

Mason Core Category: Quantitative Reasoning Proposal Worksheet

General Overview

The goal of the Quantitative Reasoning category is to develop students' critical thinking skills using mathematical and statistical concepts (i.e., formulas, graphs, tables, models, and schematics) to analyze and make sense of data, patterns, and relationships. By learning to evaluate problems using quantitative reasoning, students will be better equipped to make well-supported decisions in personal, academic, and workplace situations.

Required: One approved course.

Please keep in mind:

- Mason Core Committee members are a cross-section of the University. Please avoid discipline specific terminology and provide as much context as possible to facilitate the review process. Fully explain any terms that are unique to your area.
- As a part of the Mason Core on-going assessment process, you will be asked to regularly submit assignments that directly link to the category learning outcomes. Student work samples will be requested as well.

Required Documentation

- ☐ Syllabus with statement that this course meets the Quantitative Reasoning Mason Core requirement with a list of the category learning outcomes
- ☐ Completed proposal worksheet (this form)
- ☐ Example assignments (as needed to support proposal)
- ☐ Example assessments (as needed to support proposal)

Learning Outcomes:

Upon completing a Quantitative Reasoning course, students will be able to:

1. Interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.
2. Formulate a given problem quantitatively and use appropriate arithmetical, algebraic, and/or statistical methods to solve the problem.
3. Evaluate logical arguments using quantitative reasoning.
4. Communicate and present quantitative results effectively.

Rationale

Please provide a succinct rationale (no *more* than 500 words) for why this course should be considered for the Mason Core. Why does this course add to the available catalog of Mason Core courses?

Assignment Map

For each learning outcome, fully describe the assignment, clearly explain how the assignment meets the learning outcome, and discuss how the assignment will be assessed to provide evidence the learning outcome was met. If you are using an exam, test or quiz to assess learning, please include the questions. An assignment may meet more than one learning outcome. All outcomes must be met.

Outcome	Assignment	Explanation	Assessment
1. Interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.			
2. Formulate a given problem quantitatively and use appropriate arithmetical, algebraic, and/or statistical methods to solve the problem.			

Outcome	Assignment	Explanation	Assessment
3. Evaluate logical arguments using quantitative reasoning.			
4. Communicate and present quantitative results effectively.			

Faculty Contact

It is very useful to have a faculty member who is familiar with the course attend the Mason Core Committee meeting in which the course is discussed. Please list at least one faculty member who will attend and answer questions.

Name	Email Address

Course Management Plan

Please describe your course management plan. This may need to be completed in consultation with your curriculum coordinator or department chair.

1. Please provide who will continue as the primary contact and/or administrator for this course going forward.

Name	Email Address

2. Please provide the person in your unit who is responsible for coordinating your curriculum.

Name	Email Address

3. How will your department ensure new instructors are aligning their assignments with Mason Core outcomes?
4. What professional development will you provide to new instructors in preparation for teaching the course?
5. Student evaluations of teaching (SETs) scores sometimes suffer when course content is difficult, or a new pedagogy is implemented. In recognition of this, how will your academic unit provide support for faculty who are teaching a challenging course?

Resources

Which of the following resources have you already consulted to help you understand the learning outcomes for the course you're proposing?

- ☐ [Mason Core Website](#) descriptions of outcomes
- ☐ Prior courses approved for this Mason Core category
- ☐ Consultation with Mason Core committee member
- ☐ Mason Core [Faculty Resources](#)
- ☐ [Proposal Workshop](#)
- ☐ [Additional Stearns Center Workshops](#)
- ☐ Other (please specify)
- ☐ None of these