Framingham State University

General Education Assessment Report

2012-13

Assessment Advisory Group

And

Office of Assessment

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Academic Department	Faculty Member
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Computer Science	Dr. Jeff Gao (fall semester)
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Consumer Sciences (F&N)	Susan Massad
Consumer Sciences (FDR)	Pam Sebor-Cable
Economics and Business Administration	Karen Druffel
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English	Dr. Patricia Lynne
Geography	Dr. Judy Otto
History	Dr. Sarah Adelman
Mathematics	Dr. Sheree Arpin
Modern Languages	Dr. Juliana Freire
Nursing	Dr. Susie Conrad
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Political Science	Dr. Doug Telling
Psychology and Philosophy	Dr. Tony Dias
Sociology	Dr. Marian Cohen

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General Education Annual Assessment Report - 2012-13

Introduction

Assessment of FSU's general education program is required by the New England Association Schools and Colleges (NEASC). In addition, assessment of general education objectives is a critical aspect of our work to continuously improve our institution. The Assessment Advisory Group (AAG), which is constituted by FSU faculty, together with the Office of Assessment has general oversight of the general education assessment process.

"The general education program at FSU is intended to provide breadth in the baccalaureate degree program to foster student learning beyond a single, narrow discipline or field. General education is designed to facilitate the increase of knowledge, an appreciation for learning in a broad context, the ability to relate new information to what one has learned previously, the capacity to judge information rather than to simply accept it, and the facility to use what one learns in a realistic and logical manner. More specifically, the general education requirement is designed to help students to acquire the following learning objectives:

- Overarching Objective: Solve Problems Using Critical Thinking *(All General Education courses should meet this objective.)*

1. Communicate Effectively Orally
2. Communicate Effectively in Writing
3. Solve Problems Using Quantitative Thinking
4. Demonstrate a Critical Understanding of Human Diversity
5. Demonstrate Civic Literacy
6. Recognize Ethical and Social Responsibilities
7. Locate, Evaluate, and Apply Information
8. Solve Problems Using Creative Thinking
9. Demonstrate Technological Competency
10. Work Collaboratively and Independently" (Undergraduate Student Catalog 2012-13)

Specific courses in the general education curriculum are designated as focusing on each of the above outcomes. More information on the General Education curriculum at FSU can be found at http://www.framingham.edu/undergraduate-catalogs/documents/1314/8a-gen-ed-requirements.pdf.

In 2012-13, we implemented an approach to assess general education learning outcomes using an institutional portfolio. Institutional portfolios provide direct evidence of student performance aligned with the overall goals of general education. In 2012-13, FSU developed three institutional portfolios in the areas of critical thinking, written communication and quantitative thinking. This report focuses on the results of FSU's use of institutional portfolios and rubrics to assess the general education program.

Rubric Development Process

Rubric development is an ongoing process that began during the Fall 2010/Spring 2011 academic year. Faculty, who are part of AAG have been involved with developing and norming rubrics for general education outcomes since 2011. The Association of American Colleges and University (AAC&U) VALUE rubrics were used as a foundation. Working in small groups, faculty modified the AAC&U rubrics to more specifically align with the general education program at FSU. The utility of the rubric drafts was then evaluated using small samples of student assignments. The rubrics were revised based on the feedback from the AAG members that performed the evaluations.

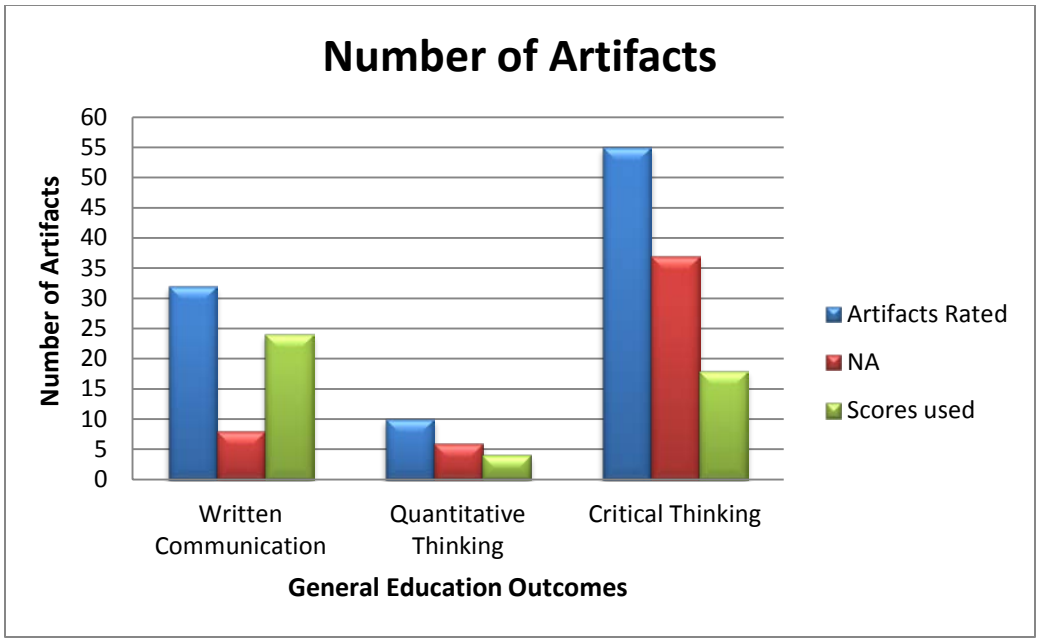
Large-scale assessment of the general education learning outcomes began once rubrics were finalized. The current status of rubric development varies by learning outcome. Assessment has already begun for three learning outcomes (i.e. Solve Problems Using Critical

Thinking, Communicate Effectively in Writing, Solve Problems Using Quantitative Thinking). The rubrics for other general education objectives are either still being developed or are being revised. Rubrics are fluid documents that must continue to be evaluated and modified as the institution and its curriculum evolves. As such, the AAG continues to seek feedback regarding the effectiveness of these rubrics from faculty teaching general education courses and/or using the rubrics.

Methods

The Office of Assessment collected student assignments (called "artifacts") embedded in existing general education courses across campus. Artifacts were collected by direct request from a random sample of general education designated courses, from faculty members who voluntarily submitted samples of student work. From the artifacts collected, the Office of Assessment randomly selected student artifacts to be included in the institutional portfolios. The total numbers of artifacts that constituted the institutional portfolio for each outcome are shown in Table 1.

Artifacts selected for the institutional portfolio were coded. Student, course and faculty information associated with the artifacts were scrubbed prior to the rating process. A panel of faculty was recruited as paid raters who provided scores for each artifact using the FSU rubric for the outcome. Each rubric varies in the number of categories assessed for each outcome but all use a 0 to 4 scale where 0 is a low score and 4 is a high score.



	WC	QT	CT
Artifacts Rated	32	10	55
Not Applicable	8	6	37
Artifacts used	24	10 (4 *)	18

Table 1. 2012-13 Institutional Portfolios of Artifacts

Scoring Process

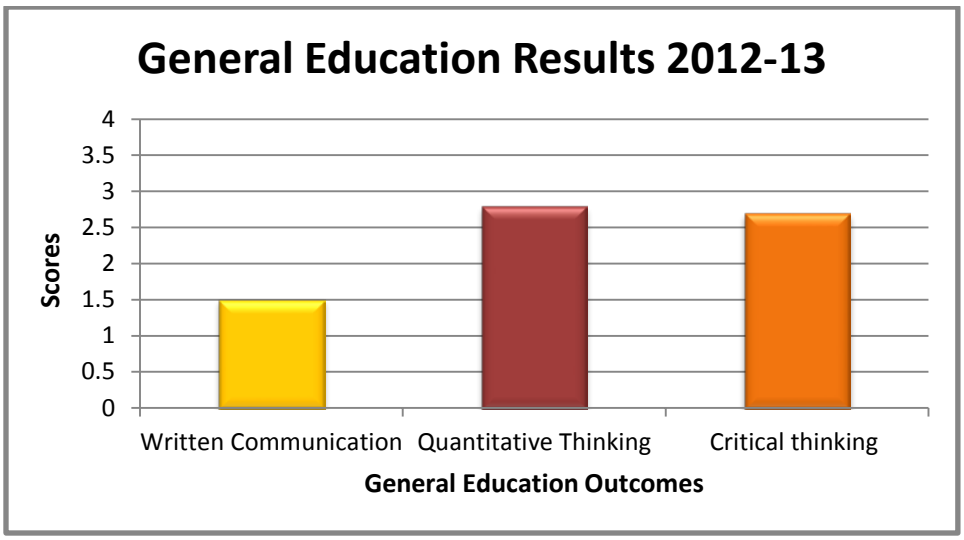
All faculty reviewers met for brief training sessions where they received an overview of the general education program and the portfolio review process. Three teams which each comprised of three faculty reviewers scored artifacts for critical thinking, written communication and quantitative thinking. In most cases, raters had the assignment prompt which helped with providing context for the assessment.

Reviewers assigned a sub-score to each artifact for each component of the rubric (see Appendix A). Sub scores were then averaged to arrive at overall score ranging from 0-4 wherein

higher scores reflect a greater level of competency in the outcome being assessed. When discrepant scores between raters existed, faculty worked to arrive at a consensus through discussion.

Results

The following institutional portfolios were assessed: critical thinking (CT), written communication (WC) and quantitative thinking (QT) in summer 2013. A summary of the results of the assessment of the FSU institutional portfolio for 2012-13 is as follows: critical thinking (n=18) averaged 2.7 (*SD*=.64); written communication (n=24) averaged 1.5 (*SD* = .51) and quantitative thinking (n=10) averaged 2.8 (*SD* = .78). These results are represented in Table 2.



Outcome	Mean	Standard Deviation	Sample Size
Written Communication	1.5	.51	24
Quantitative Thinking	2.8	.78	10
Critical Thinking	2.7	.64	18

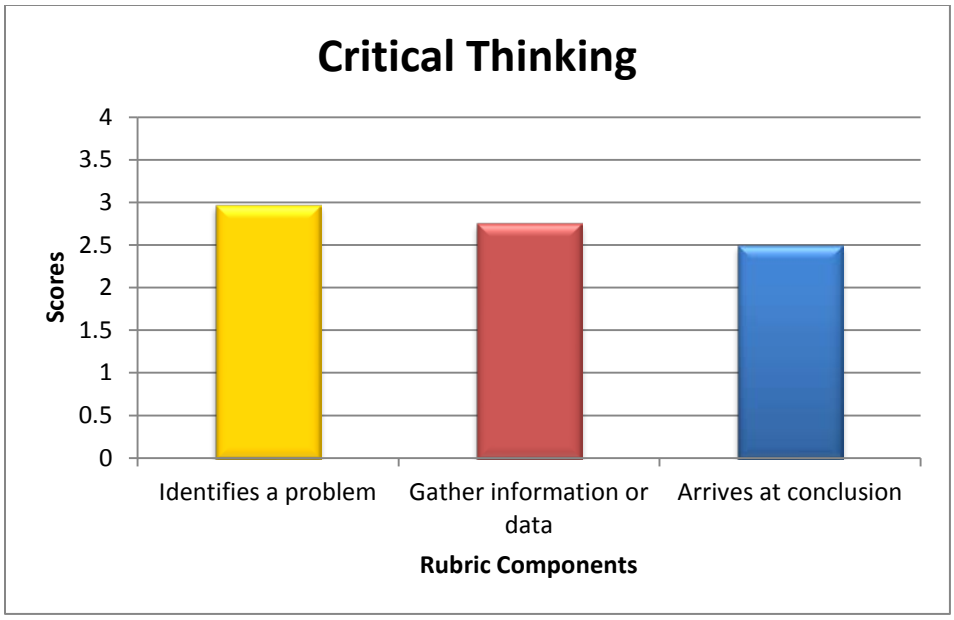
Table 2. 2012-13 Overall Results

As this is the first year that data was collected and analyzed, complex analysis like cross year comparisons was not possible. In addition, student demographic data was not collected and hence comparisons across demographic groups were also not undertaken.

Critical Thinking

In summer 2013, one team comprised of three faculty rated 18 artifacts (samples of student work) as part of the critical thinking portfolio. Artifacts used for assessing critical thinking consisted of written papers. Raters scored these artifacts using a common rubric. On average, critical thinking scores in 2012-13 were 2.7 (*SD* = .64). Of the 18 artifacts, none were assigned a score of 0, 3 (17%) were assigned a score of 1, 4 (22%) were assigned a score of 2, 10 (56%) were assigned a score of 3, 1 (6%) were assigned a score of 4.

Breaking down the overall mean score for critical thinking into the components on the rubric can provide further diagnostic insight into areas of strength or weakness in critical thinking. Results indicated that students' scored an average of 2.9 on the item identifies a problem, 2.8 on gather information or data and 2.5 on the ability to arrive at a conclusion. These sub scores are represented in Table 3.



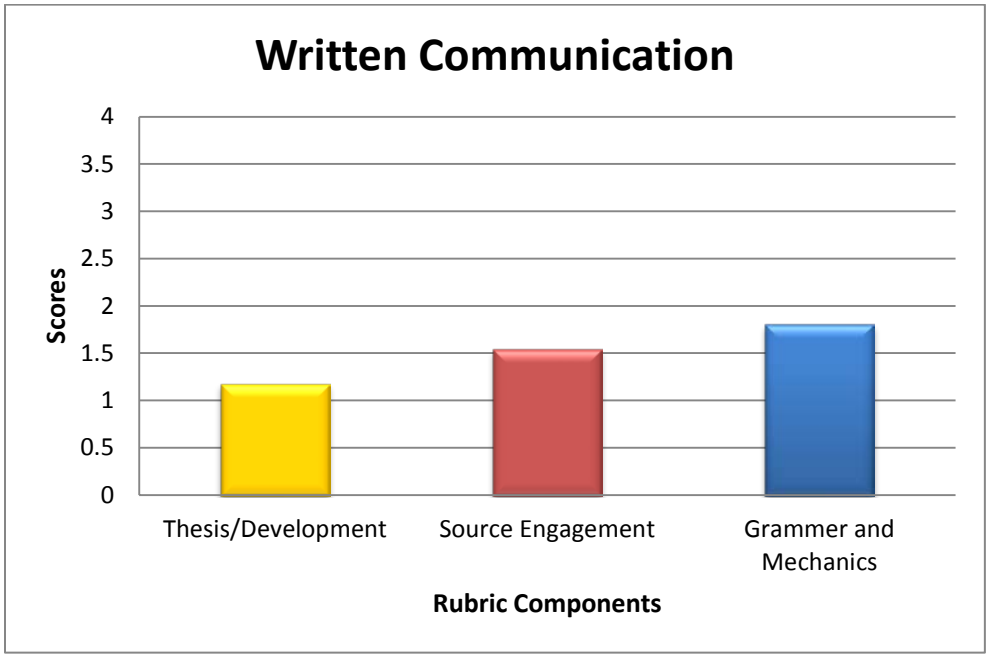
Component	Mean Score
Identifies a problem	2.9
Gather information or data	2.8
Arrives at conclusion	2.5
Overall Mean	**2.7 ***

Table 3. 2012-13 Critical thinking sub-scores

Written Communication

In summer 2013, one team comprising of three faculty members rated 24 artifacts (samples of student work) as part of the written communication portfolio. Raters scored these artifacts using a common rubric (Appendix A). On average, written communication scores for 2012-13 were 1.5 (*SD* = .51). Of the 24 artifacts, none were assigned a score of 0, 14 (58%) were assigned a score of 1, 8 (33%) were assigned a score of 2, 2 (8%) were assigned a score of 3, and none were assigned a score of 4.

Breaking down the overall mean score for written communication into the components on the rubric can provide further diagnostic insight into areas of strength or weakness in critical thinking. Results indicate that students' scored an average of 1.2 on the item thesis development, 1.5 on source engagement or data and 1.8 on grammar and mechanics. These sub scores are represented in Table 4.



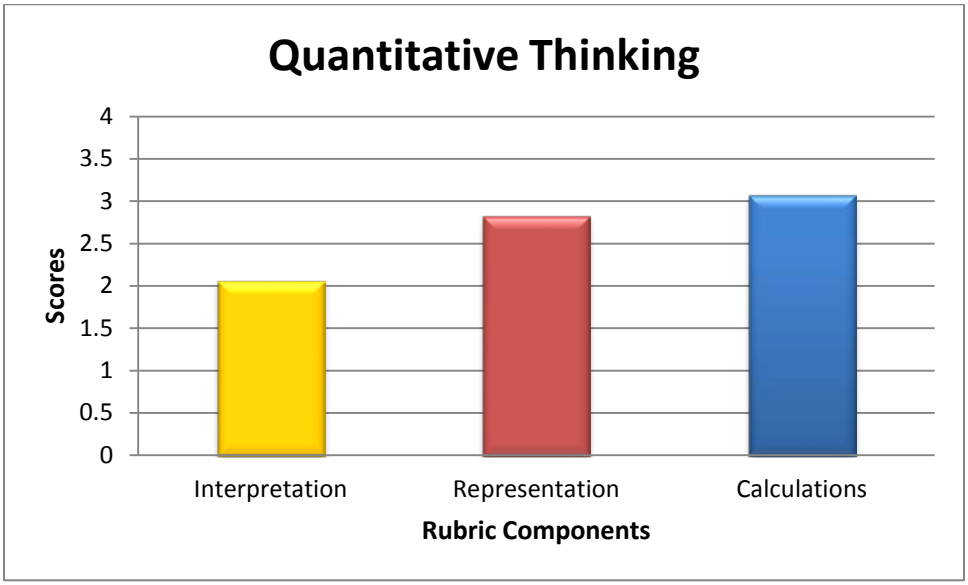
Component	Mean Score
Thesis/Development	1.2
Source Engagement	1.5
Grammar and Mechanics	1.8
Overall Mean	**1.5**

Table 4. 2012-13 Written communication sub-scores

Quantitative Thinking

In summer 2013, one team comprising of three faculty members rated 10 artifacts (samples of student work) as part of the written communication portfolio. Raters scored these artifacts using a common rubric (Appendix A). On average, quantitative thinking scores for 2012-13 were 2.8 (*SD* = .78). Of the 10 artifacts, none were assigned a score of 0 or 1, 3 (30%) were assigned a score of 2, 6 (60%) were assigned a score of 3, 1 (10%) was assigned a score of 4.

Breaking down the overall mean score for quantitative thinking into the components on the rubric can provide further diagnostic insight into areas of strength or weakness in critical thinking. Results indicate that students' scored an average of 2.1 on the item interpretation, 2.8 on representation and 3.1 on calculations. These sub scores are represented in Table 5.



Component	Mean Score
Interpretation	2.1 (4 valid scores)
Representation	2.8
Calculations	3.1
Overall Mean	**2.8 ***

Table 5. 2012-13 Quantitative thinking sub-scores

Discussion of Results and Future Plans

On 16 December, 2013 the Assessment Advisory Group met to discuss the results of this report and to chart future plans. Discussion at the meeting revolved around questions like: Can these results tell us anything about the Gen Ed Program as a whole? If yes, what specific areas do they inform? If no, what areas need focus so that results are meaningful?

The AAG determined that assessment results were not valid to speak to issues of student performance on the outcomes or the general education program itself. The group identified small sample sizes for each outcome as the chief reason for lack of validity. Hence the discussion of results focused on the assessment process itself and with finding ways to align faculty approaches in the classroom with Gen Ed objectives. The recommendations of the AAG have been grouped into categories for meaningful consumption.

Data collection process

- The group highlighted the need to improve the size of the institutional portfolio for the assessment results to be valid and meaningful to the institution. As this is a serious area of concern from the results of 2012-13, the AAG in its next meeting will brainstorm concrete ways to improve the size of each institutional portfolio.

- Need to provide clear guidelines to instructors contributing artifacts to the general education portfolio

Rating process

- Faculty raters need to be formally trained in the use and interpretation of general education rubrics. Raters should also receive guidelines on how results from assessment should be returned to the Office of Assessment.
- Need for raters to have assignment prompts for all artifacts rated and answer keys for quantitative assignments

Faculty development

- Professional development training particularly for instructors teaching general education-designated courses is imperative.
- The use of professional development would also address concerns that classroom work was not aligned with the institutional general education rubrics.
- The Director of Assessment will explore internal and external funding resources for faculty development relating to general education assessment.

Rubric revisions

- Need to re-examine FSU rubric for written communication so that it can be more inclusive of multiple genres of writing
- Need to re-examine the quantitative reasoning rubric to establish nuances in the *representation* component of the rubric
- Need to examine FSU CT and WC and QT rubrics on how closely they align with the VALUE Rubrics from the AAC&U

Coordination with Gen Ed Curriculum Committee

- Need to use common language in Gen Ed rubrics and definitions of outcomes in general education curriculum objectives
- Need to develop broad institutional definitions for Gen Ed outcomes like critical thinking
- Find ways to engage the university community with the results of general education assessment. Some suggestions included presenting results during faculty development days.

Framingham State University's commitment to student learning is evident in the resources and opportunities made available for assessment. This assessment exercise revealed that assessment is a process rather than a destination. Our task for the next cycle of assessment is clear: to continue to make improvements to our processes and rubrics with the goal of generating valid results that can inform student learning and our approach to general education at FSU.

Appendix A – FSU Institutional Rubrics

General Education Rubric OBJECTIVE: Solve problems using quantitative thinking

OUTCOME	RATING					
	4	3	2	1	0	N/A*
Interpretation/Communication Ability to explain, in words, information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words). Ability to write correctly, logically, and concisely.	Provides accurate explanations of information presented in mathematical forms including sound computation. Writing level is of high quality.	Provides accurate explanations of information presented in mathematical forms making only minor errors related to computations or units. Writing level is satisfactory.	Provides somewhat accurate explanations of information presented in mathematical forms, but fails to communicate these ideas precisely OR falls short of comprehensively answering the question.	Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means.	Blank or essentially blank	Not applicable to the problem or assignment.
Representation Ability to convert relevant information into appropriate mathematical forms (e.g., equations, graphs, diagrams, tables, words).	Completed conversion of information is accurate and has appropriate attention to detail.	Completed conversion of information contains only minor mistakes (largely accurate).	Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.	Completes conversion of information but resulting mathematical portrayal is largely inappropriate or inaccurate.	Blank or essentially blank	Not applicable to the problem or assignment.
Calculation Ability to correctly manipulate, demonstrate, and perform mathematical processes in problem solving.	Calculations are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.).	Calculations are comprehensive and contain only minor mistakes OR calculations are successful but lack a minor portion of the complete calculation required.	Calculations are attempted but are either unsuccessful OR are successful but not comprehensive (lacking a major portion of the complete calculation).	Calculations are attempted but are both unsuccessful AND not comprehensive.	Blank or essentially blank	Not applicable to the problem or assignment.

Faculty members: *Sheree Arpin, Marc Cote, Vandana Singh* Last revised: *September 14, 2012*

General Education Rubric OBJECTIVE: Solve problems using critical thinking

OUTCOME	R					
	4	**3**	**2**	**1**	**0**	**N/A**
Identifies a problem, question, or issue	Identifies a problem, question, or issue in regard to context and assumptions *and* identifies relationships among key elements of the issue that are integral to a more comprehensive understanding. Evaluation demonstrates clear analysis and synthesis of necessary elements.	Identifies a problem, question, or issue in regard to context and assumptions without overlooking key details and terms. Comprehension and application is apparent but evaluation is incomplete.	Adequately identifies a problem, question, or issue *but* does not demonstrate evaluation. Leaves terms undefined, misses key details, or overlooks context and assumptions.	Does not clearly identify the problem, question, or issue. Fails to recognize, misrepresents or confuses necessary elements.	Does not understand that a problem, question, or issue needs to be identified.	Not applicable to the assignment.
Gathers relevant information, data or evidence	Information, data or evidence from *vetted* multiple perspectives are assessed as relevant. Includes an *analysis* of importance and impact of information, data or evidence.	Gathers information, data or evidence from *vetted*, multiple perspectives and results are assessed as relevant, *but* analysis remains incomplete.	Gathers information, data or evidence from multiple perspectives *but* results are superficial, unquestioned or unexamined.	Gathers information, data or evidence but results are simplistic, unexamined and/or irrelevant. Relies only on personal experience, observation or intuition.	Does not gather data or evidence.	Not applicable to the assignment.
Arrives at a conclusion or solution	Arrives at a conclusion or solution that is plausible and based on information, data or evidence. Includes consideration of implications or consequences, and is able to qualify, integrate or reflect on own perspectives and assertions.	Arrives at a conclusion or solution that is plausible, based on information, data or evidence, and considers implications or consequences that reach beyond the immediate situation, yet misses some key considerations.	Arrives at a conclusion or solution that is tied to information, data or evidence yet includes a *simplistic* and *cursory* examination of implications or consequences.	Does not arrive at a reasoned conclusion or solution. Disregards implications or consequences.	Does not attempt to arrive at a conclusion or solution.	Not applicable to the assignment.

Faculty members: *Marian Cohen, Audrey Kali, Pamela Sebor-Cable*

General Education Rubric OBJECTIVE: Communicate effectively in writing

	RA					
OUTCOME	**4**	**3**	**2**	**1**	**0**	**N**
Thesis/Development Students will produce thesis-driven, well-developed, and logically organized written academic work.	Writing presents a clear and logical thesis and demonstrates the paper's purpose with clarity. The body of the paper develops that purpose and thesis in substantive ways and through a clear organization. In addition, the paper demonstrates innovation,	Writing presents a clear and logical thesis and demonstrates the paper's purpose with reasonable clarity. The body of the paper develops that purpose and thesis in substantive ways and through a clear organization. The writing remains focused throughout the paper and includes few, if any, tangents or digressions.	Writing presents a clear and logical thesis and a clear organization based on that thesis, but the purpose of the paper may be unclear and/or ideas in the body of the paper may not be sufficiently developed. The writing may include some tangents or digressions, but none that substantially derail the paper's main point.	Writing demonstrates an attempt to present a clear thesis and a logical organization based on that thesis, but the purpose of paper is unclear and/or the ideas in the body of the paper are not sufficiently developed. The paper may drift substantially from the thesis, or the logic and organization of the writing may be inconsistent or unclear.	Writing provides no thesis, purpose, and/or guiding organization. There is no clear logic to the presentation of ideas. Ideas presented in the thesis are not developed in the body of the paper.	Not applicable to the assignment.
Source Engagement Students will support their thesis using domain-appropriate references and integrating source material with their own intellectual contributions.	Writing demonstrates skillful use of appropriate sources to develop ideas. Sources are well integrated, and the writing exhibits exceptional intellectual engagement with the ideas in the sources. The paper uses a consistent documentation style, and everything that appears to need citation is cited.	Writing demonstrates consistent use of appropriate sources to support ideas, and sources are consistently integrated with the writer's own intellectual contributions. The writing contains few, if any, obvious misreadings. The paper uses a consistent documentation style, and everything that appears to need citation is cited.	Writing demonstrates use of appropriate sources, and writer attempts to integrate sources with his/her own intellectual contribution(s). However, the paper may not use a consistent documentation style, and/or may omit some in-text citations, OR some points that appear to need citation may not be cited. Writing may include some obvious misreadings but none that substantially impeded the paper's thesis.	Writing demonstrates an attempt to use sources to support ideas, but some sources may be inappropriate and there is limited integration of source material with writer's own intellectual contribution(s). Writing may include obvious misreadings that may impede the paper's thesis. The documentation style and information may be inconsistent and/or incomplete, OR a significant number of apparent citations may be missing.	Writing includes no references or only inappropriate references, AND/OR references completely dominate the writing so that the writer appears to be making no intellectual contribution to his/her own written work. The paper clearly relies on sources that have not been cited or includes citations for sources that are not used in the paper.	Not applicable to the assignment.
Grammar and Mechanics Students will use syntax, grammar, and mechanics to achieve clarity in their writing.	Language use is sophisticated or otherwise exceptional and skillfully communicates meaning to readers with clarity and fluency. The writing contains few, if any,	Language use is straightforward and clearly conveys meaning to readers. The writing contains few, if any, errors.	Language use generally conveys meaning to readers with clarity, although some areas are ambiguous or otherwise unclear. The writing may include some errors.	Language use sometimes impedes meaning and writing errors are present throughout the paper.	Substantial segments of the writing are too error-ridden to be comprehensible.	Not applicable to the assignment.

Faculty members: *Sarah Adelman, Patricia Lynne, Rebecca Shearman*