.Fall 2024 Gen Ed: Solutions Through Science (Current SU Course)

Course with Import Required

# General Catalog Information

NOTE: Use this proposal to make a change to an existing course's General Education designation. *Non-substantive* changes to the course title, description, or

course content can also be made if necessary.

If it is found at any point during the approval process that substantive changes are being made to the course, the proposal will be routed to the Undergraduate Curriculum Committee after the Dean's approval before it can be considered for General Education.

\*\* Read before you begin \*\*

In order to meet the standard for SU’s Solutions Through Science general education requirement, the course must meet the Code of Maryland Regulations (COMAR) standard of “One science course.”

1. **FILL IN** all required fields marked with an \*. You will not be able to launch the proposal without completing required fields. For all other fields, fill in only those for which a c hang e is being requested. Writing in N/A is not necessary.
2. **LAUNCH** proposal by clicking "Validate and Launch Approval Process" in the top left corner. Once you have launched this proposal, you will have a chance to edit the proposal before APPROVING it and sending it along in the approval process.
3. **APPROVE** proposal. Once you have made final edits after launching, you must approve the proposal to send it along to the next person in the approval process. The proposal will appear in your task list under the "My Proposals" tab, and you may easily view its progress at any time.

CURRICULUM DEADLINES

**March 1, 2023** - Submission Deadline for Fall 2024 Solutions Through Science Courses

**Mid-December, 2023** - Proposal must be approved by the final committee in the workflow – the General Education Oversight Committee (GEOC) – by their last meeting in December 2023 to be implemented by fall 2024.

**First Date of Offering:** General Education designation changes will go into effect for the fall 2024 term.

Requesting Department

*IDIS and PACE courses should show Fulton School, and HONR courses should show Honors College. \*If the appropriate Requesting Department doesn't appear, please contact Melissa Boog or Jennifer Ellis in the Office of Academic Affairs before moving forward.*

Course Type\*

Course Prefix Course Number

Course Title

Course Title for GullNet (Limited to 30 Characters)

*Required if part of the Course Change is changing the original title.*

Course Description\*

Will this impact a teacher education course / program? Will this impact a secondary education or P12 course / program?

Yes No

Yes No

# of Credits

Hours Per Week\*

If # of credit exceeds hours per week, the [Course Credit Rationale](https://www.salisbury.edu/administration/academic-affairs/ugrad-curriculum-committee/curriculum.aspx) form must be included.

Staffing and Cost Implications

*Discuss Staffing Implications and Additional Costs*

Prerequisites

Corequisites

Major Prerequisites

Non-Major Prerequisites

Pre or Corequisites

Major Pre or Corequisites

Non-Major Pre or Corequisites

Recommended Prerequisites

Recommended Pre or Corequisites

May Not Receive Credit

*Courses for which students who take this course cannot earn credit. (Ex. If a course is renumbered, students may not earn credit for the prior numbered course and the new numbered course. OR If another course is so similar to this, students may not earn credit for both.)*

Cross-Listed

Graduate Swing Equivalent

Activity Code

*Please choose the activity code that best fits your course. Note: If the activity code is not being impacted by this change please use the previous designated activity code.*

Met General Education Prior to Fall 2024

The rubric that will be used to evaluate this proposal can be found in MyClasses in the *General Education Revision: Ongoing Work* course under GEOC Standing Rules Faculty Senate Approval Spring 2022 and Fall 2022.

Rationale - Rationale must include sound justification as to why this course meets the requirements for the Solutions Through Science requirement.

STUDENT LEARNING OUTCOMES

Each Student Learning Outcome (SLO) assigned to the Solutions Through Science requirement is listed below. For each, speak to how you will teach to and assess the individual SLO, referencing any attached materials (syllabi, assignment prompts, example activity directions, etc.). **There is a 150 word limit for each response.** If more information regarding the SLO is needed, details can be found in Appendix C of the online catalog.

Note that responses to some are required and others are optional.

#1 QUANTITATIVE REASONING

How will students demonstrate that they have achieved the QUANTITATIVE REASONING Student Learning Outcome (Check all that apply.):

Homework Quiz/Exam

Lab Report/Essay

Research Paper/Project/Portfolio Case Study

Oral Presentation/Performance

Other (Included in the description below)

**Required - Students will be able to interpret models and/or solve quantitative problems from different contexts with real world relevance.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Required - Students will be able to create reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Required - Students will be able to communicate reasonable arguments supported by quantitative evidence (e.g., using words, tables, graphs, and/or mathematical equations).** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement\* Assessment Types\*

Description

**Optional - Students will be able to demonstrate a variety of mathematical principles and the methods of data analysis.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to students will apply or demonstrate the use of quantitative analyses in a variety of different contexts to construct explanations and/or solve problems.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

#2 SCIENTIFIC REASONING

How will students demonstrate that they have achieved the SCIENTIFIC REASONING Student Learning Outcome (Check all that apply.):

Homework Quiz/Exam

Lab Report/Essay

Research Paper/Project/Portfolio Case Study

Oral Presentation/Performance

Other (Included in the description below)

**Required - Students will be able to identify and use empirical evidence to describe/explain natural phenomena through application of a scientific method.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Required - Students will be able to identify and use empirical evidence to p redict natural phenomena through application of a scientific method**. Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Required - Students will be able to use scientific principles to desig n strategies to answer open-ended questions.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Required - Students will be able to use scientific principles to evaluate strategies to answer open-ended questions.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

**Required - Students will be able to use scientific principles to implement strategies to answer open-ended questions**. Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to critically evaluate scientific arguments and identify the limits of scientific knowledge.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to explore complex questions and identify how they impact or are impacted by external issues (political, economic, or ethical).** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to solve or demonstrate resolutions to complex questions or problems requiring the application of scientific concepts**. Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to communicate scientific ideas effectively**. Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

#3 CRITICAL THINKING AND REASONING

How will students demonstrate that they have achieved the CRITICAL THINKING AND REASONING Student Learning Outcome (Check all that apply.): \*

Homework Quiz/Exam

Lab Report/Essay

Research Paper/Project/Portfolio Case Study

Oral Presentation/Performance

Other (Included in the description below)

**Required - Students will be able to analyze evidence to support or create interpretations, arguments, or claims.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement\* Assessment Types\*

Description

**Required - Students will be able to identify and analyze the connection between evidence and claims.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement\* Assessment Types\*

Description

**Required - Students will be able to evaluate the strength and weaknesses of conclusions and opinions** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement\* Assessment Types\*

Description\*

**Required - Students will be able to determine the scope of evidence needed for original arguments.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement\* Assessment Types\*

Description\*

**Optional - Students will be able to demonstrate a variety of scientific principles empirically and the ways scientists from a particular discipline conduct research.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to analyze the effective use of a scientific method through exploration of a given subject or topic**. Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to explore alternative solutions to complex questions through critical evaluation of an investigation**. Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to critically evaluate quantitative or qualitative products (tables, graphs, mathematical equations) and identifies/acknowledges the limitations and capabilities of knowledge.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to comprehensively analyze evidence before they create, critique, or accept an opinion, conclusion, or determine a need for further investigation.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

#4 KNOWLEDGE OF THE PHYSICAL WORLD

How will students demonstrate that they have achieved the KNOWLEDGE OF THE PHYSICAL WORLD Student Learning Outcome (Check all that apply.):

Homework Quiz/Exam

Lab Report/Essay

Research Paper/Project/Portfolio Case Study

Oral Presentation/Performance

Other (included in the description below)

**Requird - Students will be ale to describe some of the major concepts in science to explain natural phenomena.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Required - Students will be able to evaluate the quality of scientific information on the basis of methods used to generate it.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Required - Students will be able to use qualitative and/or quantitative analyses to draw inferences or conclusions from data.** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

Description

**Optional - Students will be able to explore complex questions and identify how they impact or are impacted by external issues (political, economic, or ethical).** Track the activities and assessments related to this specific component of the SLO, referencing any attached materials.

Evidence of Student Engagement Assessment Types

## IMPACT REPORT

**Impacted Curriculum:** Indicate all current majors, programs, tracks, minors and/or courses for which this course change impacts the curriculum.

Run an Impact Report: Click the ‘run impact report’ icon in the top left corner, choose the 2023-2024 Undergraduate & Graduate Catalog, click generate report, and paste the results in the field below.

If the report pulls no results, place 'N/A' in the field below.

Changes to prefix, number and/or title will occur throughout the catalog/curriculum without further approval processes.

**Note**: Changes beyond course prefix, number and/or title require Change to Minor Proposals and/or Change to Major, Program or Track Proposals if the course is a

r equirement. Those proposals should be initiated by the department that houses the major or minor. Please communicate with the Department Chair of the need for additional proposals.

## Attachments and Acknowledgments

Attached

A detailed course syllabus that includes the Course SLOs, the General Education Designation, the General Education SLOs. At least two example assignments.

If applicable, detailed assessment tools, materials, and/or reports related to the Solutions Through Science requirement. If updates to this course will have an impact on another department, attach your communication with the department chair.

Acknowledge

I understand that this course is subject to institution-wide general education assessment.