



Trevor L. Brown
Dean and Professor

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April 1, 2020

Vice Provost W. Randy Smith
Council on Academic Affairs
Office of Academic Affairs

Dear Dr. Randy Smith:

Please find enclosed a proposal to revise and rename the undergraduate Science, Engineering and Public Policy minor offered by the John Glenn College of Public Affairs. The proposed new name of the minor is "Science and Engineering in the Public Interest," which we feel more accurately reflects its content. We also believe that the proposed curricular modifications will better enhance students' knowledge and skills related to STEM policy topics. Finally, we are proposing some changes aimed at increasing accessibility of the minor and removing barriers to completion.

This minor provides students across campus with an opportunity to take focused coursework in the area of science and engineering policy; and the proposed changes will allow them to delve into areas such as space policy, data privacy, energy policy, biomedical policy, national security and cybersecurity. The proposed changes have been developed in collaboration with other departments on campus, and we expect that the minor will continue to complement existing majors at Ohio State. With these changes, we expect enrollment numbers to increase steadily.

The Science and Engineering in the Public Interest minor will equip science and engineering majors with the context needed in order to understand how change in policy occurs, the importance of communicating technology to the public, and how to gain governmental funding for research. The Battelle Center for Science, Engineering, and Public Policy in the John Glenn College of Public Affairs will support in student recruitment and enhancing student interest by using the co-curricular programming around these topics that are already in place.

In closing, we thank the committee for their investment of time to review this request and welcome any feedback.

Sincerely,

Trevor L. Brown, Dean

**Proposal to Rename and Restructure
the John Glenn College Minor “Science, Engineering, and Public Policy [SEPP]”
to the Minor “Science and Engineering in the Public Interest”**

I. Rationale for the change

Based on an analysis of the current SEPP minor, we determined that there are structural barriers-to-entry that inhibit student participation. We propose renaming the minor in order to clarify the credential’s purpose and relevance to STEM majors. We further propose to restructure the course offerings so that there are ‘on-ramps’ to the subject matter earlier in an undergraduate’s career. Because many STEM majors have rigid schedules, we have chosen courses that do not have formidable pre-requisites and that offer the flexibility to be accomplished over four years, instead of tackled only in the junior or senior years. Finally, we focus the thematic offerings on those where Glenn College has resident strengths and strong, active collaborations with other colleges’ departments.

The restructured *Science and Engineering in the Public Interest* minor will consist of a minimum of 12 semester credit hours that provide students with (1) a broad awareness of this interdisciplinary landscape; (2) foundational public affairs knowledge; (3) and detailed understanding of a specific policy domain.

II. Present curriculum and proposed curriculum

	CURRENT Minor	PROPOSED Minor	CHANGE RATIONALE
Title	Science, Engineering, and Public Policy Minor	Science and Engineering in the Public Interest Minor	Title clarifies the minor’s desired outcome: fostering a future workforce that understands the complex interplay of factors that impact public interest.
Survey Course: Choose 1.	(none)	PUBAFRS 2620: Contemporary Issues in Science, Engineering, and Technology Policy (3) PUBAFRS 2110: Introduction to Public Affairs (3)	A survey course provides students with a broad understanding of this interdisciplinary landscape. As a 2000-level offering, it is intended to entice students to pursue the subject further.

<p>Specific Science/Technology Policy Domain</p> <p>Choose 1.</p>	<p>Land-Use Policy ENR 3600 Management of Public Lands ENR 4400 Law and Legal Process ENR 5325 Public Forest and Lands Policy</p> <p>Food and Agriculture Policy PUBAFR 5800 US Food Policy PUBAFR 5900 Food Systems Planning and the Economy FDSCTE 5320 Food Laws and Regulations AED ECON 4597 Population, Food, and the Environment AED ECON 4002.02 Operations Research in Agribusiness and Applied Economics FABENG 5320 Agroecosystems</p> <p>Energy and Environmental Policy ENR 2155 Energy and Environment ENR 4000 Environmental and Natural Resources Policy ENR 5451 Water Law MATSCEN 5572 Materials for Energy Technology</p> <p>Health Policy BMI 5760 Public Health Informatics PUBHEHS 3310 Current Issues in Global Environmental Health PUBHLTH 4650 United States & International Health Care</p> <p>Science/Engineering and Society SOCIO 3302 Technology and Global Society ENGR 2362 History of</p>	<p>Space Policy PUBAFRS 3620 US Space Policy and the Global Space Economy (3)</p> <p>National Security Technology Policy PUBAFRS 2630 Contemporary Civil-Military Relations in the U.S. (3)</p> <p>Health, Biomedical, and Biotechnology Policy PUBHEHS 3310 Current Issues in Global Environmental Health (3) PUBHHMP 3610 United States & International Health Care (3)</p> <p>Cyber, Autonomy, Information, and Data Privacy INTSTDS 3702 Herding Cyber Cats: Information Security Management (3) PUBAFRS 4040 Public Sector Data Sciences and Management (3)</p> <p>Science & Engineering in Society SOCIO 3302 Technology and Global Society</p> <p>Energy and Environment Policy ENR 3200 Environmental & Natural Resources Policy (3) ENR 5451 Water Law (3) GEOG 5803 Sustainable Energy Geographies (3)</p> <p>Food and Agriculture Policy AED ECON 4597 Population, Food, and the Environment (3) PUBAFRS 5890 US Food Policy (3) PUBAFRS 5900 Food Systems Planning and the Economy (3)</p>	<p>Students will explore deeply the specific issues associated with a traditional science and technology policy domain.</p> <p>We have also given them the ability to substitute a class for the policy domain with this language:</p> <p><i>**Students can also petition to have a relevant course from a traditional science and technology domain, including the domains above, with substantive policy dimensions satisfy this requirement with approval from the Glenn College.</i></p>
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	American Technology CIVENG 3080 Engineering Economics ISE 2040 Engineering Economics ISE 5840 Market Engineering and Applications ENGR 5050 Humanitarian Engineering		
Foundational Upper-Level Public Affairs Knowledge: Choose 2.	PUBAFR/ ENVENG 5600: Science, Engineering, and Public Policy (3) PUBAFR 5610: Innovation, Policy, and the Global Economy ... PUBAFR 5750: The Business Government Relationship	PUBAFRS 5600: Science, Engineering, and Public Policy Analysis (3) (cross-listed as ENVENG 5600) PUBAFRS 5610: Innovation, Policy, and the Global Economy (3) PUBAFRS 5620: Rapid Innovation for Public Impact (4; client project-based capstone) PUBAFRS 5750: The Business Government Relationship	Students will be grounded in the core concepts and tools in Public Affairs.

III. Revised bulletin entry

Science and Engineering can shape and inform Public Policy and therefore the way that a society tackles its complex challenges. Reciprocally, Public Policy shapes both the content and the way that Science and Engineering are accomplished.

Therefore, success in science and engineering enterprises requires not only a knowledge of technical topics, but also an understanding of the context in which science and engineering are undertaken.

This context includes the nature of government funding for research and development, the impact of politics on research agendas, and the mechanisms of policy-making that supports or regulates science and engineering. Equally critical is the way that innovation is accomplished in organizations and the facilitators and inhibitors of communities' adoption of innovation. This minor illustrates the differences between technical culture and political culture and the necessity of communicating technical risk and uncertainties in a manner customized for audiences.

The Science and Engineering in the Public Interest Minor will give students the knowledge and skills needed to act, innovate, and lead in the public interest.

IV. Course requests (if applicable)

The revised minor includes a new 2000-level survey course as a core requirement to be offered Fall 2020: PUBAFR 2620: Contemporary Issues in Science, Engineering, and Technology Policy. We have also added PUBAFR 3620 US Space Policy and the Global Space Economy and PUBAFR 2630 Contemporary Civil-Military Relations in the US as options in order to provide a deeper exploration of specific policy domains.

V. Transition Policy

We propose implementing these curricular changes in Spring 2020. The transition policy would be as follows:

- Students declaring the minor in Spring 2020 or later will be held to the standards of the new policy minor requirements.

- Current students in the minor would be converted over to the new requirements, but course substitutions for requirements would be made on a case-by-case basis to ensure that no student's time to completion of the minor is negatively impacted by the changes.

VI. Learning Goals and Assessment

Upon successful completion of the minor, students will

1. Grasp the breadth of science and engineering endeavors that have public policy dimensions
2. Demonstrate a firm grasp of basic public affairs concepts and tools employed in this space
3. Explore deeply the issues associated with a specific science/technology policy domain
4. Practice essential professional skills that form the basis for leadership and innovation in the public sector.

The Glenn College has constituted a sub-committee of three faculty members and one staff member to conduct periodic review and of the minor, providing recommendations for additional alterations as needed. This sub-committee will report findings back to the Glenn College Undergraduate Curriculum Committee. Assessment of the minor will follow the guidelines outlined in the assessment plan for our existing Bachelor of Arts and Bachelor of Science degrees.

The Ohio State University
John Glenn College of Public Affairs Minor:

Science and Engineering in the Public Interest

The John Glenn College of Public Affairs
OSU Battelle Center for Science,
Engineering, and Public Policy
Page Hall, 1810 College Road
<http://glenn.osu.edu>
<http://battellecenter.org>

Science and Engineering can shape and inform Public Policy and therefore the way that a society tackles its complex challenges. Reciprocally, Public Policy shapes both the content and the way that Science and Engineering are accomplished.

Therefore, success in science and engineering enterprises requires not only a knowledge of technical topics, but also an understanding of the *context* in which science and engineering are undertaken.

This context includes the nature of government funding for research and development, the impact of politics on research agendas, and the mechanisms of policy-making that supports or regulates science and engineering. Equally critical is the way that innovation is accomplished in organizations and the facilitators and inhibitors of communities' adoption of innovation. This minor illustrates the differences between technical culture and political culture and the necessity of communicating technical risk and uncertainties in a manner customized for audiences.

The *Science and Engineering in the Public Interest* Minor will give students the knowledge and skills needed to act, innovate, and lead in the public interest.

Structure of the Minor:

The *Science and Engineering in the Public Interest* minor consists of a minimum of 12 semester credit hours that provide students with (1) a broad awareness of this interdisciplinary landscape; (2) foundational public affairs knowledge; (3) and detailed understanding of a specific policy domain.

(1) Choose 1 of the 2 survey courses:

PUBAFRS 2620: Contemporary Issues in Science, Engineering, and Technology Policy (3)

PUBAFRS 2110: Introduction to Public Affairs (3)

(2) Choose 1 of the courses below in these traditional science and technology policy domains**

Space Policy

PUBAFRS 3620 US Space Policy and the Global Space Economy (3)

National Security Technology Policy

PUBAFRS 2630 Contemporary Civil-Military Relations in the U.S. (3)

Health, Biomedical, and Biotechnology Policy

PUBHEHS 3310 Current Issues in Global Environmental Health (3)

PUBHHMP 3610 United States & International Health Care (3)

Cyber, Autonomy, Information, and Data Privacy

INTSTDS 3702 Herding Cyber Cats: Information Security Management (3)

PUBAFRS 4040 Public Sector Data Sciences and Management (3)

Science & Engineering in Society

SOCIOL 3302 Technology and Global Society

Energy and Environment Policy

ENR 3200 Environmental & Natural Resources Policy (3)

ENR 5451 Water Law (3)

GEOG 5803 Sustainable Energy Geographies (3)

Food and Agriculture Policy

AEDECON 4597 Population, Food, and the Environment (3)

PUBAFRS 5890 US Food Policy (3)

PUBAFRS 5900 Food Systems Planning and the Economy (3)

***Students can also petition to have a relevant course from a traditional science and technology domain, including the domains above, with substantive policy dimensions satisfy this requirement with approval from the Glenn College.*

(3) Choose 2 of the 4 upper-level courses:

ENVENG 5600/PUBAFRS 5600: Science, Engineering, and Public Policy Analysis (3)

PUBAFRS 5610: Innovation, Policy, and the Global Economy (3)

PUBAFRS 5620: Rapid Innovation for Public Impact (4)

PUBAFRS 5750: The Business-Government Relationship (3)

Program Guidelines

Required for graduation: No

Credit hours required: A minimum of 12 credit hours. 1000-level courses shall not be counted in the minor. At least 6 credits must be at the 3000-level or above.

Transfer and EM Credit hours allowed: A student is permitted to count up to 6 total hours of transfer credit and/or credit by examination.

Overlap with GE: A student is permitted to overlap up to 6 credit hours between the GE and the minor.

Overlap with the major and additional minor(s)

- Each minor completed must contain a minimum of 12 hours distinct from the major and/or additional minors (i.e. minors that require more than 12 hours may overlap those hours beyond 12 with the major or another minor)

Grades required

- Minimum C- for a course to be listed on the minor
- Minimum 2.00 cumulative point-hour ratio required for the minor.
- Course work graded Pass/Non-pass cannot count on the minor
- No more than 3 hours of courses graded Satisfactory/Unsatisfactory may count toward the minor

X193 credit No more than 3 credit hours

Approval required The minor course work must be approved by the academic unit offering the minor.

Filing the minor program form: The minor program form must be filed by the time the graduation application is submitted to the student's college/school/departamental advisor.

Changes to the minor: Once the minor program is filed in the college office, any changes must be approved by the John Glenn College of Public Affairs.



Michael S. Bisesi, PhD, REHS, CIH
Senior Associate Dean and Director, Academic Affairs
Professor and Chair (Interim), Environmental Health Sciences
Fellow, AIHA
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January 10, 2020

Dr. W. Randy Smith, Vice Provost for Academic Programs
Office of Academic Affairs
203 Bricker Hall
190 N. Oval Mall
Columbus, OH 43210

Dear Dr. Smith:

The College of Public Health supports the proposed change to the *Science, Engineering and Public Policy* (SEPP) minor offered by the John Glenn College for Public Policy. The current SEPP minor curriculum, and the proposed change, do not conflict with any programs currently offered by our College.

The modified curriculum includes the two courses from the College of Public Health listed below as possible selectives:

- PUBHEHS 3310 *Current Issues in Global Environmental Health*
- PUBHEHS 3610 *United States & International Health Care*

Students from the SEPP minor are welcome to take either course. As courses continue to develop in our College, we will work with the Glenn College to identify any other course(s) that may be an additional suitable selective course for their SEPP minor.

Sincerely,

Michael S. Bisesi, PhD
Senior Associate Dean and Director, Academic Affairs

From: [Adams, Christopher](#)
To: [Shields, Jenny](#)
Subject: FW: Minor revision
Date: Monday, January 6, 2020 4:27:21 PM

Also, good news from SENR!

-----Original Message-----

From: Brooks, Jeremy S. <brooks.719@osu.edu>
Sent: Monday, January 6, 2020 4:07 PM
To: Adams, Christopher <adams.615@osu.edu>
Cc: Johnston, Renee <johnston.230@osu.edu>
Subject: Minor revision

Hi Chris,

I am responding as the Chair of the Academic Affairs Committee in SENR. Renee Johnston forwarded me your email about the minor revision in Glenn.

I have reviewed the proposed revisions as have our faculty who work on environmental policy. We are happy to provide concurrence, but want to note two changes to the courses from SENR that are listed in the minor.

1. ENR 4000 went through revision. It retained its title but it is now ENR 3200 "Environmental and Natural Resources Policy"
2. ENR 5451 is now titled "Water Policy and Governance".

Thank you!

- Jeremy

Fiscal Unit/Academic Org	John Glenn College of Pub Aff - D4240
Administering College/Academic Group	John Glenn College of Pub Aff
Co-administering College/Academic Group	
Semester Conversion Designation	Re-envisioned with significant changes to program goals and/or curricular requirements (e.g., degree/major name changes, changes in program goals, changes in core requirements, structural changes to tracks/options/courses)
Current Program/Plan Name	Science, Engineering, and Public Policy Minor
Proposed Program/Plan Name	Science and Engineering in the Public Interest Minor
Program/Plan Code Abbreviation	SCIENPP-MN
Current Degree Title	

Credit Hour Explanation

Program credit hour requirements		A) Number of credit hours in current program (Quarter credit hours)	B) Calculated result for 2/3rds of current (Semester credit hours)	C) Number of credit hours required for proposed program (Semester credit hours)	D) Change in credit hours
Total minimum credit hours required for completion of program		12	8.0	12	0
Required credit hours offered by the unit	Minimum	6	4.0	9	3
	Maximum	12	8.0	12	0
Required credit hours offered outside of the unit	Minimum	0	0.0	0	0
	Maximum	6	4.0	3	3
Required prerequisite credit hours not included above	Minimum	0	0.0	0	0
	Maximum	0	0.0	0	0

Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

Program Learning Goals	<ul style="list-style-type: none"> • Upon successful completion of this minor, students will be able to: • Grasp the breadth of science and engineering endeavors that have public policy dimensions. • Demonstrate a firm grasp of basic public affairs concepts and tools employed in this space. • Explore in detail the issues associated with a specific science/technology policy domain. • Practice essential professional skills that form the basis for leadership and innovation in the public sector.
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Assessment

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

Is this a degree program (undergraduate, graduate, or professional) or major proposal? No

Program Specializations/Sub-Plans

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

Pre-Major

Does this Program have a Pre-Major? No

Attachments

- Full Proposal SEPP Minor to OAA April 2020 v2.pdf: Full proposal

(Program Proposal. Owner: Adams,Christopher John)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Adams,Christopher John	02/10/2020 02:51 PM	Submitted for Approval
Approved	Adams,Christopher John	04/16/2020 01:36 PM	Unit Approval
Approved	Adams,Christopher John	04/16/2020 01:37 PM	SubCollege Approval
Approved	Greenbaum,Robert Theodore	04/16/2020 01:57 PM	College Approval
Approved	Vankeerbergen,Bernadette Chantal	04/17/2020 04:56 PM	ASCCAO Approval
Approved	Horn,David Graves	04/21/2020 09:00 AM	ASC Approval
Pending Approval	Reed,Kathryn Marie Johnson,Jay Vinton	04/21/2020 09:00 AM	CAA Approval