GSC - 205 - Applied General Science Capstone

2025-2026 Course Proposal Form

Course Information

Please select which best fits this course proposal:*
- [x] Course New/Reactivation Proposal
- [ ] Course Revision Proposal
- [ ] Course Retirement Proposal
- [ ] Course Outcomes Revision Proposal

Department* Science

IF proposing a new course type or prefix, please select "NEW Course Type or NEW Prefix" from the dropdown and input the requested data in the new text field that follows.

Course Type:* General Science

NEW Course Type:

NEW Prefix:

Prefix:* GSC

Course Number:* 205

Course Title:* Applied General Science Capstone

Credit(s):* 3

Course Description:*

This capstone course is designed to equip students with the skills to apply general science knowledge to identify key challenges, critically evaluate existing solutions, and identify or develop innovative strategies, with a strong focus on regional issues. Students will gain proficiency in effectively communicating their ideas through formal channels, including mastering research databases, navigating complex publication processes, and crafting compelling proposals. They will also explore funding and entrepreneurship opportunities to support their projects. To ensure a well-rounded skill set, the course will cover strategies for presenting research findings to diverse audiences and leveraging professional networks for collaboration and dissemination. The course culminates in a professional presentation of the projects.

Modality*	Traditional, ONLA, ONLS, HYBR, HYFLEX
Lecture Hours:*	3
Laboratory Hours:*	0
Clinical Hours:*	0
Internship Hours:*	0
Prerequisite(s):	MATH 210
Corequisite(s):	None
Pre / Corequisite(s):	None
Required Materials*	Check with the College Bookstore for required materials.
Program Learning Outcomes:*	TBD
Course Learning Outcomes:*	□ CO1: Identify and analyze key global or regional challenges that can be addressed through general science approaches, with a particular focus on regional issues. □ CO2: Critically evaluate existing solutions to selected global or regional issues using general science methodologies. □ CO3: Describe actionable strategies for implementing innovative scientific solutions. □ CO4: Deliver clear and compelling presentation of the general science project.

Student Learning Outcomes:*

SLO1: Identify key challenges specific to regional or global issues that can be addressed using methods of general science (CLO1)

SLO2: Analyze the root causes and impacts of selected regional or global challenges using general science principles (CLO1)

SLO3: Evaluate current scientific approaches and methodologies applied to address regional or global challenges (CLO2)

SLO4: Conduct thorough literature reviews and use research databases effectively to support the development of scientific solutions (CLO2)

SLO5: Demonstrate awareness of the depth and breadth of the student's field of focus (CLO3)

SLO6: Explore and evaluate funding opportunities, professional networking, professional societies and memberships, or entrepreneurial avenues to support scientific projects (CLO3)

SLO7: Organize a presentation of scientific research, including effective use of visual aids (CLO4)

SLO8: Critique a presentation of scientific research (CLO4)

SLO9: Describe the focus and typical activities of Bachelor, Master, and Doctorate level courses at various schools (CLO3)

SLO10: Describe research topics in various areas of the student's field of focus (CLO3)

SLO11: Deliver a presentation of scientific research (CLO4)

General Education Outcomes:

Please select up to 2 from the list of the general education outcomes taught in this course.

Select up to 2 of the following:*

- [x] Communicate effectively in oral and written formats
- [ ] Employ or utilize information access and literacy skills
- [ ] Demonstrate problem-solving and critical thinking skills
- [ ] Employ mathematical and science literacy skills
- [ ] Acquire a cultural, artistic and global perspective
- [x] Demonstrate professional and human relations skills

Types of Formative Assessment:

Please select at least 3 formative assessment tools that are most appropriate to the course description and outcomes, regardless of modality. Formative assessment tools are learning activities or assessments that monitor and provide ongoing feedback on student learning. Formative assessments allow students to identify their strengths and weaknesses and for instructors to address student questions and misunderstandings

Select at least 3 of the following:*

- [x] Practice Quizzes
- [x] Paper Drafts
- [x] Class Discussions/Q&A
- [ ] Low-stakes Group Work
- [ ] Homework Assignment
- [ ] Surveys/Polls
- [ ] Laboratory/Instrument Practice
- [ ] Written Reflections
- [ ] Self-appraisal using study guides, quiz software, interactive textbook
- [ ] Other

Types of Summative Assessment:

Please select at least 2 summative assessment tools that are most appropriate to the course description and outcomes, regardless of modality. Summative assessment tools are learning activities or assessments that evaluate student learning at the end of an instructional period, like a module, unit, or course. Summative assessments are formally graded and allow instructors to determine whether and to what extent students have met the course learning outcomes.

Select at least 2 of the following:*

- [ ] Instructor-Created Exams/High-Stakes Quizzes
- [ ] Standardized Tests
- [ ] Laboratory Reports
- [x] Final Projects
- [ ] Final Essays/Research Papers
- [x] Final Presentations
- [ ] Final Reports
- [ ] Internships/ Clinical Site Evaluations
- [ ] Other

Minimum Acceptable Standards*

For quizzes, homework, and assessment activities listed, the instructor's analysis of satisfactory demonstration of knowledge will be used: on summative methods such as exams, papers, or projects, achieving a letter grade of "C", or 70% or above will demonstrate satisfactory understanding and basic mastery of outcomes.

Please answer the following questions related to your curriculum proposal:

Why are you recommending these changes? (courses outdated, recommendation of advisory committee, results of assessment activities and data, better attainment of program/course outcomes)

Justification:*

The course is proposed as a part of the AS general science concentration development.

Last Semester Needed:

Impact Report Statement

List all program(s) or course(s) affected by these changes. If no program(s) or course(s) are affected, please state "NA" below. Run an Impact Report by clicking in the top left corner and answer below according to the results.

Impact Report: None

What impact will these changes have on other courses or programs? (List impacted programs and comments or input you have gathered from other faculty, program directors, or Division Chairs)

Other Courses or Programs: None

What impact will these changes have on institutional resources? (Budget, faculty, equipment, labs, instructional design, etc.) Have you already discussed this impact with appropriate personnel (financial aid, administration, division chair, other faculty)?

Institutional Resources: (Budget,faculty, equipment, labs, instructional design, etc.) Have you already discussedthis impact with appropriate personnel (financial aid, administration, divisionchair, other faculty)?

What impact will these changes have on current students? How will you ensure that current students are not penalized by these changes?

Current Students: None

What impact will these changes have on transferability, national/regional association standards, etc.?

Transferability, National / Regional Association Standards, Etc.: NA

What impact will these changes have on the institution's mission and student's achievement of general education outcomes/requirements?

Mission; General Education Outcomes / Requirements: The introduction of this course allows for a better alignment of the program with the institution's mission.

Administrative Use Only

Please do <u>not</u> alter the information within this section.

Course OID:

Information or Voting Item: ☐ Information Item (If the proposal does not impact other courses, select this option)

☑ Voting Item

Implementation Semester and Year* Fall 2025