

# Quantitative Analysis

## Proposal and Evaluation Procedures

**Required Proposal Materials:** In order for a course proposal to be evaluated for this General Education category, the Subcommittee *must* be provided with:

- Completed Course Information Worksheet
- Course Syllabus
- Completed Criteria Worksheet

**Course Proposals will be evaluated in three areas:**

- Course Description & Objectives
- Course Focus
- Evidence of Student Learning

**CRITERIA WORKSHEET: QUANTITATIVE ANALYSIS**  
(to be completed by faculty applicant)

**REQUIRED OF ALL COURSES**

<b>Criteria:</b> Students will...	<b>Evidence of Student Engagement</b>	<b>Assessment Types</b>	<b>Description</b>
Critically evaluate mathematical products (tables, graphs, mathematical equations) and identifies the limitations and capabilities of knowledge.	<i>150 word limit</i>		<i>150 word limit</i>

**QUANTITATIVE REASONING: COMPLETE AT LEAST THE FIRST THREE OF THE FOLLOWING**

<b>Criteria:</b> Students will...	<b>Evidence of Student Engagement</b>	<b>Assessment Types</b>	<b>Description</b>
a) Interpret models and/or solve quantitative problems from different contexts with real world relevance.	<i>150 word limit</i>		<i>150 word limit</i>
b) Create reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).	<i>150 word limit</i>		<i>150 word limit</i>
c) Communicate reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).	<i>150 word limit</i>		<i>150 word limit</i>
d) Demonstrate a variety of mathematical principles and the methods of data analysis.	<i>150 word limit</i>		<i>150 word limit</i>
e) Students will apply or demonstrate the use of quantitative analyses in a variety of different contexts to construct explanations and/or solve problems.	<i>150 word limit</i>		<i>150 word limit</i>

**CRITERIA CHECKLIST: QUANTITATIVE ANALYSIS**  
(to be completed by evaluator)

**REQUIRED OF ALL COURSES**

<b>Criteria:</b> Students will...	<b>Course Meets Criteria?</b>	<b>Comments</b>
Critically evaluate mathematical products (tables, graphs, mathematical equations) and identify the limitations and capabilities of knowledge.	<input type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <b>Unclear</b>	

**QUANTITATIVE REASONING: COURSE MUST MEET AT LEAST THE FIRST THREE OF THE FOLLOWING**

<b>Criteria:</b> Students will...	<b>Course Meets Criteria?</b>	<b>Comments</b>
a) Interpret models and solve quantitative problems from different contexts with real world relevance.	<input type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <b>Unclear</b>	
b) Create reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).	<input type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <b>Unclear</b>	
c) Communicate reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).	<input type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <b>Unclear</b>	
d) Demonstrate a variety of mathematical principles and methods of data analysis.	<input type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <b>Unclear</b>	
e) Students will apply or demonstrate the use of quantitative analyses in a variety of different contexts to construct explanations and/or solve problems.	<input type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/> <b>Unclear</b>	

**Total Number of Criteria Met by Course Proposal:**

**/5**

**EVALUATION RUBRIC FOR GENERAL EDUCATION COURSE PROPOSALS**  
(to be completed by evaluator)

**Quantitative Analysis:  
numerical, analytical, statistical, and problem-solving skills**

Student Learning Outcomes

**Quantitative Reasoning:** Students will be able to interpret models and solve quantitative problems from different contexts with real world relevance; understand and create reasonable arguments supported by quantitative evidence; and clearly communicate those arguments in effective formats (e.g., using words, tables, graphs, and mathematical equations).

**COURSE DESCRIPTION & OBJECTIVES**

Based on the course syllabus, assign an appropriate rating to course description and objectives in relation to the required Student Learning Outcomes.

<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
Description and objectives show an exceptional emphasis on the required student learning outcomes.	Description and objectives show a clear emphasis on the required student learning outcomes.	Description and objectives adequately address the required student learning outcomes.	Description and objectives make limited reference to the required student learning outcomes.	Description and objectives make no reference to the required student learning outcomes.

**COURSE FOCUS**

Based on the course syllabus, assign an appropriate rating to the course focus by determining what percentage of the course content deals with the required Student Learning Outcomes.

<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	
90-100% of the course appears to be related to the student learning outcomes	80-89% of the course appears to be related to the student learning outcomes	70-79% of the course appears to be related to the student learning outcomes	50-69% of the course appears to be related to the student learning outcomes	0-49% of the course appears to be related to the student learning outcomes	
100%	90%	80%	70%	50%	0%

**EVIDENCE OF STUDENT LEARNING**

Based on the following Criteria Checklist, assign an appropriate rating to course assessments in relation to the required Student Learning Outcomes.

<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
Assessments far exceed the minimum requirements for ensuring student learning outcomes.	Assessments exceed the minimum requirements for ensuring student learning outcomes.	Assessments meet the minimum requirements for ensuring student learning outcomes.	Assessments do not meet the minimum requirements for ensuring student learning outcomes.	Assessments need significant improvement to ensure student learning outcomes.