

Indiana University Bloomington
General Education Curriculum
Natural & Mathematical Sciences Course Proposal

Instructions

For each proposed course, please fill out this form, append a course syllabus, save the file, and send to the appropriate school academic officer (i.e., school/college official) by email as a PDF. The proposal file must be named according to the following convention:

Subject code <hyphen> letter prefix and course number <hyphen> GenEd category abbreviation.pdf

For example: GEOL-G103-NM.pdf

Please be sure to complete **all five (5) pages** of the course proposal form.

The method for appending a file to a PDF varies depending your version of Adobe Acrobat or Adobe Reader. Please consult the instructions or help menu for your software. Do not attempt to use non-Adobe software to fill out this proposal form.

Note: Course proposals may not be submitted directly to the GenEd Committee by individuals or departments. All course proposals must be approved by the appropriate school, who will then forward the proposals to the GenEd Committee.

PART I: Course Information

Subject area (e.g., GEOL-G): _____ **Catalog number (e.g., 103):** _____ **Credit hours:** _____

Course title: _____

Generic/variable-title course: Yes No (If proposing a single topic of a generic course, please include topic title below.)

Topic title: _____

Bulletin description:

Proposal submitted by

Department or Program: _____

School / College: _____ **Date:** _____

PART II: GenEd Learning Outcomes

Natural and Mathematical Sciences

Courses in Natural and Mathematical Sciences will expose students to the nature and methods of scientific inquiry, emphasizing quantitative approaches to the testing of falsifiable hypotheses. These courses will begin to provide students with the tools and skills required not only to understand physical and biological phenomena but also to discover them through theoretically based inquiry, rigorous analytical thinking, and/or the collection and interpretation of empirical data, broadly interpreted. Development of these skills is essential for preparing students to be informed and active participants in modern society.

Student Learning Outcomes

Students who complete the Natural and Mathematical Sciences requirement will demonstrate

1. an understanding of scientific inquiry and the bases for technology;
2. the ability to model and understand the physical and natural world;
3. the ability to collect and interpret data, think critically, and conduct theoretically based inquiry;
4. the ability to solve problems;
5. analytical and/or quantitative skills.

PART III: Learning Outcomes for the Proposed Course

Please list below the student learning outcomes for the proposed course as they appear in the course syllabus. Alignment with GenEd N&M learning outcomes should be evident. (NB. Syllabi for GenEd-approved courses must include a clear statement of the learning outcomes for the course.)

PART IV: Alignment of Course Learning Outcomes with GenEd Learning Outcomes

IU Bloomington GenEd Student Learning Outcomes for This Course

Below, please explain how the GenEd N&M learning outcomes are addressed in the proposed course (e.g., readings, assignments, etc.). Please note that a GenEd course need not address all of the GenEd N&M learning outcomes, but a course that does not address most of the N&M learning outcomes is not likely to be approved for GenEd N&M credit. Please leave blank any box (or boxes) that do not pertain to this course.

1. Students who complete the Natural and Mathematical Sciences requirement will demonstrate an understanding of scientific inquiry and the bases for technology.

2. Students who complete the Natural and Mathematical Sciences requirement will demonstrate the ability to model and understand the physical and natural world.

3. Students who complete the Natural and Mathematical Sciences requirement will demonstrate the ability to collect and interpret data, think critically, and conduct theoretically based inquiry.

4. Students who complete the Natural and Mathematical Sciences requirement will demonstrate the ability to solve problems.

5. Students who complete the Natural and Mathematical Sciences requirement will demonstrate analytical and/or quantitative skills.

PART V: Course Characteristics

N&M Course Characteristics

Courses in this area will expose students to the nature and methods of scientific inquiry, emphasizing quantitative approaches to the testing of falsifiable hypotheses. These courses will begin to provide students with the tools and skills required not only to understand physical and biological phenomena but also to discover them through theoretically based inquiry, rigorous analytical thinking, and/or the collection and interpretation of empirical data, broadly interpreted. Development of these skills is an essential component for enabling the discerning of fact from myth and superstition; evaluating methodology, evidence, and opinion; problem-solving; and generally preparing students to be informed and active participants in modern society.

Please explain how the proposed course exhibits the N&M course characteristics. If proposing a generic (i.e., variable title) course for blanket approval, please explain how all topics/variable titles of this course exhibit N&M course characteristics.

PART VI: Course Syllabus

A course syllabus must be appended to this proposal. The syllabus should indicate a clear and consistent connection between the elements of the course—i.e., course description, learning objectives, course readings, assignments, and assessments—and the GenEd N&M learning outcomes and course characteristics.

You may also provide annotations, sample assignments, or additional explanation further highlighting the alignment of the course with the GenEd learning outcomes and course characteristics.

If proposing a variable title course for blanket approval, please append syllabi for at least three topics.