Appendix F: Quantitative Analysis Category Course Submission Requirements and Evaluation Criteria and Rubrics

COURSE SUBMISSION REQUIREMENTS

Minimum Required Materials for GEOC Review (per GEOC Standing Rules):

1. Cover Letter/Rationale/Justification
    a. Rationale must include sound justification as to why this course meets the requirements for the Quantitative Analysis category. The originator must demonstrate how the course will teach to and assess the Student Learning Outcome assigned to the Quantitative Analysis category.
        i. Quantitative Reasoning: Students will be able to interpret models and/or solve quantitative problems from different contexts with real-world relevance; create and communicate reasonable arguments supported by quantitative evidence; and clearly communicate those arguments in effective formats (e.g., using words, tables, graphs, and mathematical equations).
    b. Quantitative Analysis category-specific list of criteria follow.
2. Course Syllabus
3. Example Assignment(s)
4. Example Assessment(s)

Minimum Rubric Evaluation Criteria for SLOs (per GEOC Standing Rules):

Quantitative Reasoning	Interpret models and/or solve quantitative problems from different contexts with real-world relevance
	Create reasonable arguments supported by quantitative evidence
	Communicate reasonable arguments supported by quantitative evidence in effective formats

Quantitative Analysis Category-Specific Materials/Responses:

1. Complete the Criteria Worksheet, providing evidence of student engagement with SLOs and descriptions of assessment types (150-word limit for each response).

Note: This table is provided here for planning purposes. The last three columns will be available as fillable fields in Curriculog.

Criteria Worksheet: Quantitative Analysis

Required of All Courses			
Criteria: Students will …	**Evidence of Student Engagement**	**Assessment Types**	**Description**
Critically evaluate mathematical products (tables, graphs, mathematical equations) and identifies the limitations and capabilities of knowledge.			

Complete at the least the FIRST THREE of the following			
Criteria: Students will …	**Evidence of Student Engagement**	**Assessment Types**	**Description**
a) Interpret models and/or solve quantitative problems from different contexts with real world relevance.			
b) Create reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).			
c) Communicate reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).			
d) Demonstrate a variety of mathematical principles and the methods of data analysis.			
e) Apply or demonstrate the use of quantitative analyses in a variety of different contexts to construct explanations and/or solve problems.			

COURSE PROPOSAL EVALUATION CRITERIA AND RUBRICS

GEOC Advisory Subcommittee members will use the following rubrics when reviewing and providing feedback on faculty submissions for Quantitative Analysis.

Criteria Checklist Rubric: To be completed by the subcommittee		
Required of All Courses		
Criteria: Students will …	**Course Meets Criteria?**	**Comments**
Critically evaluate mathematical products (tables, graphs, mathematical equations) and identify the limitations and capabilities of knowledge.	❑ **Yes** ❑ **No** ❑ **Unclear**	

QUANTITATIVE REASONING: COURSE MUST MEET **AT LEAST THE FIRST THREE** OF THE FOLLOWING		
Criteria: Students will …	**Course Meets Criteria?**	**Comments**
a) Interpret models and solve quantitative problems from different contexts with real world relevance.	❑ **Yes** ❑ **No** ❑ **Unclear**	
b) Create reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).	❑ **Yes** ❑ **No** ❑ **Unclear**	

c) Communicate reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).	❑ **Yes** ❑ **No** ❑ **Unclear**	
d) Demonstrate a variety of mathematical principles and methods of data analysis.	❑ **Yes** ❑ **No** ❑ **Unclear**	
e) Apply or demonstrate the use of quantitative analyses in a variety of different contexts to construct explanations and/or solve problems.	❑ **Yes** ❑ **No** ❑ **Unclear**	
Total number of criteria met by course proposal:		**/5**

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.

5	4	3	2	1
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.

5	4	3	2	1
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%	0% 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.

5	4	3	2	1
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.

Final remarks and decision, to be completed by the subcommittee:

❑ Accept the course, as submitted, for Quantitative Analysis.

❑ Suggested revisions to meet Quantitative Analysis requirements:

Salisbury UNIVERSITY