Quantitative Reasoning Course Proposal

Deadline for full course proposals: *rolling; review time frame: rolling*

Review and approval of courses for inclusion in the USM Core Curriculum shall respect and give appropriate deference to the expertise and academic freedom of individual faculty to teach what they know and to determine the content, pedagogy, required student activities, and teaching practices of each course.

In cases of courses intended to count toward the major, minor, or other program, review by college, school, or other curriculum review bodies may be necessary. Such review is the responsibility of the faculty members proposing the course and/or their departments, as appropriate.

Course proposals will be reviewed as the CCC’s proposal review process schedule permits. Faculty submitting proposals will be provided with an estimated time frame for the review and will be informed of any action on their proposals within one week after the first review. Revisions and resubmissions will be read and acted on as soon as they are received by the committee.

Names of faculty developing the course:

Primary contact person:

Name:

E-mail: Phone:

Names of faculty expected to teach course:

**Departmental notification/approval:**

_____ Yes, I have notified my department and have received department approval to propose this course

_____ No, I have not notified my department or received department approval to propose this course. I will do so by (date)___________________.
Scheduling:

Expected number of sections:_____
Semester/days/times/campus(es) in which you plan to offer the course for the first time (all sections):

Has this scheduling been approved by the department(s) involved? Y / N

After the first offering, what semesters do you plan to offer this course and how many sections will you offer per semester?

Fall ______20__ Spring ____20__ Summer ____ 20__
Fall ______20__ Spring ____20__ Summer ___ 20__

Course Proposal

Course proposals should include the following:

1. A narrative describing the following:
   a. how each of the learning outcomes and course characteristics will be addressed in the course
   b. for each outcome selected, describe at least one concrete example of an assignment students will complete to achieve the learning outcome and
   c. describe how student learning will be assessed in relation to the selected learning outcomes.

2. A course outline showing organization of topics, central questions, related readings and assignments, etc.

The learning outcomes and course characteristics of the Cultural Interpretation requirement follow, as does the rubric used by the CCC to review proposal narratives.

Send proposals electronically to smcwilms@usm.maine.edu
Quantitative Reasoning

Students in quantitative reasoning courses will acquire introductory mathematical concepts and skills that are necessary for everyday life and to successfully complete their chosen field of study. In quantitative reasoning courses students will gain an awareness of the utility of mathematics in life and an appreciation of the scope and nature of its decision making potential. These skills include critical thinking, mathematical reasoning, the use of technological tools, computation, interpretation, inquiry, and application of mathematical concepts to issues and problems in the contemporary world.

Learning Outcomes:
Students will be able to:
1. Recognize, explain, and use the tools of thinking critically to:
   - Pose relevant questions about quantitative analyses
   - Explain the difference between inductive and deductive reasoning.
2. Apply appropriate and correct numerical computation and technology to decision making.
3. Apply techniques for estimation with correct units of measurement identified.
4. Identify and select, in problem solving, the appropriate quantitative method and strategy, and apply appropriate algebraic or statistical analysis.
5. Describe the power of, and use appropriately, deterministic or stochastic function models and
   - Use technology to construct and interpret graphs of these functions, and
   - Explain the limitations of the graphs.
6. Organize, analyze, interpret and present data in appropriate and effective ways using
   - Verbal and written methods,
   - Correct notation and symbols,
   - Algebraic or probabilistic/statistical methods and
   - Technological tools.
7. Demonstrate an appreciation for the varied applications of quantitative reasoning in areas not traditionally viewed as quantitative fields.

Course Characteristics:
1. All quantitative reasoning courses should involve active and collaborative learning such as a lab or other hands-on learning component.
2. Course enrollments are limited to 30
3. Course Prerequisites: Students must meet existing proficiency requirements prior to enrollment.
4. Course restrictions: Students must complete their quantitative reasoning component prior to enrollment in a Science Exploration course.
This sheet indicates the Criteria the CCC will use to review your proposal. You do not need to complete this check list yourself, but your proposal should address all components of the check list.

Core Curriculum Committee Quantitative Reasoning proposal review sheet

Indicate with a check whether the course proposal satisfactorily addresses the following:

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