MORRISVILLE STATE COLLEGE
GUIDELINES FOR ASSESSING CRITICAL THINKING
AND INFORMATION MANAGEMENT
AS PART OF ACADEMIC PROGRAM REVIEW

Campus guidelines for academic program assessment require that assessment of two of the SUNY General Education requirements, critical thinking and information management, be incorporated into the program review process. The purpose of this document is to give some guidance and background to faculty who will need to include this assessment in their program review.

1. **What is the requirement?**

When SUNY established the system-wide General Education Requirement in 1998, it included critical thinking and information management areas to be evaluated by all campuses. As with the other SUNY General Education categories that were established at this time, SUNY included specific student learning outcomes that must be measured.

For critical thinking, we need to show how well students can:

- Identify, analyze, and evaluate arguments as they occur in their own or other’s work
- Develop well-reasoned arguments

(SUNY has given further guidance on what is meant by an “argument” in these outcomes. See rubric below.)

For information management, we need to show how well students can:

- Perform the basic operations of personal computer use
- Understand and use basic research techniques
- Locate, evaluate and synthesize information from a variety of sources

Campuses are free to add any other outcomes they want to the areas of critical thinking and Information management, but at a minimum campuses must measure these outcomes.

2. **What do faculty doing an academic program review have to do?**

Each program that is beginning an academic program review should decide how it wants to measure their majors performance in the area of critical thinking and information management and then discuss how the program is going to incorporate these findings into the self-study document it produces as part of the review process.

3. **What’s the most effective and efficient way to measure student performance on these outcomes?**
One way to measure student performance in critical thinking and information management is to take a sample of work that students are already producing in the major (a paper, presentation, proposal, business plan etc.) and evaluate how the students’ work on that assignment shows that they have met the stated outcomes in the areas of critical thinking and information management.

As part of its work, the former General Education Assessment Committee of Faculty Congress reviewed rubrics that faculty can use to assess student performance in the required outcomes for critical thinking and information management. Those rubrics are attached to this document.

Faculty are free to modify or adapt these rubric, provided that they still include the required outcomes as established by SUNY. Additional outcomes could be added and the criteria for what constitutes exceeding, meeting, approaching or failing to meet the outcome could also be changed or adapted by consensus of the faculty doing the review.

4. **If we decide to use these rubrics, how many students do we have to sample?**

One practical guideline you can use is for faculty to agree what size sample they would need to be confident in making changes to the program if the student performance does not meet their expectations.

For example, say that the results show that students in the major do not have as high a level of proficiency in information management as the faculty expected. One simple response to this finding could be for faculty to say that the results were poorer than expected because the sample wasn’t representative. In planning your sample size, it is useful to discuss this matter so that you can have some confidence that the results you get really are representative of your students and give you information that you can act on.

There is no one “magic” answer. Faculty need to discuss and agree what size sample would yield results that the faculty would be confident using as the basis of making changes to courses. Some programs might want to sample all majors or as many as practical. Others, maybe larger majors, may want to take a sample of anywhere between twenty or twenty five percent of the majors to fifty percent or more. The main danger is having a sample size that is too small.

5. **What do we do with the results?**

The new academic program review format asks faculty to evaluate what they think results mean rather than just reporting data. So once the program has results for the assessment of majors’ performance on the SUNY-mandated outcomes for critical thinking and information management, faculty should discuss what they think those results mean as part of their larger discussion of how well students are meeting the stated program outcomes in the major.
The SUNY Trustees learning outcomes for critical thinking focus on arguments but offer little guidance as to their nature or variety. We conceive of an argument as any piece of reasoning aimed at deciding what to believe or what to do. On this conception, we are engaged in argument whenever we try to decide what we ought to think about some topic, whether the topic concerns the past, the present or the future, and whenever we try to decide how best to achieve some practical goal. Arguments thus include designing an experiment to test an hypothesis, deciding how best to measure some phenomena, defending a view about the nature and value of free will, explaining the causes of some historical event, predicting the outcome of some physical process, evaluating a performance or work of art, and balancing the costs and benefits of some public policy. These otherwise very different activities are unified by the fact that doing them well requires thinking critically both about the subject matter at hand and about the decision process itself. We designed our rubric to capture at an abstract level what these decisions have in common when they are all well made.

The word “argument” in the rubric is thus to be understood as applying to a wide variety of different kinds of activities aimed at deciding what to believe or to do. The word “premise” applies to the evidence or grounds on which a decision or recommendation is based. Thus, the results of an experiment or measurement may be the premises for a scientific conclusion or a policy recommendation, knowledge of initial conditions and laws of nature may be the premises for a prediction, and an evaluation of a dance may be premised on aesthetic criteria. In all such cases, thinking critically requires distinguishing the question whether those premises are correct or credible from the question whether they provide sufficient support to accept the conclusion.

The rubric does not attempt to define when the premises of an argument are “acceptable” or when they provide “sufficient” evidence to support the conclusion. This is a notoriously difficult task, especially since standards of acceptability and sufficiency seem to vary from one discipline to another and from one historical period to another. While it is important for students to be aware of the ideal of a logically valid argument, where the truth of the premises would guarantee that of the conclusion, this ideal provides little practical guidance in ordinary life.
The first learning outcome concerns a student’s critique of some argument and the second concerns a student’s attempt to develop one. In both, the word “argument” is meant to include any kind of reasoning aimed at deciding what to believe or do. Thus, the student’s critique may target some specific policy recommendation or some historical explanation, and the argument developed may be a proposal to test some hypothesis or a defense of some philosophical view. In principle, one piece of work would suffice so long as it required the student to both critique an argument and construct an argument. But a portfolio including one piece of work analyzing and evaluating an argument and another supporting and defending some conclusion would perhaps be more practical.

1. Students will identify, analyze, and evaluate arguments as they occur in their own and others’ work.

**Exceeding:** The student’s work
1. Identifies the target argument(s) and clearly distinguishes it from any extraneous elements such as expressions of opinion and descriptions of events.
2. Carefully articulates the argument’s conclusion, clearly distinguishes it from its premises and identifies most relevant definitions and/or hidden assumptions.
3. Clearly and correctly assesses whether the argument’s premises provide sufficient logical support for the conclusion, independently of whether the premises are true.
4. Clearly and correctly assesses the reasonableness of the premises, including the credibility of their sources (e.g., observation, testimony, measurement, experiment, etc.), independently of whether the premises support the conclusion.

**Meeting:** The student’s work
1. Identifies the target argument(s).
2. Distinguishes the argument’s conclusion from its premises and some effort is made to identify relevant definitions and/or hidden assumptions.
3. Correctly assesses whether the argument’s premises provide sufficient logical support for the conclusion, independently of whether the premises are true.
4. Correctly assesses the reasonableness of the premises, including the credibility of their sources, independently of whether they support the conclusion.

**Approaching:** The student’s work
1. Identifies the target argument(s) but includes extraneous elements such as expressions of opinion and descriptions of events.
2. Distinguishes the argument’s conclusion from its premises, but little effort is made to identify relevant definitions and/or hidden assumptions.
3. Attempts to assess whether the argument’s premises provide sufficient logical support for the conclusion, independently of whether the premises are true.
4. Attempts to assess the reasonableness of the argument’s premises, but little effort is made to consider the credibility of the premises’ sources.

**Not Meeting:** The student’s work
1. Does not isolate the argument(s) from extraneous elements in the text.
2. Does not identify the argument’s conclusion or distinguish it sufficiently from the premises and little or no effort is made to identify relevant definitions or hidden assumptions.
3. Does not address whether the argument’s premises provide sufficient logical support for the conclusion, independently of the truth of the conclusion.
4. Does not consider whether the premises are reasonable to believe, independently of whether they support the conclusion or else no effort is made to evaluate the credibility of the premises’ sources.

2. Students will develop well-reasoned arguments.

Exceeding: the student’s work
1. Develops a clearly articulated argument, using evidence and/or systematic logical reasoning in support of a conclusion or point of view.
2. Identifies relevant qualifications or objections or alternative points of view and prioritizes evidence and/or reasons in support of the conclusion.
3. Describes the broader relevance, significance or context of the issue and/or applies the reasoning to a novel problem.

Meeting: the student’s work
1. Presents an argument using evidence and/or logical reasoning in support of a point of view.
2. Identifies some qualifications or objections or alternative points of view.
3. Describes the broader relevance, significance of context and/or applies the reasoning to a novel problem.

Approaching: the student’s work
1. States a conclusion or point of view but does not organize the evidence or reasons in a logically adequate way.
2. Does not clearly identify or respond to relevant objections or alternative points of view.
3. Does not adequately describe the broader relevance or significance or apply the reasoning to a novel problem.

Does not meet: the student’s work
1. Does not clearly state a conclusion or point of view or else little or no supporting reasoning or evidence is presented.
2. Makes no attempt to recognize or respond to objections or alternative points of view.
3. Makes no attempt to describe the broader relevance or significance or to apply the reasoning to a novel problem.

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<tr>
<th>Skill Outcomes</th>
<th>Measurements</th>
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<tr>
<td>Perform the basic operations of personal computer use.</td>
<td>Student will submit a document, prepared on a computer, to be assessed. By definition, 100% of students being assessed must meet standard.</td>
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| Locate, evaluate and synthesize information from a variety of sources          | Obtain appropriate reference material from a variety of sources  
Reference material is effectively integrated into writing  
The measurement of the outcome will be the assessment of an assigned thesis paper. Criteria:  
**Exceed standards** – Number and type of references surpass assignment requirements and are directly relevant to topic. References are from a variety of sources including multiple databases where appropriate and are completely integrated into writing.  
**Meet standards** – Number and type of references fulfill assignment requirement and are relevant to topic. References are from a variety of sources including multiple databases where appropriate and are satisfactorily integrated into writing.  
**Approach standards** – Number and type of references are inadequate to fulfill assignment requirement and are not always relevant to topic. References are from an insufficient variety of sources and databases and are poorly integrated into writing.  
**Not meet standards** – No evidence of use of proper information resources or relevance to topic.                                                                 |
| Understand and use basic research techniques                                  | Properly formatted reference list  
Properly used in-text citations  
Absence of plagiarism  
The measurement of the outcome will be the assessment of an assigned thesis paper. Criteria:  
**Exceed standards** – Publication quality references and in-text citations.  
**Meet standards** – Minor errors in references and in-text citations eg. punctuation and content errors.  
**Approach standards** – Uses references and in-text citations with major errors in format.  
**Not meet standards** – Excessive errors in or missing references and in-text citations and/or plagiarism.                                                                 |

This information management rubric was adopted by the Morrisville General Education Committee in 2008. A copy of the report containing the document and related materials is on the Faculty/Staff share drive in the Folder “Information Management” which is in the folder “Gen Ed-Assessment.”