Course Change Request

A deleted record may not be edited and the course number may not be re-used until 5 years have passed since the course's inactivation.

Course Deactivation Proposal

Date Submitted: 09/05/25 10:04 am

Viewing: COS 310 : Introduction to Science Policy

Last approved: 10/25/23 6:04 am

Last edit: 09/05/25 10:05 am

Changes proposed by: jbazaz

Catalog Pages referencing this course	College of Science College of Science (COS) Science and Technology Policy Minor
Programs referencing this	SCTP: Science and Technology Policy Minor

Justification for deactivation	What: Inactivating the course number. Why: This course is being replaced with COS 411.

Are you completing this form on someone else's behalf?

~~No~~

Effective Term: Fall 2026

Subject Code: COS - College of Science **Course Number:** 310

Bundled Courses:

Is this course replacing another course? No

In Workflow

1. **SC Curriculum Committee**
2. SC Assistant Dean
3. Assoc Provost-Undergraduate
4. Registrar-Courses
5. Banner

History

1. Jan 26, 2021 by Jessica Rosenberg (jrosenb4)
2. Feb 16, 2021 by Gregory Craft (gcraft)
3. Oct 25, 2023 by Deborah Mcgarrah (dmcgarra)

Equivalent Courses:

Catalog Title: Introduction to Science Policy

Banner Title: Introduction to Science Policy

Will section titles vary by semester? No

Credits: 3

Schedule Type: Lecture

Hours of Lecture or Seminar per week: 3

Repeatable: May be only taken once for credit, limited to 3 attempts (N3)

Max Allowable Credits: 9

Default Grade Mode: Undergraduate Regular

Recommended Prerequisite(s):

Recommended Corequisite(s):

Required Prerequisite(s) / Corequisite(s) (Updates only):

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:

This course is an introduction to how science is used to inform governmental policy decisions and how policy impacts U.S. science. The course is intended for any STEM student with an interest in understanding or contributing to decision making at the federal and state level or joining the government to draft policies and legislation directly. Government policies affect all parts of society, including the scientific research enterprise. Reciprocally, science can be used to inform policy in myriad ways at different levels of government. Scientists' lack of familiarity with policy, and policymakers' lack of familiarity with science contributes to the longstanding gap between the production of scientific research and its perceived utility by decision-makers. This course will bridge this gap and provide new skills for scientists to contribute to this new field.

Justification:

Does this course cover material which crosses into another department? Yes

Impacted Departments:

Department
PP

Learning Outcomes:

- Understand the theoretical framework of science-policy
- Compare and contrast the roles of the branches of government in science
- Explain how evidence-based policy is generated and compare different approaches
- Apply STEM knowledge and skills to policy
- Recognize and contrast competing societal values on decision-making
- Understand and identify ways that science can be used to address societally impactful questions and develop methods to implement these approaches
- Synthesize disparate information to produce a technically accurate, but concise and understandable briefing document for non-scientist audiences

Will this course be scheduled as a cross-level cross listed section?

Attach Syllabus Science Policy Undergraduate Draft Syllabus_rev.pdf

Additional Attachments
Science Policy Undergraduate MC Syllabus.pdf
Synthesis_Course_Justification.pdf
Interagency projects - Disposal of Nuclear Waste.pdf
20191118 - AAAS Leadership Seminar Exercise.pdf
Core_Synthesis_rubric.pdf
SciPoli Workshop 3 Congressional Hearing Questions.pdf

Specialized Course Categories: Mason Core

Select the Mason Core Requirement the course is proposing to fulfill:

Foundation Courses:

Exploration Courses:

Integration Courses: Mason Apex
Retired Category (Registrar's Office Use Only): Synthesis

Mason Apex

Learning Objectives:

Upon completing a Mason Apex course, students will be able to:

1. Integrate skills, abilities, theories, or methodologies gained across a Mason student's undergraduate education to explore complex issues in original ways.
2. Communicate effectively the results of the student's work with awareness of audience, purpose, and context using an appropriate modality (for example: written, oral, visual, material, embodied, multimodal).

Describe the overall rationale for designating this course as Global Understanding Mason Core.

For each learning outcome, what assignments or activities will you give that allow students to demonstrate their competence on each outcome? Please confirm these are reflected in the attached syllabus or uploaded as additional documents as needed.

Synthesis

Course must meet learning outcomes 1 and 2:

1. Communicate effectively in both oral and written forms, applying appropriate rhetorical standards (e.g., audience adaptation, language, argument, organization, evidence, etc.)

2. Using perspectives from two or more disciplines, connect issues in a given field to wider intellectual, community or societal concerns

Course must meet one additional learning outcome:

3a) Apply critical thinking skills to evaluate the quality, credibility and limitations of an argument or a solution using appropriate evidence or resources OR

I affirm that I have attached the following using the syllabus and attachment buttons provided above: (see "?" for help with submission)

Syllabus

Completed proposal worksheet

Assignments (if needed)

4

Describe the overall rationale for designating this course as Synthesis Mason Core.

Rationale for Introduction to Science Policy being a synthesis course:

Learning Outcomes:

The purpose of the synthesis course is to provide students with the opportunity to synthesize the knowledge, skills and values gained from the Mason Core curriculum. Synthesis courses strive to expand students' ability to master new content, think critically, and develop life-long learning skills across the disciplines. While it is not feasible to design courses that cover "all" areas of general education, synthesis courses should function as a careful alignment of disciplinary goals with a range of Mason Core learning outcomes.

Introduction to Science Policy is an ideal venue for a synthesis course as it takes science and engineering students and introduces them to the world of policy. The goal is for students to combine their knowledge and understanding of science and engineering with an understanding of policy that they will gain as part of this course. They will combine these two disciplines and consider questions regarding how they would work with policy makers to have an impact on a science-related policy issues. The learning outcomes for the course (from the syllabus) are:

- Understand the theoretical framework of science-policy
- Compare and contrast the roles of the branches of government in science
- Explain how evidence-based policy is generated and compare different approaches
- Apply STEM knowledge and skills to policy
- Recognize and contrast competing societal values on decision-making
- Understand and identify ways that science can be used to address societally impactful questions and develop methods to implement these approaches
- Synthesize disparate information to produce a technically accurate, but concise and understandable briefing document for non-scientist audiences

A Mason Core synthesis course must address outcomes 1 and 2, and at least one outcome under 3. Upon completing a synthesis course, students will be able to:

1. Communicate effectively in both oral and written forms, applying appropriate rhetorical standards (e.g., audience adaptation, language, argument, organization, evidence, etc.)

As part of this course students will communicate in oral and written about science policy issues in a way that is accessible to the public or policymakers rather than scientists and engineers. A central part of this course is preparing a science policy document for policymakers and then

presenting it to the student s congressional representative (or staff member). Discussion will be central to this course and students will explore how to explain these issues at the juncture of science and policy to a broad audience.

2. Using perspectives from two or more disciplines, connect issues in a given field to wider intellectual, community or societal concerns

The point of this course is for students to connect their field of science or engineering with the field of policy as a way of thinking about how they might use their background to have an influence on society more broadly. Disciplines from which the ideas in this course draw: government, economics, politics and policy, sociology, science and engineering.

3. Apply critical thinking skills to: Evaluate the quality, credibility and limitations of an argument or a solution using appropriate evidence or resources

In this course students will be asked to evaluate the limits of science and scientific results in political decision making. They will have to analyze both the scientific and political factors that go into making policy decisions and how these are weighed and applied to the decision-making process.

For each learning outcome, what assignments or activities will you give that allow students to demonstrate their competence on each outcome? Please confirm these are reflected in the attached syllabus or uploaded as additional documents as needed.

The purpose of the synthesis course is to provide students with the opportunity to synthesize the knowledge, skills and values gained from the Mason Core curriculum. Synthesis courses strive to expand students' ability to master new content, think critically, and develop life-long learning skills across the disciplines. While it is not feasible to design courses that cover "all" areas of general education, synthesis courses should function as a careful alignment of disciplinary goals with a range of Mason Core learning outcomes.

Introduction to Science Policy is an ideal venue for a synthesis course as it takes science and engineering students and introduces them to the world of policy. The goal is for students to combine their knowledge and understanding of science and engineering with an understanding of policy that they will gain as part of this course. They will combine these two disciplines and consider questions regarding how they would work with policy makers to have an impact on a science-related policy issues. The learning outcomes for the course (from the syllabus) are:

- Understand the theoretical framework of science-policy
- Compare and contrast the roles of the branches of government in science
- Explain how evidence-based policy is generated and compare different approaches
- Apply STEM knowledge and skills to policy
- Recognize and contrast competing societal values on decision-making
- Understand and identify ways that science can be used to address societally impactful questions and develop methods to implement these approaches
- Synthesize disparate information to produce a technically accurate, but concise and understandable briefing document for non-scientist audiences

A Mason Core synthesis course must address outcomes 1 and 2, and at least one outcome under 3. Upon completing a synthesis course, students will be able to:

1. Communicate effectively in both oral and written forms, applying appropriate rhetorical standards (e.g., audience adaptation, language, argument, organization, evidence, etc.)

As part of this course students will communicate in oral and written about science policy issues in a way that is accessible to the public or policymakers rather than scientists and engineers. A central part of this course is preparing a science policy document for policymakers and then presenting it to the student's congressional representative (or staff member). Discussion will be central to this course and students will explore how to explain these issues at the juncture of

central to this course and students will explore how to explain these issues at the juncture of science and policy to a broad audience.

2. Using perspectives from two or more disciplines, connect issues in a given field to wider intellectual, community or societal concerns

The point of this course is for students to connect their field of science or engineering with the field of policy as a way of thinking about how they might use their background to have an influence on society more broadly. Disciplines from which the ideas in this course draw: government, economics, politics and policy, sociology, science and engineering.

3. Apply critical thinking skills to: Evaluate the quality, credibility and limitations of an argument or a solution using appropriate evidence or resources

In this course students will be asked to evaluate the limits of science and scientific results in political decision making. They will have to analyze both the scientific and political factors that go into making policy decisions and how these are weighed and applied to the decision-making process.

Writing Intensive:

Have you reached out to the Libraries to determine whether there are adequate resources to support your course? If not, please email Meg Meiman, Associate University Librarian for Learning, Research, and Engagement at mmeiman2@gmu.edu.

Additional Comments: ~~Converting all Capstone/Synthesis courses to Mason Apex for the 2024-2025 catalog year Mason Core updates.~~

Reviewer Comments

Key: 16861