

Mason Core Category: Natural Science WITH Lab Proposal Worksheet

General Overview

The general education natural sciences courses engage students in scientific exploration; foster their curiosity; enhance their enthusiasm for science; and enable them to apply scientific knowledge and reasoning to personal, professional and public decision-making.

Required: Two approved science courses. At least one course will have laboratory experience. (7 credits)

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 Natural Science with lab learning outcomes. Student work samples will be requested as well.

Required Documentation

- ☐ Syllabus with statement that this course meets the Natural Science with lab 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 Natural Science with lab course, students will be able to:

- 1) Understand how scientific inquiry is based on investigation of evidence from the natural world, and that scientific knowledge and understanding:
 - a) evolves based on new evidence
 - b) differs from personal and cultural beliefs
- 2) Recognize the scope and limits of science.
- 3) Recognize and articulate the relationship between the natural sciences and society and the application of science to societal challenges (e.g., health, conservation, sustainability, energy, natural disasters, etc.).
- 4) Evaluate scientific information (e.g., distinguish primary and secondary sources, assess credibility and validity of information).
- 5) Participate in scientific inquiry and communicate the elements of the process, including:
 - a) Making careful and systematic observations
 - b) Developing and testing a hypothesis
 - c) Analyzing evidence
 - d) Interpreting results

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. Understand how scientific inquiry is based on investigation of evidence from the natural world, and that scientific knowledge and understanding: a) evolves based on new evidence b) differs from personal and cultural beliefs			
2. Recognize the scope and limits of science.			

Outcome	Assignment	Explanation	Assessment
3. Recognize and articulate the relationship between the natural sciences and society and the application of science to societal challenges (e.g., health, conservation, sustainability, energy, natural disasters, etc.).			
4. Evaluate scientific information (e.g., distinguish primary and secondary sources, assess credibility and validity of information).			
5. Participate in scientific inquiry and communicate the elements of the process, including: a) Making careful and systematic observations b) Developing and testing a hypothesis c) Analyzing evidence d) Interpreting results			

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