 credits (3 lecture hours, 2 laboratory hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### PHYS 108. Introductory Physics II. (4 Credits)

An introduction into the concepts and methods of scientific inquiry illustrated using fundamentals of thermal physics and classical electromagnetism complemented with laboratory experiments. It includes a survey of thermodynamic variables and laws applied to ideal-gas processes and phase changes in matter. Also, it discusses electromagnetic interactions and fields exemplified using charge statics and dynamics, simple elements of electric circuits, and an excursion into the nature of light. Prerequisite: PHYS 107 or permission of instructor 4 credits (3 lecture hours, 2 laboratory hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### PHYS 127. General Physics I. (4 Credits)

The first of two general-level survey courses in Physics, with an emphasis on analysis using algebra and trigonometry. Topics include: physical units and dimensions, vectors, kinematics, Newton's laws, potential and kinetic energy, circular motion, linear and angular momentum, and rigid body motion. Pre- or Co-requisite: MATH 103 or equivalent 4 credits (3 lecture hours, 2 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### PHYS 128. General Physics II. (4 Credits)

The second of two general-level survey courses in Physics, with an emphasis on analysis using algebra and trigonometry. Topics include: concepts of heat, work, internal energy, heat transfer, and the first and second laws of thermodynamics. Simple harmonic motion, wave motion, harmonic waves, and superposition. Topics in electromagnetism. Properties of light include reflection, refraction, interference, diffraction, polarization, the electromagnetic spectrum, and optical instruments. Prerequisite: PHYS 127 or permission of instructor 4 credits (3 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### PHYS 154. Univ Physics I (Mechanics). (4 Credits)

This course is a calculus-based introductory survey of classical mechanics. It presents translational, rotational and vibrational motion of particles and rigid bodies based on Newtonian kinematics and dynamics, and on the laws of energy and momentum conservation. Pre- or Co-requisite: MATH 161 or equivalent 4 credits (3 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### PHYS 155. Univ Physics II(Elec & Magnet). (4 Credits)

This course is a calculus-based introduction into the classical theories of electricity and magnetism with applications to electrical components and circuits. It surveys concepts such as the intertwined nature of electric and magnetic fields, classical laws and models culminating with Maxwell's equations of electromagnetism, and devices including capacitors, resistors and inductors combined into simple dc and accircuits. Prerequisite: PHYS 154 Pre- or Co-requisite: MATH 162 or equivalent 4 credits (3 lecture hours, 2 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### PHYS 158. Univ Physics II(Elec & Magnet). (4 Credits)

Theoretical basis of electricity and magnetism with applications to circuits and electrical instruments. Coulomb's law, the electric field, potential, Gauss' law, electromotive force, capacitance, Kirchhoff's laws, the magnetic field, Ampere's law, induced fields, magnetic properties of matter, mutual and self-inductance, AC circuits. Finishes with an overview of Maxwell's equations and electromagnetic waves. Prerequisite: PHYS 157 Pre- or Co-requisite: MATH 162 4 credits (3 lecture hours, 3 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### PHYS 168. Univ Physics II(Elec & Magnet). (4 Credits)

Theoretical basis of electricity and magnetism with applications to circuits and electrical instruments. Coulomb's law, the electric field, potential, Gauss' law, electromotive force, capacitance, Kirchhoff's laws, the magnetic field, Ampere's law, induced fields, magnetic properties of matter, mutual and self-inductance, AC circuits. Finishes with an overview of Maxwell's equations and electromagnetic waves. Prerequisite: PHYS 157 or 167 Pre- or Co-requisite: MATH 162 4 credits (3 lecture hours, 3 laboratory hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### PHYS 254. Univ PhysicsIII(Sound, Thermo). (4 Credits)

This course is an introduction into the theory and applications of acoustics and classical thermodynamics. The sound part is an illustration of mechanical wave characterization, production, propagation and detection. The topics of thermodynamics include a classical interpretation of the thermal properties of matter at macroscopic and microscopic scales, a survey of thermal processes and the laws of thermodynamics, and their applications to simple heat machines. Prerequisite: PHYS 154, 155 Pre- or Co-requisite: MATH 261 or equivalent 4 credits (3 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

#### PHYS 255. Physics IV (Modern & Optics). (4 Credits)

This course is an introductory exploration of increasingly explanatory theories of light and matter, from classical optics to modern physics and cosmology. The discussion of optics includes concepts and applications of ray optics (reflection, refraction and image formation) and wave optics (interference, diffraction and polarization). The survey of modern physics includes elements of relativity and quantum mechanics applied to the study of matter in atomic, nuclear, molecular and solid state physics. Prerequisite: PHYS 154, 155 Pre- or Co-requisite: MATH 262 or equivalent 4 credits (3 lecture hours, 2 laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science

# **Political Science (POLI)**

#### POLI 101. American National Government. (3 Credits)

Topics include nature, functions and philosophy of the government of the United States, importance of the individual in the American constitutional system and the dynamic aspects of that structure. 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### POLI 111. State & Local Government. (3 Credits)

Topics include state and local government structures-grass roots politics, parties, and policies on state, county, city, township, village, and special district levels. Interrelationships, structures, functions, financing, problems and how they are approached today. Participation directly and indirectly in these governments by the average citizen. 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### POLI 113. American Judiciary System. (3 Credits)

This course introduces students to the operations of criminal, civil, and appellate courts and their key participants and includes an evaluation of the American Judiciary System. 3 credits (3 lecture hours) fall or spring semester This course satisfies the Liberal Arts and Sciences requirement.

#### POLI 151. Intro Comparative Government. (3 Credits)

This is an introductory course in comparative government that examines both the theoretical and real-life issues confronting governments today. It discusses such basic concepts as: the social contract, democracy, authoritarianism, capitalism, and socialism. Concepts and structures are presented in the context of actual contemporary (non-U. S.) world governments. 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Other World Civilization and World History & Global Awareness.

### **Psychology (PSYC)**

#### PSYC 101. Introduction to Psychology. (3 Credits)

This course includes an introduction to the scientific study of behavior, mental processes, and the influences upon them. It also covers major theories and findings in psychology, including learning, cognition, abnormal psychology, and others. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 103. Intro to Applied Psychology. (1 Credit)

An introduction to the Applied Psychology major. The course discusses career options in psychology, and proved information on choosing and preparing for a career path with a psychology degree. Prerequisite: Major in Applied Psychology; pre- or co-requisite PSYC 101 Offered fall or spring semester 1 credit

#### PSYC 161. Social Science & Pseudoscience. (1 Credit)

This one-credit course provides an in-depth look at how social scientists collect and assess evidence for and against their theories. We will compare these methods to similar techniques from popular culture, particularly paranormal investigations. 1 credit (3 lecture hours), spring semester, total of 5 weeks This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 211. Lifespan Development. (3 Credits)

Lifespan Development provides an in-depth study of the biological, cognitive, emotional and social aspects of human growth and development from conception to old age. Special emphasis is placed on contemporary theories including a focus on how research in the field is conducted. Prerequisite: PSYC 101 or equivalent, or permission of instructor 3 credits (3 lecture hours). fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 221. Biological Psychology. (3 Credits)

This course is an introduction to the biological side of psychology. Students will gain knowledge of physiological processes and their relationship to human thought and behavior. Prerequisite: Grade of "C" or better in Introduction to Psychology (PSYC101) and grade of "C" or better in Human Biology (BIOL 105) or the equivalents. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 241. Child Development. (3 Credits)

A survey of the biological, cognitive, emotional, and social aspects of human growth and development from birth to adolescence. Special emphasis on contemporary theories. Prerequisite: PSYC 101 or equivalent, or permission of instructor 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 242. Adolescent Development. (3 Credits)

This course will focus on the general principles and theories of development during the adolescent period. Topics included are biological and cognitive processes, psychosocial development, identity and other special issues and concerns in adolescence. Prerequisite: PSYC 101 or equivalent, or permission of instructor 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 243. Adult Development. (3 Credits)

This course covers the years between 18 and 50 are the center of life, a time of growth, opportunity, and crisis. It examines what philosophers, social scientists, psychologists and other human beings have theorized about the process of living and aging. Moral as well as personality insight and strategies for survival will be explored so that future coping with life's changes will not be as isolating or overwhelming. Prerequisite: PSYC 101 or equivalent or permission of instructor 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 251. Abnormal Psychology. (3 Credits)

This course examines psychological disorders from a variety of perspectives. In addition to the usual survey of psychological disorders across diagnostic categories, it also considers the possible causes of psychological problems and a wide variety of therapeutic techniques used to treat them. The history and scientific underpinning of psychological diagnosis and treatment is also covered. Prerequisite: PSYC 101 or equivalent, or permission of instructor 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 255. Psychology Personal Adjustment. (3 Credits)

This course examines personal growth and adjustment throughout the life span, encompassing theory research and practical applications. Topics include: theories of adjustment, characteristics of the healthy personality, inter-personal relationships, adjustments to school, work, and retirement, understanding and managing stress, human sexuality, and strategies for coping and adjustment. Prerequisite: PSYC 101 or equivalent or permission of instructor 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 284. Psychology of Gender. (3 Credits)

This course examines factors that contribute to the development of gender, explores internal and external pressures that mold and modify male/female behavior and personality. Cultural and ethnic differences between men and women are also studied. Prerequisite: PSYC 101 or equivalent or permission of instructor 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 291. Human Diversity Social Context. (3 Credits)

The course examines diversity, including race, gender, sexual orientation and selected topics. A specific focus will be given to group and institutional identity formation. Theories of bio-psycho-social development, reference group affiliation, social stratification, oppression and institutional discrimination. Prerequisite: PSYC 101 or SOCI 101 3 credits (3 lecture hours), fall or spring semester

#### PSYC 300. Sports & Exercise Psychology. (3 Credits)

This course introduces the student to the psychological factors that influence individual and group sport and exercise participation. Topics include the influence of personal psychology and the environment on athletic performance, techniques to enhance athletic and exercise performance and adherence, and the dynamics of group processes as they relate to sports. Discussion to address psycho-social factors related to the healthy psychological growth and development of children including aggression, character development, and sportspersonship. This course is cross-listed with EXSC 300. Prerequisite: PSYC 101, fall semester 3 credits (3 lecture hours per week)

#### PSYC 304. Industrial/Org Psychology. (3 Credits)

This course is designed to help students develop an understanding of human behavior in work settings, the variables which affect workers and their productive efficiency and strategies to improve productive human relations in such settings. Prerequisite: PSYC 101 or equivalent, juniorlevel status (or permission of instructor) 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 325. Motivation and Behavior. (3 Credits)

This course examines the various theories that attempt to explain the complex reasons why humans pick one behavior or goal over another. It will cover many theories of motivation, including (but not limited to) physiological regulation, pleasure-seeking, external incentive, and such modern theories as competency and effectance motivation. Prerequisite: Grade of 'C' or better in Introduction to Psychology (PSYC 101), major in Applied Psychology or permission of instructor. 3 credits (3 lecture hours), fall or spring semester

#### PSYC 352. Foundations of Addiction. (3 Credits)

Examine substance use disorders in multiple client populations and how these disorders are assessed, diagnosed and treated. Develop conceptual knowledge of the major theories of addiction and develop practical skills and professional awareness concerning the etiology of addiction and its impact on society and the individual. This course is designed for those students who are considering entering the field of chemical dependency but is also of value to students interested in careers in education, medicine and criminal justice. Prerequisite: PSYC 101 or equivalent or permission of instructor. 3 credits (3 lecture hours), fall or spring semester.

#### PSYC 361. Research Methods Applied Psy I. (4 Credits)

The purpose of this course is to provide students with an introduction to the research methods and statistical interpretation used in the scientific discipline of psychology. This course will introduce basic concepts in research methods and assumptions used to design studies and will also present basic concepts from statistical analysis on how to design studies. Basic concepts from statistical analysis on how to describe data, evaluation and presentation of research methods and findings will also be covered. Prerequisite: Grade of "C" of better in Introduction to Psychology (PSYC 101), grade of "C" or better in Intermediate Algebra with Trigonometry (MATH 102), and grade of "C" or better in Principles of Computers and Applications (CITA 101) or the equivalents, or permission of instructor. 4 credits (3 hours + lab), fall semester.

#### PSYC 362. Research Methods App Psyc II. (4 Credits)

The purpose of this course is to provide a continuation of the material and topics from Research Methods and Statistical Application 1. This course will provide instruction into specific types of studies commonly conducted in the psychological sciences and the statistical methods used to analyze and interpret the data gathered in those studies. Prerequisite: Grade of "C" or better in Research Methods and Application I (PSYC36) or the equivalent 4 credits (3 hours +lab), spring semester

#### PSYC 363. Research Methods in Psychology. (3 Credits)

This course will provide students with an introduction to the research methods used in the scientific discipline of psychology. The course will cover basic types of research and the kinds of generalizations and conclusions one may draw from them. Students will also learn how to present results. Prerequisite: Grade of "C" of better in Introduction to Psychology (PSYC 101), grade of "C" or better in Introduction to Statistics (MATH 123), and grade of "C" or better in Principles of Computers and Applications (CITA 101) or the equivalents, or permission of instructor. 3 credits (3 lecture hours), fall or spring semester

#### PSYC 381. Personality. (3 Credits)

Explore how personalities develop, change, and impact the many aspects of our social life, work life, self-concept, and wellness, and how they are impacted by our age, gender, culture, relationships, and mental health. Examine contemporary and classic theories used to study stable traits and dispositions and learn how they are related to human behavior, including (but not limited to) the Big Five, Learning and Cognitive theories, Psychoanalysis, Neo-Freudian, Humanistic, Biological, and Evolutionary theories. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science. Prerequisite: Grade of "C" or better in Introduction to Psychology (PSYC 101) or permission of instructor. 3 credits (3 lecture hours), fall or spring semester.

#### PSYC 384. Group Behavior. (3 Credits)

This course examines human behavior in small groups. The emphasis will be on participation in face-to-face small groups focusing on the group's behavior and each individual's behavior, including interaction style and skills. Prerequisite: PSYC 101 or equivalent, and junior-level status (or permission of instructor) 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 386. Social Psychology. (3 Credits)

This course examines the relationship between the individual and the group, the influence of culture and of institutions on humans, factors in the development of social attitudes, and the psychology of mass movements and of social decisions. Prerequisite: PSYC 101 or equivalent, or permission of instructor 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### PSYC 405. Applied Psyc Internship Orient. (1 Credit)

Prepares students in the B.S. in Applied Psychology degree program for the 120-credit internship in the following semester. This course will introduce students to workplace expectations and norms and provide assistance in students' applications to internship. Prerequisite: Major in Applied Psychology, successful completion of at least 90 credits or permission of instructor 1 credit (1 lecture hour), fall semester

#### PSYC 406. Applied Psychology Internship. (12 or 15 Credits)

This course involves supervised fieldwork in a selected business or human service organization. Students carry out a planned program of educational experiences under direct supervision of a senior staff member on site. Each intern will be advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report, and an oral presentation. Prerequisite: Grade of "C" or better in PSYC 405, (Applied Psychology Internship Orientation), major in Applied Psychology, all other degree course work successfully completed. 12 -15 credits, fall, spring or summer semester

#### PSYC 410. Senior Seminar Applied Psych. (3 Credits)

This course provides a framework for students to connect the theoretical concepts they mastered in their previous coursework to the practical concerns found outside of the laboratory, in business and in human services. As a topical course, exact content will vary from year to year. Prerequisite: Completion of at least 12 credits in PSYC courses at the 300-level or above or the equivalent or permission of instructor. 3 Credits (3 lecture hours), fall semester

#### PSYC 461. Tests and Measures. (3 Credits)

This course is a hands-on introduction to testing and psychological measurement, including, basic psychometrics such as IQ and personality, academic testing such as the SAT and achievement tests, and employment related testing such as aptitude testing. Students will learn the fundamentals of what makes a good test, and learn the strengths and weaknesses of many common commercial tests. Prerequisite Grade of "C" or better in Introduction to Psychology (PSYC 101), grade of "C" or better in Research Methods in Applied Psychology I (PSYC 361) and grade of "C" or better in Applied Psychology II (PSYC 362) or the equivalents ), major in Applied Psychology or permission of instructor 3 credits (3 lecture hours), fall or spring semester

### **Renewable Energy (RENG)**

#### RENG 101. Basic Elec Renewable Energy. (4 Credits)

Introductory course covering DC and AC electrical circuits as applied to renewable energy fields, including solar photovoltaics, small wind, micro hydroelectricity, biofuel generators, and standalone power systems (batteries and generators). Fundamental theoretical concepts will be intimately linked to hands-on laboratory exercises that form the basis for subsequent renewable energy courses. Power conditioning components will also be emphasized, including charge controllers, inverters, and diversion loads. Pre or Co-requisite: MATH 102, 123 or 141 4 credits (3 lecture hours and 2 lab hours), fall semester

#### RENG 102. Renewable Energy Resources. (3 Credits)

A scientific examination of the energy field with emphasis on alternate energy sources; their technology and application will be covered in this course, in addition to present needs and future demands; conventional sources, biomass conversions; wind power; geothermal; solar and nuclear energy. Conservation methods are stressed. Knowledge of intermediate algebra is highly recommended for this course. 3 credits (3 lecture hours), fall and spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science.

#### RENG 103. Renewable Energy Seminar. (1 Credit)

The course provides the student with an introduction to renewable energy resources and systems, recent socioeconomic renewable energy issues, and career opportunities in the field of renewable energy and sustainability. 1 credit (1 lecture hour per week), fall semester.

#### RENG 150. Analysis Techniques for Renewable Energy. (3 Credits)

Provides students with fundamental analysis skills pertinent to the field of renewable energy systems. Course focus is on energy and power conversions, algebraic fractions, logarithmic and exponential power functions, Euclidean graph interpretation, and fundamental statistics, with a strong emphasis on renewable energy system examples. Pre- or Co-requisite: MATH 102, 123 or 141 and RENG 102. 3 credits (3 lecture hours), fall or spring semester.

#### RENG 221. Introduction to Wind Systems. (3 Credits)

This course provides students with an introduction to wind energy and the impacts of turbulence, frequency distributions, and tower height on the wind resource. Students are engaged with installation, maintenance, and troubleshooting wind system. This course covers the Job Task Analysis for the North American Board of Certified Energy Practitioners (NABCEP) Small Wind Installer examination and fundamental skills for industrial wind technicians. This course has an additional lab fee. Prerequisites: RENG 101 or DTEC 125 or RESC 125 minimum grade of C. Corequisite: PHYS 107 3 Credits (2 hours lecture, 2 hours laboratory), spring semester

#### RENG 225. Tower Climbing and Rescue. (2 Credits)

Develop industry-relevant tower climbing, rescue, and rigging skills through hands-on experience on our indoor and outdoor tower climbing facilities. Understand tower climbing standards and industry terminology, competent climber expectations and duties, and fall protection equipment inspections. Build confidence in working safely at heights and performing team tasks in stressful conditions. This course is physically demanding and requires the willingness to be at heights; students must be able to lift 50 pounds and climb a ladder. This course has an additional lab fee. 2 credits (1 lecture hour, 3 lab hours), spring/fall semester.

#### RENG 231. Solar Photovoltaic Installation. (3 Credits)

This course provides students with an introduction to solar energy and the impacts of seasonality, aspect, and latitude on solar resources. Students are engaged with system components and design of solar photovoltaic electricity generation in both grid-tied and off-grid systems. This course covers the Job Task Analysis for the North American Board of Certified Energy Practitioners (NABCEP) Solar PV Associate examination. This course has an additional laboratory fee. Prerequisites: RENG 101 or DTEC 125 or AGEN 125, and MATH 102, 123 or 141 minimum grade of C. 3 Credits (2 hours lecture, 2 hours laboratory), fall semester

#### RENG 240. Introduction to Heat Pumps. (3 Credits)

This course is centered on the installation, operation, and maintenance of geothermal and air-source heat pump systems, while introducing principles of system operation and design. This course has an additional lab fee. Co requisite: RESC 260 - Heating and Energy Systems 3 credit hours (2 hours of lecture and 3 hours of laboratory), spring semester.

#### RENG 306. Alternative Fuel Vehicles. (2 Credits)

This course explores current and future technology in the automotive industry in the areas of alternative power sources. Alternative vehicles such as hybrid electric, full electric (EVs), biofuels and fuel cell technology will be studied. Students will learn automotive technology necessary to understand the hurdles required to achieve a fully sustainable vehicle. Prior knowledge of automotive technology and internal combustion theory is helpful but not necessary. 2 credits (1 lecture hour and 3 laboratory hours), spring semester

#### RENG 310. Biomass Energy Resources. (3 Credits)

This course provides students with a technical understanding of biomass energy resources, materials, and production systems. Two broad categories of biomass energy resources are considered: dedicated energy crops and waste streams or coproducts. The primary focus of the course is on the production of dedicated bioenergy sources, including agriculture, forestry and aquaculture feedstocks, and recovery of biomass from waste streams, including agriculture, forestry, municipal and industrial systems. The course also provides an introduction to chemical, biological, and thermal conversion pathways of biomass into useful energy sources and materials. Prerequisites: BIOL or CHEM or ENRM 302 or ENRM 332 and MATH 102, 123 or 141, or permission by the instructor. 3 credits (2 lecture hours, 2 lab hours), fall semester

#### RENG 311. Biofuels. (3 Credits)

This course provides the student with a scientific and technical understanding of biomass-derived fuels. Feedstock procurement, logistics, processing, and conversion to finished fuel, and fuel quality testing will be explored through lectures ad hands-on field and laboratory activities designed to develop practical skills relevant to both small-scale and commercial biofuels production. Prerequisites: RENG 310, and CHEM as advised 3 credits (2 hours of lecture and 3 hours of laboratory), fall semester

#### RENG 321. Intro to Micro Hyro Systems. (3 Credits)

This course provides students with an introduction to hydroelectricity and the impacts of head, flow, and fluid dynamics on the useable water resource. Students are engaged with installation, maintenance, and troubleshooting micro hydroelectricity systems (those <10 kW in size). Course focus will be on sizing penstock, mapping the hydro resource, and identifying environmental concerns with small hydro systems. Prerequisites: AGEN 151 and PHYS 107 minimum grade of C. 3 Credits (2 hours lecture, 2 hours laboratory), fall semester

#### RENG 331. Solar Thermal Systems. (3 Credits)

This course provides students with an overview of solar energy and the impacts of seasonality, aspect, and latitude on solar resources. Students install solar thermal systems and design systems for solar domestic hot water, pool heating, and space heating applications. This course covers the Job Task Analysis for the North American Board of Certified Energy Practitioners (NABCEP) Solar Heating Systems Entry Level examination. This course has an additional lab fee. Prerequisites: RESC 221, RENG 240, or RESC 260 minimum grade of C. 3 Credits (2 hours lecture, 2 hours laboratory), spring semester

#### RENG 332. Passive Solar Energy Systems. (3 Credits)

Passive solar energy systems are directly related to the sun, site, climate, and materials. They exhibit a special relationship to natural processes which offer the potential for an inexhaustible supply of energy. Passive solar energy systems have few moving parts, require little maintenance, and do not generate thermal pollution. This course will address the fundamental concepts of passive solar theory, and the intentions and application of passive solar energy systems. The purpose and impact of passive solar energy systems, specific to natural heating and cooling, will be address through investigation, exploration, and identification. Through the use of system design techniques, students will study and analyze various systems. Energy/thermal evaluation methods will also be emphasized to determine comfort conditions and the overall performance of various passive solar energy systems. Prerequisite: Junior standing or permission of the instructor. Pre- or co-requisite: MATH 102, CAD 181 or permission of the instructor. 3 credits (3 lecture hours), spring or fall semester.

#### RENG 335. Solar Photovoltaic System Design. (3 Credits)

The focus of RENG 335 is on siting solar PV systems, National Electrical Code Article 690, roof analysis, wind loading, weight loading, array withdrawal forces, sliding forces, 1- line electrical diagrams, system grounding, off-grid systems, optimizing system efficiency, and troubleshooting. Paperwork necessary for grant funding and New York State local ordinances are also covered. Prerequisite: MATH 102, MATH 123, or MATH 141 and RENG 231. 3 credits (2 hours of lecture and 3 hours of laboratory), fall semester.

#### RENG 340. Renewable Energy Heat & Cool. (3 Credits)

The focus of RENG 340 is on the design of renewable and clean space heating and cooling systems, which may include biomass heating, solar thermal, and heat pump technologies, as well as integration with conventional systems. Design considerations will include heating and cooling load estimation, equipment sizing and specification, duct sizing and design layout for forced-air systems, hydronic system sizing and layout of heat emitters, and system controls and monitoring. Prerequisites: RENG 240 3 credits (3 hours lecture), spring semester

#### RENG 350. Energy Economics & Financing. (3 Credits)

This course will introduce students to the principles of energy economics including the following: energy supply and demand, energy security, energy price regulation, and environmental externalities. Financing topics related to energy efficiency and renewable energy, such as power purchase agreements and leases will be explored. This course will cover the key aspects of renewable energy project motivation and project development. Students will learn the skills needed to both develop a project budget and financially evaluate a renewable energy project. Prerequisite: MATH 102, MATH 123, or MATH 141, or permission of the instructor 3 credits (3 lecture hours), Spring or Fall semester

#### RENG 355. Renewable Energy Law & Policy. (3 Credits)

This course will examine the goals, impacts, benefits, and challenges of both federal and state energy laws and policies. Current energy industry examples will be used to illustrate specific policies and strategies pertaining to the implementation of renewable energy systems and technologies. Students will research a specific energy policy or law and analyze and evaluate the implications, benefits, and challenges of implementing the policy or law. 3 credits (3 lecture hours), Spring or Fall semester Prerequisite: Junior standing or permission of the instructor

#### RENG 420. Wind Energy Development & Analytics. (3 Credits)

The focus of RENG 420 is on siting small wind systems, plotting and analyzing Weibull and Rayleigh wind distribution functions, analyzing wind shear and turbulence data, tip-speed ratios, optimizing turbine-inverter inter-actions for maximum energy production, rotor design, electrical system design, National Electrical Code, and system troubleshooting. Paperwork necessary for grant funding and New York State ordinances are also covered. This course will heavily emphasize the NABCEP requirements for small wind site assessment. Prerequisite: MATH 123 or 141, and RENG 221 3 credits (2 hours of lecture and 3 hours of laboratory), spring semester

#### RENG 435. Solar Development Engineering. (3 Credits)

Solar Photovoltaics systems are rapidly changing in scope, scale, and development. Advanced Topics is a flexible, leading edge course that mirrors the changes in industry to meet the high demands of this renewable energy job sector. Examples of semester topics include commercial/industrial systems, high voltage DC systems, transformers, utility interconnection, and storage-based micro grids. National electrical code AutoCAD, and the NABCEP examination are integral components of this high-level, project-based course. Prerequisite: RENG 335, minimum grade of C. 3 credits (3 lecture hours) weekly, spring semester.

#### RENG 450. Advanced Grid Technologies. (3 Credits)

This course focuses on components, systems, economics, and design of advanced electricity grids, with an emphasis on renewable energy technologies. Key topics may include smart grids, energy storage, grid communication and control systems, microgrid design, electricity markets, and renewable energy forecasting. This advanced topics course is intended to shift specific focus as advances in grid technologies continue to evolve. Prerequisite: RENG 335. 3 credits (3 lecture hours), fall semester.

#### RENG 460. Systems Integration. (3 Credits)

This is a capstone class for the Renewable Energy degree program. Quantitative, technical writing, and presentation skills (oral and written) will be applied to design and propose a renewable energy system for a landowner. Students are expected to perform an energy audit, recommend energy efficiency and conservation measures, assess renewable energy resources available, design a full system consistent with landowner objectives, check for town ordinance regulations, prepare applicable paperwork for incentives and utility interconnection agreement, and conduct a financial analysis for the system. A final written and oral presentation will be graded. Prerequisite: Minimum of two 400-level RENG courses 3 credits (3 lecture hours), fall semester

#### RENG 480. Renewable Energy Internship Pr. (1 Credit)

This course is designed to prepare students for an internship and assist them with the process of employment and career development in renewable energy. It formalizes internship planning and preparation to ensure that internships are conducted in a professional manner, follow program guidelines, and satisfy the goals and objectives of students, faculty advisors and employers. Students must complete RENG 480 prior to enrolling in RENG 490 - Renewable Energy Internship. Pre-requisites: Junior standing in Renewable Energy B.Tech. 1 credit (1 lecture hours), fall semester

#### RENG 490. Renewable Energy Internship. (15 Credits)

This course is intended to provide the student with a professional work experience in renewable energy or energy efficiency. This work experience should range from 120 to 600 hours (40 hours per credit) and apply theoretical and technical knowledge in a professional setting. Prior to taking this course, students are required to develop a resume, create goals and objectives of the internship, and seek internship organizations in conjunction with their internship advisor while in RENG 480. To qualify for the internship, the internship sponsor, student, and academic advisor must sign a written contract. Students will be required to prepare and submit interim progress reports, develop and submit a comprehensive written report, and deliver a professional presentation of their internship experience. Prerequisite: RENG 480, enrollment in the Renewable Energy B. Tech. program, and permission from the instructor. 3-15 credits, spring semester.

### **Renewable Resources (RREN)**

#### RREN 450. RREN Internship Orientation. (1 Credit)

This course is designed to prepare students for an internship and to assist them with the process of employment and career development. It prepares students for internship requirements such as goal definition, placement site identification, job application, performance evaluation and report writing. RREN 450 formalizes internship planning and preparation to insure that internships are procured, conducted in a professional manner, follow course guidelines, and satisfy the goals and objectives of students, faculty advisors and cooperating placement sites. 1 credit (2 lecture hours), 8-week course, spring semester

# **Residential Construction (RESC)**

#### RESC 106. Graphic Communications. (3 Credits)

An introduction to the graphic standards of construction working drawings wherein students learn to interpret and interpolate construction drawings, using judgment based on accepted building techniques and material usage. Functional design concepts for residential floor plans are introduced and incorporated into various residential design situations. "Chief Architect" design software is introduced in laboratory sessions giving students the ability to design homes and create complete working drawings using the latest technology. 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### RESC 125. Residential Electrification. (3 Credits)

Design, installation, and troubleshooting of alternating current circuits used in residential construction. Circuit planning and layout as per national electrical code is emphasized. A set of hand tools is required for this course. 3 credits (2 lecture hours, 2 laboratory hours), spring semester.

#### RESC 130. Light Framing. (3 Credits)

Light framing and layout work encountered in residential construction are introduced in lecture sessions and practiced in laboratory settings, dealing with the construction and modification of light home and agricultural structures. This course has an additional lab fee. 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### RESC 160. Intro Bldg Materials & Estimat. (3 Credits)

A thorough introduction to the basics of platform framing and the major concepts of balloon construction, post and beam construction, and manufactured housing. Emphasis directed to understanding the advantages and limitations of contemporary building materials and methods and their impact on the construction industry. Laboratory experiences culminate with a take-off list of materials required for the proper construction of a residential structure Prerequisite: RESC 106 or permission of instructor 3 credits (2 lecture hours, 3 laboratory hours), spring semester

#### RESC 180. OSHA 30 Hour Construction Indu. (3 Credits)

The Construction Industry Training will provide a variety of training to workers with safety responsibility in the construction industry. It also provides a further understanding of OSHA standards and OSHA compliance. Training emphasizes hazard identification, avoidance, control, and prevention. A Lockout/tag-out safety program introduced within the woodshop for a live hands-on training. Students who complete the hour requirement and pass this course will receive their hard card. 3 credits (3 lecture hours), spring semester

#### RESC 190. Construction Internship. (6 Credits)

Work experience in the residential construction industry is detailed in a written report documenting and stratifying the various occupational tasks encountered. The candidate must receive prior approval from the department staff after submitting a detailed proposal in writing. Prerequisite: Approval of department staff 1-6 credits

#### RESC 201. Estimating And Planning. (3 Credits)

The estimating consideration involved with the cost of doing business, the control of those costs, and the professional presentation of the final estimate to the prospective customer. Workbook Instruction in the use of construction calculators included in course work. The assessment portion of the class directs the student's attention toward a rational evaluation of the overall quality of a product of building material and it's propriety of use in a given circumstance. Guest lecturers from the industry and field trips to places of business enhance the student's under-standing as to the variety of opportunities within the home-building industry. Prerequisite: RESC 160 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### RESC 211. Masonry And Foundations. (3 Credits)

An overview of the functional requirements of residential foundations, available systems to affect those requirements, and of the properties and uses of concrete and masonry products in residential construction. Laboratory sessions introduce the student to skills required to plan, place, and finish concrete, plus design, layout, and erect structures using masonry products. This course has an additional lab fee. 3 credits (2 lecture hours, 4 laboratory hours), fall semester

#### RESC 221. Plumbing. (3 Credits)

An overview of the plumbing trade including tools, skills, mathematics, nomenclature, science of fluids, cold and hot water distribution systems, and the drain-waste-vent system. The student will participate in the installation and testing of a residential plumbing system with special emphasis on setting of fixtures and trim work. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### RESC 260. Heating And Energy Systems. (3 Credits)

The study of heat transfer in conventional building materials and construction techniques for reducing energy consumption. Subjects covered will also include residential hot water, hot air, and steam heating systems. Sizing of heating/ cooling systems and selecting of peripheral components will be covered. 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### RESC 270. Construction Planning & Mgt. (4 Credits)

A class for graduating Residential Construction majors that draws together features of all previous classes and introduces points directed toward effective planning and management of a construction project. The Senior Construction Project(s), a building activity completely organized, directed, and executed by the students, is the major concentration helping to prepare them for a management position in the home-building industry, Prerequisite: Senior Residential Construction majors only 4 credits (1 lecture hour, 6 laboratory hours), spring semester

### **Resort Recreation Mgmt Tech** (RRMT)

#### RRMT 320. Legal Implications RR Industry. (3 Credits)

This course will cover legal principles governing hospitality operations. Case studies involving the resort and recreation industry will be emphasized. Topics include responsibilities for loss or injury to guests and guest property, inn maker relationships tax laws, labor laws, building codes and public health regulations. Prerequisites: BSAD 107 or BSAD 108 3 credits (3 lecture hours), fall semester

#### RRMT 398. Hosp Analytics Revenue Mktg. (3 Credits)

This course studies the application of budgeting, finance and revenue management principles at resort enterprises. Students will gain an applied understanding of hospitality analytics and measures of performance for revenue centers at resorts. Quantitative assessment tools and metrics as well as industry benchmarks will be studied. The final portion of the term will focus on case studies and culminates with a final research project which analyzes and synthesizes findings, presenting them in client ready format. Prerequisites: FSAD 201 or TOUR 251, 30 credit hours completed, or permission of instructor 3 credits (3 lecture hours), fall semester

#### RRMT 399. Study of Wine and Spirits. (3 Credits)

The intent of the course is to introduce the student to wine and spirits from various regions of the globe with an emphasis on location. Terroir and its importance to the evolution of wine and spirits will be integrated throughout the course. Products that are indigenous to the areas of study will be researched, discussed and examined. Sampling of the various products will be done throughout the course. The course also examines the essential items needed to set up a proper bar area. This includes glassware, and tools necessary in the preparation of the service of alcohol. Prerequisites: CAS 240 or BSAD 112 and junior standing in bachelor's degree program or permission of instructor 3 credits (3 lecture hours)

#### RRMT 425. Training Design & Impl - Hosp. (3 Credits)

This course is an applications-based course that will provide students with a solid foundation in the principles and procedures for selecting, designing, implementing and evaluating training programs. Conducting a needs assessment, utilization of instructional design models, applying appropriate technology, and evaluating outcomes will be studied. Students will be able to link results of the training programs studied to the mission of the corporation. Prerequisite: RRMT 320or permission of instructor 3 credits (3 lecture hours), spring semester

#### RRMT 430. Assessment Customer Satisfacti. (3 Credits)

This course will identify and utilize the various assessment issues related to evaluation and the development of instruments and methodologies. The focus will be placed on how these assessment methods can be implemented to measure customer satisfaction. Guidelines for the development of instruments and processes will be discussed with an emphasis on reliability and validity issues. Focus groups, their uses, makeup and procedures for effective use will be discussed. Company models will be used to implement and demonstrate the student's understanding of the subject material. The relationship between assessment and continuous quality improvement will be emphasized. Prerequisite: BSAD 221 or RRMT 398 or permission of instructor 3 credits, (3 lecture hours), spring semester

#### RRMT 440. Tech Applications for RR Mgt. (4 Credits)

This course covers the applications of various software programs that enhance efficiency in resorts and recreational facilities. Identification of information management systems and function in various departments as well as necessary interfaces to enhance service recovery and quality will be covered. Prerequisites: TOUR 106, TOUR 153, RRMT 320 4 credits, (2 lecture hours, 2 hours of recitation), fall semester

#### RRMT 450. Facilities Safety and Security. (3 Credits)

This course identifies issues of security, surveillance and safety which must be addressed by resort enterprises for loss prevention. Major concepts include operational intervention and strategies for an effective security and safety program. Legal, prevention and compliance requirements will be reviewed. Prerequisite: BSAD 310 or permission of instructor 3 credits (3 lecture hours), fall semester

#### RRMT 460. International Hotel Resort Mgt. (3 Credits)

The goal of this course is to provide students with a basic understanding of the international hotel and resort industry by examining various aspects of hotel development and management in global terms. Prerequisites: TOUR 153 3 credits (3 lecture hours), spring semester

#### RRMT 465. Managing Entertainment Venues. (3 Credits)

This course is designed to identify the components of successful entertainment venues. Special focus on strategic planning, budgeting, special considerations/ requirements, legal issues, contracts, and public relations as they relate to leveraging the department. Students will integrate hospitality skills and knowledge to formulate an executive philosophy applicable to entertainment management. The class will implement a case study approach to enhance critical thinking and presentation skills. Prerequisite: RRMT 320 or permission of instructor 3 credits (3 hours per week, lecture), fall semester

#### RRMT 470. Capstone Exp. Orientation. (2 Credits)

This 2 credit hour course is to be completed during the semester prior to the student's 12 credit hour capstone experience. The focus of this course will be on preparation for the capstone experience including self-assessment of workplace competencies, identification of preferred work sites, developing interviewing skills, formulating a list of ideal capstone sites, creating an electronic portfolio, the application process, designing strategic career mapping document, formulating objectives of the experience, creating an approved project plan for the capstone experience, and completing a facility orientation schedule. Necessary forms and the capstone experience plan, (identifying projects to be completed); for RRMT 480 will be submitted by the student, and must be approved, prior to beginning their capstone work experience. Prerequisite: FSAD 257 and RRMT 430, B.B.A Resort and Recreation Service major, or permission of instructor 2 credits (2 lecture hours)

#### RRMT 475. Meeting Management. (3 Credits)

The goal of this class is to provide students with a comprehensive understanding of the meetings, expositions, events and conventions industry (MEEC). The class offers students an in-depth view of planning and management in MEEC. The course supports students with hands-on, step-by-step methods for planning and managing gatherings in MEEC. Prerequisite: TOUR 252 and RRMT 460 or permission of instructor 3 credits (3 lecture hours), spring semester

#### RRMT 480. Internship RR Service Mgt. (12 Credits)

This is supervised field work in a selected resort and recreation business or service organization. Students carry out a planned program of educational experiences under direct supervision of an owner, manager, or supervisor of the Resort or Recreation Department head in an organization. Each intern will be supervised by a member of the faculty on a regular basis. Written and oral reports of work experience activities will be required. An evaluation will be based on the quality of experiences gained from the internship. Prerequisites: RRMT 320, 430, 440, 470 or permission of instructor 12 credits, spring semester/fall semester/ summer semester

# Science Technology & Society (STS)

#### STS 101. Values of Science & Technology. (3 Credits)

This course explores ethical, social, political, and religious issues associated with science and technology. For many people, the practice of science is the pursuit of knowledge, while the application of technology involves tools that may have a positive impact on society, depending upon the actions of those using them. Students in this course will analyze contemporary challenges to those views, through the use of case studies and theoretical investigations (including fiction and film). The course will confront both science and technology with questions about knowledge, expertise, progress, and neutrality. By the end of the class, students should have a richer perspective on the values and challenges of science and technology within society. Prerequisite: "C" or better in COMP 101 Pre- or Co-requisite: Lab science 3 credits (3 lecture hours) spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### STS 301. Humans vs. Nature. (3 Credits)

An exploration of the relationship between the natural world and human attempts to understand it (science) and control it (technology). The distinction between what is natural and what is technological often informs human discourse in terms of what is permissible and what is possible. Students will survey and critique the ethical, social, and scientific distinctions between the natural world and the human world. To this end, the course will take a broad view of technology to include human artifacts and technological systems, but will also grapple with objects at the boundaries of technology and nature – domesticated animals, designed babies, and other genetic and biological "enhancements" and "reassignments." Prerequisites: STS 101, or PHIL 201 or permission of instructor. 3 credits (3 lecture hours) fall semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### STS 316. Investigating Cyberculture. (3 Credits)

This course will examine the contemporary transformation in human interaction via computer technologies. Topics investigated through reading and research include: new concepts of space and time; electronic subjectivity and anonymity; new representations of gender, race and class; emergence of new forms of expression; localization and the trend in networked individualism and the impact of hypertext and multimedia technologies on human thinking and learning. Prerequisite: SOCI 101 or permission from the instructor. 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### STS 380. History of Science & Medicine. (3 Credits)

This is an advanced topics course focusing on the history of science and medicine. The course surveys human understandings of the nature of the universe and of human beings, beginning with the Neolithic peoples and continuing through ancient cultures such as the Chinese and Greeks and on into the early development of modem science in Europe. It ends with a discussion of the broad developments in science and medicine occurring in the past 200 years of human history. This course can be taken for credit only once as either HIST 380 or STS 380. Prerequisite: COMP 101 "C" or better. 3 credits (3 lecture hours) fall or spring This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Western Civilization.

#### STS 401. Adv Topics in STS. (3 Credits)

This course focuses on a specific set of issues relating to how science and/or technology engage the larger social world. The issue set is examined in detail from a variety of perspectives (historical, philosophical, sociological, etc.). This course is designed to give upperdivision students in the major an opportunity to explore a rapidly changing world in-depth. Topics vary from semester to semester. Topics selected will center around the social dimensions of recent or highly influential developments in science and technology, and might include subjects like gender and technology, modernism and science, or nonwestern scientific traditions. Prerequisites: junior or senior standing and permission of instructor 3 credits (3 lecture hours) fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Humanities.

# Sociology (SOCI)

#### SOCI 101. Intro to Sociology. (3 Credits)

Introduction to sociological concepts, with description and analysis of the structure and dynamics of human society. Consideration of contemporary social institutional trends and of the reciprocal relationship among individuals and institutions. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### SOCI 201. Social Problems. (3 Credits)

Examine problems confronting contemporary civilizations. Topics include institutional problems within family, economic, political, media, scientific, religious, and educational systems, as well as the effect of these problems on individuals. Potential solutions to social problems will be addressed. Prerequisite: Introduction to Sociology (SOCI 101) -or- U.S. History 1900-present (HIST 103). 3 credits (3 lecture hours; spring semester). #This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science and Diversity: Equity, Inclusion and Social Justice.

#### SOCI 220. Marriage and Family. (3 Credits)

Designed for students who want to gain perspectives on the evolution and current state of marriage and family relations in the United States. There will also be a focus on alternatives to the traditional notion of marriage and family. Discussion of issues such as nontraditional relationships, mate selection and dating, gender roles, love and sexuality, family planning, separation and divorce, families in crisis, etc. Prerequisite: SOCI 101 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### SOCI 221. Death and Dying. (3 Credits)

This course examines the impact of dying and bereavement on individuals, families, groups, social institutions and cultures. Prerequisite: PSYC 101 or SOCI 101 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### SOCI 250. Social Gerontology. (3 Credits)

Social, psychological, and physiological changes experienced in aging and the responses of our society to problems faced by older people. Role changes in work and family relationships, economic and health problems, planning adjustment to retirement and beyond, institutionalization. Training of those responsible for care and management of older people. Prerequisite: PSYC 101 or SOCI 101 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### SOCI 261. Environmental Justice. (3 Credits)

This course will examine environmental guality and social justice. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income concerning the development, implementation, and enforcement of environmental laws, regulations, and policies. The basic premise of the course is to discuss and analyze the history of environmental justice and current advocacy introducing the concept that all people have a right to live in a clean environment and have access to resources to sustain their health and livelihood. The course will cover the environmental justice movement's history, issues, and future, including climate, energy, water, food, and urbanization justice. The course relies on readings, student interaction, and site visits. Student can not earn credit for both ENSC 261 and SOCI 261 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science and Diversity: Equity, Inclusion and Social Justice.

#### SOCI 270. Drugs, Society & Behavior. (3 Credits)

Examines the use of psychoactive drugs. Explores human behavior, examining the interactions between chemicals and neurons to the psychological, behavioral, and physiological effects on the individual and the attendant impact on society. We will touch on topics relating to biology, pharmacology, neuroscience, chemistry, anthropology, history, law, sociology, and political science; the effects of psychoactive drug use on society will help us to understand the behavior of social and political groups and how they influence the individual. Pre- or co-requisite: PSYC 101 or SOCI 101 or permission of the instructor. 3 credits. This course is cross listed with SOCI 370. Students may not earn credit for both SOCI 270 and SOCI 370. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### SOCI 360. Social Mvt & Community Change. (3 Credits)

Examines social change through political advocacy and/or use of community resources, with a focus on both specific social movements and theoretical explanations for movement processes. Prerequisite: Grade of "C" or better in SOCI 101 Introduction to Sociology, or permission of instructor. 3 credits (3 lecture hours), fall semester. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science and Diversity: Equity, Inclusion and Social Justice.

#### SOCI 370. Drugs, Society & Behavior. (3 Credits)

Examines the use of psychoactive drugs. Explores human behavior, examining the interactions between chemicals and neurons to the psychological, behavioral, and physiological effects on the individual and the attendant impact on society. We will touch on topics relating to biology, pharmacology, neuroscience, chemistry, anthropology, history, law, sociology, and political science; the effects of psychoactive drug use on society will help us to understand the behavior of social and political groups and how they influence the individual. Prerequisite: PSYC 101 or SOCI 101 or permission of the instructor. 3 credits. This course is cross listed with SOCI 270. Students may not earn credit for both SOCI 270 and SOCI 370. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

#### SOCI 390. Urban Sociology. (3 Credits)

Urban sociology analyzes both the historical roots of urban development as well as the contemporary urban area as a regional social system. Basic sociological research concepts are used to discover demographic and organizational patterns and relate those patterns to urban problems and planning techniques. Prerequisite: SOCI 101 3 credits (3 lecture hours) This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Social Science.

### Social Media (SOCM)

#### SOCM 100. Social Media Content Curation. (3 Credits)

Become a social media content curator with this course, which focuses on the groundwork for creating social media content across platforms. While developing content, students will learn the importance of having a strong content strategy across the platforms they are working on. Social Media Content Curation will examine how the same basic content is distributed differently across platforms. Platforms that are discussed may vary but should include the most popular social media platforms. 3 credits (3 lecture hours)

#### SOCM 101. Social Media Community Mgmnt. (3 Credits)

Transform the way you engage on social media. Students will learn to act as the active voice of the community while monitoring dialogue across social media platforms. Students will master how to manage content for these platforms and the best practices for maintaining a strong social media presence while developing and executing a strong strategic plan for clients or their business. 3 credits (3 lecture hours)

#### SOCM 102. Social Media Analytics & Engmt. (3 Credits)

This course will allow students to locate and analyze data from social media platforms and sources. Social Media Analytics and Engagement will give students the skills to work professionally with clients to determine which data is most qualified to achieve company-wide goals. Students will gain an overview of metric tools and the process for ROI achievement. One of the most important factors in social media analytics is qualified data. The key is determining the most qualified data to achieve company-wide marketing goals. 3 credits (3 lecture hours)

#### SOCM 103. Social Media Branding & Profit. (3 Credits)

Students will build the background knowledge needed to assess different approaches to using social media strategies and tactics both paid and organic, to support a company's efforts to engage customers and solidify brand loyalty. An overview of how socially enabled consumer engagement can amplify a brand promise, leading to higher ROI and increased earned media. 3 credits (3 lecture hours)

# Spanish (SPAN)

#### SPAN 101. Beginning College Spanish 1. (3 Credits)

This course is for students who have not previously studied Spanish and who are not familiar with the language. Using a communicative approach with a variety of listening, speaking, reading, and writing activities, students will become familiar with basic structure and vocabulary of the Spanish language. Elements of Hispanic culture, customs and geography will be introduced. Note: this course is not designed for students who have taken 3 or more years of Spanish in high school, or for anyone who has passed the high school Regents Spanish exam. This course is not designed to meet the needs of heritage or native speakers of Spanish. 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language and World Languages.

#### SPAN 102. Beginning College Spanish 2. (3 Credits)

This course builds on SPAN 101 to further develop and strengthen listening, speaking, reading and writing skills. Emphasizes the ability to use and understand Spanish in context. Instruction occurs in Spanish with clarification in English. Students express themselves orally, read authentic materials, understand oral input, and write compositions at high novice level. Prerequisite: SPAN 101 at Morrisville with a C grade or better, or 2 to 3 years of high school Spanish – Passing Grade in Course I and II 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language and World Languages.

#### SPAN 125. Spanish for Heritage Speakers. (3 Credits)

This course addresses the needs of students who can communicate in Spanish but need to develop and/or improve their reading and writing skills. It will enable the student to capitalize upon his/her existing language skills, expand his/her knowledge base and develop his/her ability to read, write, and communicate more effectively in the language. The student will recognize regional and dialectal differences, describing varieties of Spanish spoken in the U.S. and throughout the world. Special attention is given to specific linguistic issues such as diction, orthography and sentence structure. The course is conducted in Spanish and includes cultural discussions. Students cannot receive credit or both; SPAN 101 or 102 and SPAN 125. Prerequisite: Placement Evaluation or by permission of instructor 3 credits (3 lecture hours) fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language and World Languages.

#### SPAN 201. Intermediate College Spanish 1. (3 Credits)

Enhances Spanish listening, speaking, reading and writing skills. Emphasizes increasing the accuracy and depth of communicative abilities and cultural understanding. Students express themselves orally and in writing, read authentic sources, and understand clear, native speech at the intermediate level. Instruction occurs in Spanish. Prerequisite: passing Spanish 102 with a "C" or better, permission of instructor, or passing grade on Course 3 Regents Spanish 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language and World Languages.

#### SPAN 202. Intermediate College Spanish 2. (3 Credits)

Strengthens Spanish listening, speaking, reading and writing skills acquired in intermediate Spanish I. Emphasizes increased accuracy and depth of the students' abilities and knowledge of contemporary Hispanic culture through group and individual work. Students express themselves orally and in writing at the high-intermediate level and understand key concepts when spoken clearly at native speed. Instruction occurs in Spanish. Prerequisite: Spanish 201 or passing grades on 3-4 years high school Spanish or permission of instructor 3 credits (3 lecture hours), fall or spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Foreign Language and World Languages.

### **Technology Management (TECH)**

#### TECH 480. Internship in Tech Management. (15 Credits)

In this course, student will participate in supervised fieldwork. Students carry out a planned program of educational experiences under direct supervision of an owner, manager, or supervisor of the business/ organization. Each intern will be advised and monitored by a member of the faculty on a regular basis. Requirements include a journal, interim reports, supervisor evaluations, a summary report and an oral presentation.

### Theatre (THEA)

#### THEA 124. Introduction to Theatre. (3 Credits)

Critical, historical, aesthetic, and practical survey of dramatic forms and styles, the development of the theater, and contemporary theatrical practice. Analysis of plays of each type or period. 3 credits (3 lecture hours), fall semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### THEA 125. Introduction to Acting & Directing. (3 Credits)

Introduction to the basic techniques of acting, directing, and dramatic production. Practical experience in the fundamentals of character development, stage movement and dramatic pantomime, the designing and construction of sets and planning of lighting. Students produce various scenes and participate in the college dramatic organization. 3 credits\* (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts.

#### THEA 150. Theatre Production Laboratory. (3 Credits)

This course is an advanced hands-on course in theatre production. In this course the students will participate in the creation of a theatrical production from casting to performance in one of these four areas: acting, design, directing, or stage management. In acting the student will develop the ability to create a character through the rehearsal process while increasing confidence and poise. In the design areas the student will research past productions, develop a design concept for the production, and execute the final design. In directing the student will choose a production for performance, research said production, develop a production concept, hold auditions, and hold rehearsal for said production up to the last performance of said production. The Stage Manager will work with the director to co-ordinate all aspects of a given production and also be responsible for the back stage areas during performance. Students will also explore the significance of theatre in our society. Prerequisite: Permission of Instructor For 1 credit, 2 credits, or 3 laboratory credits offered both fall and spring. This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for The Arts. Student must accumulate three credits (in any combination) to meet SUNY General Education requirement in the Arts. Students may successfully complete a combination of four credits of THEA 150 or THEA 160 toward graduation

#### THEA 160. Technical Theatre Prod Lab. (1 Credit)

This course is for the student who wishes to work back stage or in the front of house for a chosen theatre production. The student will work with the stage manager and director to coordinate the front-of-house and backstage elements of a performance. Prerequisite: Permission of Instructor For 1 credit, 2 credits, or 3 laboratory credits offered both fall and spring. Does not meet SUNY General Education requirement in the Arts. Students may successfully complete a combination of four credits of THEA 150 or THEA 160 toward graduation

### **Tourism (TOUR)**

#### TOUR 101. Tourism And Geography. (3 Credits)

This course approaches geography from a travel industry perspective. Basic geographic regions, country locations, and landmarks of significance to the travel industry are presented. 3 credits (3 lecture hours), fall semester

#### TOUR 106. Travel-Tourism/Hospitality. (3 Credits)

This course is a basic introduction to the travel and tourism industry. The course explores the roles played by the various components of the industry including air transportation, maritime transportation, surface transportation, the hotel industry, the tourism industry wholesale and distribution companies and the food service segment. The course also explores potential career options available in the industry. The course focuses on team building. 3 credits (3 lecture hours), fall semester

#### TOUR 151. Computerized Reservation Syste. (3 Credits)

Presents the concepts, procedures and formulas necessary for a working understanding of American Airline's SABRE Computer Reservation System. Students practice what they learn in a simulated SABRE environment with intensive hands-on computer exercises, case studies and role playing, travel reservations and bookings, travel agency and airline accounting, and legal issues affecting both. 3 credit hours

#### TOUR 152. Trav Ind Operations & Admin. (3 Credits)

Provides students with a basic understanding of travel agency and airline operations and administration as well as the legal environment of the travel industry. Topics include the role of ARC and IATAN, travel agency location and staffing, travel sales techniques and customer service skills are emphasized. 3 credits (3 lecture hours), spring semester

#### TOUR 153. Hotel Operations. (3 Credits)

This course presents a systematic approach to front office procedures by detailing the flow of business through a hotel, from the reservations process to checkout and settlement. The course examines the various elements of effective front office management, paying particular attention to the planning and evaluation of operations and to human resource management. Front office procedures and management are placed within the context of the overall operation of a hotel. Certification by the American Hotel/Motel Association. 3 credits (3 lecture hours), spring semester

#### TOUR 200. Internship in Customer Service. (3 Credits)

Customer service laboratory experience in conjunction with an approved restaurant or hospitality operation. A field experience providing food service administration, restaurant management, and travel/tourism majors with an opportunity to apply their knowledge in a customer service setting. 3 credits, fall semester, spring semester

#### TOUR 250. Tourism Planning & Development. (3 Credits)

The goal of this course is to define the major concepts in tourism and to explore those factors influencing tourism. The course will also examine how the economic impact of tourism has become an important factor in the wealth of nations. Transportation Fee: \$30 Prerequisites: TOUR 153 or permission of instructor 3 credits (3 lecture hours), fall semester

#### TOUR 251. Cooperative Work Experience. (2 Credits)

Cooperative work experience will be completed in an approved position in the Travel-Tourism/Hospitality industry (320 hours). Comprehensive written and oral reports are required at the end of the work experience during the fall semester. 2 credits (2 lecture hours), fall semester

#### TOUR 252. Meeting & Convention Services. (3 Credits)

Introduction to convention and group planning as it relates to the Hospitality Industry. This certificate course includes marketing the facility for various meetings and conventions, catered events, planning, cost controls, special services, technology implications, and sales. National Certification by the American Hotel and Lodging Association. 3 credits (3 lecture hours), spring semester

#### TOUR 253. Travel Agency Operations. (2 Credits)

This course will provide a hands-on experience focusing on customer service for the retail travel industry. The class will take place at the SUNY Morrisville Travel Center utilizing SABRE. Prerequisites: TOUR 151 and TOUR 152 2 credits (4 hours recitation), fall and spring semester

#### TOUR 255. Tourism Agency Operations. (2 Credits)

This course will provide the student with an advanced practical experience in tourism promotion agencies. The course will be taught in conjunction with a tourism-related business. Students will complete an externship. Prerequisites: TOUR 151 and TOUR 152 2 credits (4 laboratory hours), fall and spring semester

#### TOUR 390. Cultural Immersion Intl Cuisin. (3 Credits)

This course is a full international cultural immersion. This special learning community coursework offers knowledge, exposure, and historical insight to international culture and cuisines. (The initial study abroad program is in Italy.) The particular aspects of regional ingredients and traditional cooking techniques along with the lifestyles and historic origins are discovered. Students will be guided to practice cultural relativism using a holistic approach and practice hands-on ethnographic research methods as they study the people, art, and food & wine regions of a country. Students will practice and develop interviewing, observing, recording and evaluating skills. Students will examine the indigenous lifestyles, family structure, foods and traditions, gender roles, religion, art, architecture, human rights and globalization. Being a conscientious world-traveler makes for a better hospitality professional. Pre and posttrip work will be assigned. Lectures will also take place abroad. (Currently presented by the partner institution, Apicius via the Florence University of the Arts.) Co-Requisite: ANTH 260 offered at TC3\* Prerequisites: FSAD 100 or FSAD 101 or CUL 101, and TOUR 106, and TOUR 215 or FSAD 201. Permission of the Hospitality Technology Department. \*Students enrolled in TOUR 390 will also be required to enroll in the Cultural Field Study Course at TC3 (our Study Abroad travel partners) which will run concurrently with TOUR 390 3 credits, spring semester

# Wellness (WELL)

#### WELL 100. Holistic Health. (3 Credits)

This course explores the many facets of holistic health as it pertains to ourselves. Topics to be covered include body and mind connection, stress management, exercise, nutrition, meditation, visualization and global effects on health. Open to all majors. 3 credits (3 lecture hours), fall and spring semester

#### WELL 101. Stress and Wellness. (3 Credits)

This course introduces the student to the concept of stress, the normalization of stress, nutritional and exercise practices as related to stress, personal health strategies and specific skills for stress management. 3 credits (3 lecture hours), fall or spring semester

#### WELL 102. Stress and Wellness. (1 Credit)

The class Introduces students to various concepts and information related to stress management, personal health, and wellness. It includes strategies and specific skills to achieve holistic wellness as well as the development of an actionable wellness plan. This plan will help them minimize unhealthy stress and/or anxiety, in addition to maximizing their motivation and overall life satisfaction. 1 credit (1 lecture hour)

### Wood Technology (WOOD)

#### WOOD 101. Wood Products and Processes. (3 Credits)

An introduction to the furniture/lumber industry and its products, including commercial woods, furniture and cabinets, layout, hardware and assembly, as well as safety and nomenclature of machines are topics in this course. Laboratory includes introduction to common woodworking equipment and construction of small furniture project. This course has an additional lab fee. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### WOOD 160. Wood Technology. (3 Credits)

Anatomical features and physical properties and uses of wood are covered in this course as well as macro identification of commercially important species. 3 credits (2 lecture hours, 3 laboratory hours), spring semester

#### WOOD 170. Lumber Manufacturing & Grading. (3 Credits)

This course covers basic sawmilling practices, the breakdown of logs into lumber, basic equipment and applications, air-drying of lumber and lumber grading rules. Prerequisite: MAGN 101 or permission of instructor 3 credits (2 lecture hours, 3 laboratory hours), spring semester

#### WOOD 180. Furniture Design Construction. (3 Credits)

Survey of the various styles of furniture, their design and construction. Students will design and construct a piece of furniture. Prerequisite: WOOD 101, DRFT 151, CAD 181 or permission of instructor 3 credits (2 lecture hours, 2 laboratory hours), spring semester

#### WOOD 190. Summer Work Study. (3 Credits)

This consists of work experience of at least 10 weeks in the wood industry between the first and second year a report is required. Prior instructor's approval and pre-registration is necessary. 3 credits, fall or spring semester

#### WOOD 211. Wood Industry Field Trip. (1 Credit)

Supervised field trip for observation and study of organizations, facilities and processes in the various industries within the wood industry. A SWOT analysis report is required 1 credit, spring semester, senior year

#### WOOD 221. Wood Glues, Laminating&Finishes. (3 Credits)

Basic concepts of surface preparation and application techniques used in gluing and finishing wood are covered in this course. Wood-adhesive and woodcutting relationships to assist diagnosing problems are also covered. Prerequisite: WOOD 160 3 credits (2 lecture hours, 3 laboratory hours), fall semester

#### WOOD 231. Wood Seasoning & Preservation. (3 Credits)

Students will learn principles of wood seasoning, dry kiln operation, wood-water relationship and species variation which affect the production of defect-free dried lumber and basic wood preservation practices. Prerequisite: WOOD 160 3 credits (2 lecture hours, 2 laboratory hours), fall semester

#### WOOD 241. Secondary Wood Processing. (4 Credits)

Students will explore the theory, principles and methods of machining wood, fastenings and assemblies. In a production environment. This course has an additional lab fee. Prerequisites: WOOD 160, WOOD 170, WOOD 180 4 credits (2 lecture hours, 6 laboratory hours), fall semester

#### WOOD 260. Production Maint Supervision. (2 Credits)

General background in OSHA regulations pertaining to the wood & construction industry for production, installation & maintenance personnel. Basic CNC programming and job setup using "G Code" & "Master Cam" software. Course includes molder setup and operations including knife design & grinding and machine alignment. 2 credits (2 lecture hours, 2 laboratory hours), spring semester

#### WOOD 270. Wood Production Engineering. (3 Credits)

This course is a complete engineering economic feasibility study course relative to the organization, location, establishment of a wood products manufacturing plant. Prerequisite: senior standing, WOOD 241 3 credits (1 lecture hour, 4 seminar hours), spring semester

#### WOOD 271. Cabinet Design/Manufacturing. (3 Credits)

Introduction to the principles of cabinet design and construction including emphasis on practical production problems relative to planning, layout and design, terminology, estimating, production sequence, types of construction, finishing, man-made boards, and installation. This course has an additional lab fee. Prerequisite or co-requisite: WOOD 101, DRFT 151, CAD 181 or permission of instructor. 3 credits (1 lecture hours, 4 laboratory hours), spring semester.

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