*April 2023*

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| * The Liberal Education Subcommittee will accept Liberal Education course proposals from November 1 through February 1 to review courses for inclusion in the following year’s course catalog. Please consult your college and department for internal course review deadlines so that course proposals forms are in the Academic Affairs Office no later than February 1. Note: If the course is new, the department must also submit the separate New Course Proposal Form through the college’s curriculum review and approval process prior to submission to Academic Affairs (details, dates, form: <https://evcaa.d.umn.edu/curriculum-management/course-proposal-processes>).
* All course proposal form approvals may be submitted through email or as an attachment. Signatures may be provided on the form or with approval documented within the email message.
* Departments and colleges may involve curriculum committees as advisory in their review procedures. The campus Liberal Education Subcommittee reviews all Liberal Education course proposals for Academic Affairs.

**Category Description**Liberal education courses in the natural sciences teach students how to formulate and test scientific hypotheses, interpret experimentally obtained data, and draw conclusions from the data. They also create a link between scientific ideas and problems that arise in the everyday world.Courses comprised of a lecture and a lab will use SLOs #1, 2, and 3.A lecture-only course must use SLO #1, and may opt to use SLO #2 and/or 3.  SLO 1: Students identify concepts and principles that comprise the foundational knowledge of the discipline.SLO 2: Students explain how scientific inquiry is used to address questions about natural phenomena.SLO 3: Students will apply the scientific method to address questions about natural phenomena. |
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|  | Name (print) | Signature | Date |
| Department Head/Designee |  |  |  |
| Dean/Designee |  |  |  |
| EVCAA/Designee |  |  |  |
|  |  |  |  |
| Course Effective Term |  |
| Faculty Contact |  |
| Course Designator |  |
| [Catalog Number](http://www.dumn.edu/vcaa/Coursenumbering.html)  |  |
| Course Title  |  |
| Number of Credits |  |
| Course Description*(Must match approved course or course proposal description)* |  |
| Has this course been approved by Academic Affairs? |  |
| How often will the course be offered? (every year, every other year) |  |
| Does this course have a lab? |  |
| Course pre-requisites |  |
| What other Liberal Education categories (if any) is this course proposed for or has it been approved for? |  |
| **Category Criteria**This section asks how the course will address all of the criteria for this category. Please use examples to help illustrate that the course will substantially address the following criteria.*100 word minimum for each item response.* |
| Describe how the course will help students understand the major concepts and principles of a natural science field of study and how they were developed through rigorous processes of scientific hypothesis testing.[response required] |
| Describe how the course will provide problem-solving experiences that increase quantitative skills and actively engage students in development and testing hypotheses of natural phenomena by gathering data, testing and interpreting quantitative data with statistical analysis, and formulating a valid conclusion. [response required] |
| Describe how the course will situate content so students understand the final step in the scientific process, the development of a scientific theory supported by consilience of evidence assembled into a unified explanatory argument. [response required] |
| **Course Assessment** Because LEP course assessment is an LEP requirement, this section asks how the student learning outcomes (SLOs) associated with this category will be assessed in the course. A full response to each question will include a detailed description of what students will do to demonstrate their learning of the SLOs. These descriptions are intended to explain the graded course components (or portions of them) that will be used for the LEP category’s course assessment report faculty complete as part of the campus’s LEP assessment practices. Please provide details that will allow the committee to understand why the measures are a good fit for the category’s SLOs. For example, you might want to give an example of a potential exam question or essay prompt, etc. If the same graded component is used to assess multiple SLOs, please be sure to identify the portion of the graded component or the evaluation tool (e.g., rubric or rating scale) used for each SLO in your description. *Note: For new courses, faculty are encouraged to include the Liberal Education category SLOs as course learning outcomes on the course proposal.*  |
| SLO 1: Describe a graded course component(s) or portion(s) thereof that could be used for the LEP course assessment report completed for SLO 1: Students will identify concepts and principles that comprise the foundational knowledge of the discipline. [response required] |
| SLO 2: Describe a graded course component(s) or portion(s) thereof that could be used for the LEP course assessment report completed for SLO 2: Students will explain how scientific inquiry is used to address questions about natural phenomena. [response required for course with lab; optional for lecture-only course] |
| SLO 3: Describe a graded course component(s) or portion(s) thereof that could be used for the LEP course assessment report completed for SLO 3: Students will apply the scientific method to address questions about natural phenomena. [response required for course with lab; optional for lecture-only course] |