

Application for Approval as University Studies Explorations Course

Strand G – Sciences: Biological, Physical, Computer

Course Number _____ Course Title _____

Name(s) of Proposer(s) _____

In what term/year will this course first be offered? _____

Instructional Delivery Method (check one): Classroom Hybrid Online All

The purpose of this application form is to allow the University Studies Committee to determine whether the proposed course meets the criteria for an Explorations course appropriate to this University Studies strand, and to understand how the course will align with TracDat levels of instruction (Introduce, Teach and Assess, Refine and Apply – see hints embedded with checkboxes below).

Strand Description: G – Sciences

Understand the fundamental concepts, methods, and applications of the sciences and their impacts on human experience. SOU defines the sciences as those disciplines that focus on a systematized body of knowledge derived through methodologies involving repeatable experimentation, observation, verification, and study.

Course Requirements

At least one goal must be a primary focus of the class, with all proficiencies clearly present in the assignments and design of the course. Addressed goals introduce students to proficiencies but receive less emphasis.

Please indicate which goals and proficiencies are primary and which are addressed. For each goal or proficiency, briefly explain what students will do to demonstrate understanding or mastery. Proficiencies should be developed through course assignments to optimize students' appreciation for the sciences and their role in human experience.

Please also indicate the TracDat level of instruction for each goal.

Strand Goals and Proficiencies

Goal 1. Understand the scientific method and major concepts, principles, and theories of the sciences. Proficiencies - Students will be able to:

- Distinguish among scientific data, ideas, hypotheses, and theories.
- Apply critical thinking, quantitative reasoning, and problem-solving skills to interpret scientific evidence and to evaluate hypotheses and theories.
- Explain the broad historical development of the scientific worldview and important theories.

Emphasis on Goal 1 (check one): Primary Addressed

Level of Instruction for Goal 1 (check one): Introduce Teach & Assess Refine & Apply

List and briefly describe or explain the assignments that will be used to assess students' proficiency for each part of the goal. Please include one example assignment in full, either by pasting it into the text box below or by attaching hard copy. If appropriate, the same example assignment may be used for more than one goal.

Application for Approval as University Studies Explorations Course

Goal 2. Understand science as a means of learning about and understanding the natural world. Proficiencies - Students will be able to generate and test scientific hypotheses by:

- Designing and carrying out experiments and systematic observational studies. In some cases this may include a laboratory or field setting.
- Using appropriate tools to analyze results.
- Communicating results orally and in writing in accordance with established standards of scientific communication, including appropriate use of tables, figures, and graphs.

Emphasis on Goal 2 (check one): Primary Addressed

Level of Instruction for Goal 2 (check one): Introduce Teach & Assess Refine & Apply

List and briefly describe or explain the assignments that the instructor will use to assess students' proficiency for each part of the goal. Please include one example assignment in full, either by pasting it into the text box below or by attaching hard copy. If appropriate, the same example assignment may be used for more than one goal.

Application for Approval as University Studies Explorations Course

Goal 3. Apply scientific knowledge and methods to societal issues. Proficiencies - Students will be able to apply scientific data to:

- Inform decision-making on social, political, and economic issues.
- Explain interrelationships between society and the sciences.
- Investigate impacts of technologies on segments of society and investigate plausible solutions to adverse impacts.

Emphasis on Goal 3 (check one): Primary Addressed

Level of Instruction for Goal 3 (check one): Introduce Teach & Assess Refine & Apply

List and briefly describe or explain the assignments that the instructor will use to assess students' proficiency for each part of the goal. Please include one example assignment in full, either by pasting it into the text box below or by attaching hard copy. If appropriate, the same example assignment may be used for more than one goal.

Building on Foundational Strands

Because Explorations Strands build on the skills and knowledge developed in the Foundational Strands, it is important that students continue to have opportunities to develop these areas. Briefly describe specific assignments or classroom activities that will allow students to hone their skills in each Foundational Strand.

Foundational Strand A - Communication. Students will be able to communicate effectively in various ways: written, oral, and visual.

Application for Approval as University Studies Explorations Course

Foundational Strand B - Critical Thinking. Students will be able to use appropriate modes of inquiry, including identifying and framing problems, investigating and supplying evidence, and conceptualizing.

Foundational Strand C - Information Literacy. Students will be able to access and use information resources effectively and ethically.

Foundational Strand D - Quantitative Reasoning. Students will be able to effectively formulate and use mathematical models and procedures to address abstract and applied problems.

Condensed Syllabus

A condensed version of the syllabus should contain the following elements. Specific class schedule and similar details are not required, but may be included if you wish.

- Course description (same as catalog copy or longer, as needed)
- Learning objectives of the course
- Required texts or other media
- Other – please add any other relevant materials needed to explain the goals and teaching methods of this course to the University Studies Committee.

Please attach a condensed syllabus.

Application for Approval as University Studies Explorations Course

Complete Syllabus

Please attach a complete course syllabus, as it will be provided to the students.

Signatures

Instructor

Date

Reviewed and approval signatures

Chair/Program Director

Date

University Studies Director

Date