

# ENVIRONMENTAL SCIENCE & POLICY

ZOFIA GAGNON, Ph.D., *Chair*

## MISSION:

The mission of the Department of Environmental Science & Policy is to educate students to become professionals who understand and solve environmental problems and, more broadly, to create a Marist College student body with a high level of environmental consciousness. The demands upon Earth's natural resources and life-support systems increase each year as human population and consumption levels increase. Our ability to cope with such demands requires that we educate more of the population about environmental resources, problems, and solutions. Consequently, the Department educates majors to become knowledgeable, skilled professionals and educates non-majors to become highly responsible environmental citizens. Majors also are prepared for advanced courses and research in graduate programs.

The Department is an interactive community of faculty and students, committed to better understanding the environment and the problems confronting it, and to finding solutions to correct them. Students are actively engaged by faculty having diverse expertise in natural and social sciences related to study of the environment. We offer a stimulating and relevant curriculum that incorporates classroom, laboratory, field, research, internship, and seminar experiences. Through this curriculum, we educate for fundamental understanding of the structure and function of natural, economic, and political systems as they relate to the environment. Students come to appreciate the details, complexity, and interrelatedness of systems and problems. We also examine the effects of society's activities upon environmental resources and their relevance to human well-being.

Given the College's location, the Department seeks to integrate the ecological features and environmental affairs of the Hudson River Valley, as well as its rich history and culture, into its instructional, scholarly, service, and outreach activities. Moreover, the Department is committed to promoting and contributing to environmentally sustainable practices on campus and beyond. The Department is also committed to the continued professional growth of its faculty, through teaching refinement, scholarly activities, and service to various communities.

## PROGRAM DESCRIPTION:

The Department of Environmental Science & Policy educates students to become professionals, which grants them the ability to understand and solve environmental problems. More broadly, the program works to develop a body of students within Marist College with a high level of environmental consciousness. The Department has gained a reputation for crafting students who are well-prepared for challenging environmental careers; whereby, employers, both government and private sectors, extol the knowledge and skills our students can and have demonstrated. Whether a student's interest pertains to the political, economic, legal, scientific, or natural aspects of the environment, the Department's program equips the students with a pertinent educational background that is molded to each student's individual needs and goals.

Located in New York's Hudson Valley, our courses offer numerous nearby sites well-suited for field study, and our new Mobile Aquatic Laboratory enables our students to enhance their hands-on skills with studies on the Hudson River. In addition, a vast array of internships are available to augment the learning experience.

For students whose ambition is to pursue graduate studies, our program has a very successful record of placing students in excellent graduate programs by providing a comprehensive undergraduate research experience that utilizes the most up-to-date laboratory equipment, which includes conference presentation opportunities.

This program is also well-suited to accommodate dual majors and minors, allowing students to strengthen their undergraduate education and career preparation.

NOTE: Please refer to <http://www.marist.edu/science/environmental/> for current information about the program.

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The Environmental Science and Policy Environmental Assessment Concentration has been developed to prepare students for a career developing environmental impact statements investigating the significant short-term and long-term effects of plans, policies, or programs prior to implementation of the proposed action. Students also learn ways to minimize, mitigate, or eliminate the potential hazards. The rigorous and well-rounded coursework is highlighted with extensive field and laboratory experience involving up-to-date equipment and procedures, which students will encounter in the workplace. Upon completing the required OSHA course, students receive an OSHA certification, a very attractive accomplishment to potential employers in both government and private sectors.

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## REQUIREMENTS FOR A BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE, ASSESSMENT CONCENTRATION

Note: A minimum of 60 credits in Liberal Arts is required.

### 1.0 Course Requirements in Environmental Science

ENSC 101 Intro to Environmental Issues	3 cr
ENSC 125 Field and Lab Experience	1 cr
ENSC 202 Environmental Politics and Policy	3 cr
ENSC 210 Intro to Geology	3 cr
ENSC 212 Intro to Geology Laboratory	1 cr
ENSC 230 Intro to GIS	3 cr
ENSC 308 Introduction to Occupational Safety & Health	3 cr
ENSC 310 Environmental Chemistry	3 cr
ENSC 309 Environmental Chemistry Laboratory	1 cr
ENSC 360 Ecology	4 cr
ENSS 380 Environmental Assessment	3 cr
ENSC 404 Toxicology	4 cr
ENSC 415 Environmental Science Seminar	1 cr
ENSC 425 Environmental Law	3 cr
ENSC 426 Environmental Investigation & Remediation	3 cr
ENSC 440 Research I OR	

ENSC 398 Internship I	3 cr	
ENSC 477 Environmental Science & Human Values (Capping)	<u>3 cr</u>	
Credit Requirement in Environmental Science		45 cr
<b>2.0 Course Requirements in Related Fields</b>		
BIOL 130 General Biology I	4 cr	
BIOL 131 General Biology II	4 cr	
BIOL 211 Plant Biology	4 cr	
CHEM 111 General Chemistry I	3 cr	
CHEM 115 General Chemistry Laboratory I	1 cr	
CHEM 112 General Chemistry I	3 cr	
CHEM 116 General Chemistry Laboratory II	1 cr	
CHEM 201 Intro to Organic Chemistry	3 cr	
CHEM 202 Intro to Organic Chemistry Laboratory	1 cr	
MATH 130 Intro to Statistics I	3 cr	
MATH 241 Calculus I	4 cr	
POSC 110 American National Government	<u>3 cr</u>	
		34 cr
Related Field Electives:		
Must select two or more additional courses from the following:		
BUS 380 Business Law I	3 cr	
ENSC 305 Environmental Economics	3 cr	
ENSC 306 Environmental Health	3 cr	
ENSC 315 Natural History of the Hudson Valley	3 cr	
ENSC 327 Freshwater Ecology	3 cr	
ENSC 330 Advanced GIS	3 cr	
ENSC 340 Epidemiology	3 cr	
ENSC 420 Environmental Planning	3 cr	
PHYS 201 College Physics I	3 cr	
POSC 240 Intro to Public Policy	<u>3 cr</u>	
		6 cr
Credit Requirement in Related Fields	41 cr	
<b>Total Credit Requirement for a Major in Environmental Science &amp; Policy, Assessment Concentration</b>		<b>85 cr</b>
<b>3.0 Core/Liberal Studies Requirements</b>		
<b>3.1 FOUNDATION</b>		
FYS 101 First Year Seminar:	4 cr	
ENG 120 Writing for College:	3 cr	
		7 cr
<b>3.2 DISTRIBUTION</b>		
Breadth		
PHIL 101 Philosophy:	3 cr	
Ethics, Applied Ethics, or Religion:	3 cr	
Fine Arts:	3 cr	
History:		3 cr
Literature:	3 cr	
Mathematics: (fulfilled by major req)	0 cr	
Natural Science: (fulfilled by major req)	0 cr	
Social Science: (fulfilled by major req)	0 cr	
	15 cr	
Pathway*	12 cr	
Courses addressing an interdisciplinary topic.		
<b>3.0 Total</b>		<b>34 cr</b>
<b>Total Credit Required for Graduation</b>		<b>120 cr</b>

\* Breadth and Pathway courses may overlap, but all students must take a total of 36 distribution credits (including related field requirements). Students majoring in Breadth areas may apply a maximum of 6 credits to their distribution total. If applicable to a Pathway, 3 credits may come from disciplines outside of Core Breadth areas. Although foreign language and culture courses are not required within the Core, some courses in these fields may be used to fulfill distribution requirements. See the Core/LS Program website for a detailed list of all courses that satisfy distribution requirements.

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Students enrolled in the Environmental Science and Policy Science Concentration can expect a rigorous and stimulating curriculum. Our program provides the ideal academic preparation for in-depth understanding of environmental considerations as they pertain to the effects of human activity on the dynamics and

interrelationships of ecosystems, the health of humans and other organisms, and scholarly pursuit of the, as yet, unknown. Whether a student's personal career interest is in field-work, conducting laboratory research, being actively involved in environmental concerns, or continuing your education with graduate studies, our program's coursework, combined with internships or faculty-mentored scholarly undergraduate research, provides the diversity necessary to thoroughly prepare our students to pursue their desired goals.

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## REQUIREMENTS FOR A BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE & POLICY, SCIENCE CONCENTRATION

Note: A minimum of 60 credits in Liberal Arts is required.

1.0	Course Requirements in Environmental Science		
	ENSC 101 Intro to Environmental Issues	3 cr	
	ENSC 125 Field and Lab Experience	1 cr	
	ENSC 202 Environmental Politics and Policy	3 cr	
	ENSC 210 Intro to Geology	3 cr	
	ENSC 212 Intro to Geology Lab	1 cr	
	ENSC 230 Intro to GIS	3 cr	
	ENSC 310 Environmental Chemistry	3 cr	
	ENSC 309 Environmental Chemistry Laboratory	1 cr	
	ENSC 315 Natural History of the Hudson Valley	3 cr	
	ENSC 360 Ecology: Principles & Practice	4 cr	
	ENSC 380 Principles of Environmental Assessment	3 cr	
	ENSC 404 Toxicology	4 cr	
	ENSC 415 Environmental Science & Policy Seminar	1 cr	
	ENSC 440 Research I AND		
	ENSC 441 Research II           OR		
	ENSC 398 Internship I AND	6 cr	
	ENSC 399 Internship II		
	ENSC 477 Environmental Science and Human Values (Capping)	<u>3 cr</u>	
	Credit Requirement in Environmental Science		42 cr
2.0	Course Requirements in Related Fields		
	BIOL 130 General Biology I	4 cr	
	BIOL 131 General Biology II	4 cr	
	BIOL 211 Plant Biology	4 cr	
	CHEM 111 General Chemistry I	3 cr	
	CHEM 115 General Chemistry Laboratory I	1 cr	
	CHEM 112 General Chemistry I	3 cr	
	CHEM 116 General Chemistry Laboratory II		
	CHEM 201 Intro to Organic Chemistry†	3 cr	
	CHEM 202 Intro to Organic Chemistry Lab†	1 cr	
	MATH 130 Intro to Statistics I	3 cr	
	MATH 241 Calculus I	4 cr	
	POSC 110 American National Government	3 cr	
			34 cr
	Related Field Elective Credits (at least 10 credits from the courses below)		
	BIOL 312 Microbiology	4 cr	
	BIOL/ENSC 435 Plant Physiology	4 cr	
	ENSC 306 Environmental Health	3 cr	
	ENSC 327 Freshwater Ecology	3 cr	
	ENSC 330 Advanced GIS	3 cr	
	ENSC 340 Epidemiology	3 cr	
	ENSC 308 Intro to Occupational Safety and Health	3 cr	
	ENSC 404 Toxicology	4 cr	
	ENSC 420 Environmental Planning	3 cr	
	ENSC 425 Environmental Law	3 cr	
	PHYS 201 College Physics I	3 cr	
		<u>10 cr</u>	
	Credit Requirement in Related Fields		44 cr
	<b>Total Credit Requirement for a Major in Environmental Science &amp; Policy, Science Concentration</b>		<b>86 cr</b>
3.0	Core/Liberal Studies Requirements		
3.1	FOUNDATION		
	FYS 101 First Year Seminar	4 cr	
	ENG 120 Writing for College	<u>3 cr</u>	
			7 cr

### 3.2 DISTRIBUTION

#### Breadth

PHIL 101 Philosophical Perspectives	3 cr	
Ethics, Applied Ethics, or Religious Studies	3 cr	
Fine Arts	3 cr	
History	3 cr	
Literature	3 cr	
Mathematics	0 cr	(fulfilled by major field req.)
Natural Science	0 cr	(fulfilled by major field req.)
Social Science	<u>0 cr</u>	(fulfilled by major field req.)

15 cr

#### Pathway\*

Courses addressing an interdisciplinary topic.

12 cr

#### Total Core/Liberal Studies Requirement

34 cr

#### Total Credit Requirement for Graduation

120 cr

\*

Breadth and Pathway courses may overlap, but all students must take a total of 36 distribution credits (including related field requirements). Students majoring in Breadth areas may apply a maximum of 6 credits to their distribution total. If applicable to a Pathway, 3 credits may come from disciplines outside of Core Breadth areas. Although foreign language and culture courses are not required within the Core, some courses in these fields may be used to fulfill distribution requirements. See the Core/LS Program website for a detailed list of all courses that satisfy distribution requirements.

† May replace with CHEM 211-212 Organic Chemistry I-II and CHEM 215-216 Laboratory I-II

†† May replace with MATH 241 Calculus I

\* Not all 200-level BIOL courses qualify; consult with advisor.

The Environmental Science and Policy Concentration is designed for environmentally-conscious students interested in a science-oriented approach to environmental problems, who wish to enhance that knowledge with an in-depth exploration of an additional area of interest such as: economics, environmental law, social science, or politics, to name a few. The concentration provides a strong foundation while accommodating each student with much flexibility to create a program well-suited to his/her individual interests. Career preparation is enhanced with the requirement of internships, providing real-world experience, and scholarly research mentored by a faculty member.

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## REQUIREMENTS FOR A BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE & POLICY, POLICY CONCENTRATION

Note: A minimum of 60 credits in Liberal Arts is required.

### 1.0 Course Requirements in Environmental Science

ENSC 101 Intro to Environmental Issues	3 cr	
ENSC 125 Field and Lab Experience	1 cr	
ENSC 202 Environmental Politics and Policy	3 cr	
ENSC 230 Intro to GIS	3 cr	
ENSC 305 Environmental Economics	3 cr	
ENSC 306 Environmental Health	3 cr	
ENSC 360 Ecology: Principles & Practice	4 cr	
ENSC 380 Principles of Environmental Assessment	3 cr	
ENSC 415 Environmental Science & Policy Seminar	1 cr	
ENSC 420 Environmental Planning	3 cr	
ENSC 425 Environmental Law	3 cr	
ENSC 440 Research I AND		
ENSC 441 Research II OR		
ENSC 398 Internship I AND	6 cr	
ENSC 399 Internship II		
ENSC 477 Environmental Science and Human Values (Capping)	<u>3 cr</u>	

#### Credit Requirement in Environmental Science

39 cr

### 2.0 Course Requirements in Related Fields

BIOL 130 General Biology I	4 cr	
BIOL 131 General Biology II	4 cr	
CHEM 101 Intro to Chemistry	3 cr	
CHEM 102 Intro to Chemistry Laboratory	1 cr	
MATH 130 Intro to Statistics I	3 cr	
MATH 115 Calculus with Management Applications†	3 cr	
ECON 103 Principles of Microeconomics	3 cr	
POSC 110 American National Government	3 cr	
POSC 240 Intro to Public Policy	3 cr	

27 cr

Approved Related Field Elective Credits (200 level or above)\*\*

BIOL 211 Plant Biology	4 cr	
ENSC 210 Intro to Geology	3 cr	
ENSC 212 to Geology Laboratory	1 cr	
ENSC 308 Intro to Occupational Safety and Health	3 cr	
ENSC 315 Natural History of Hudson Valley	3 cr	
ENSC/BIOL 327 Freshwater Ecology	3 cr	
ENSC 330 Advanced GIS	3 cr	
ENSC 340 Epidemiology	3 cr	
POSC 113L International Relations	3 cr	
POSC 235 Scope & Methods for Political Sciences	3 cr	<u>12 cr</u>

One additional 100 level POSC course may be taken, and is required for a minor in Political Science.

Credit Requirement in Related Fields 38 cr

**Total Credit Requirement for a Major in Environmental Science & Policy, Policy Concentration** 78 cr

3.0 Core/Liberal Studies Requirements

3.1 FOUNDATION

FYS 101 First Year Seminar	4 cr	
ENG 120 Writing for College	<u>3 cr</u>	7 cr

3.2 DISTRIBUTION

Breadth\*

PHIL 101 Philosophical Perspectives	3 cr	
Ethics, Applied Ethics, or Religious Studies	3 cr	
Fine Arts	3 cr	
History	3 cr	
Literature	3 cr	
Mathematics	0 cr	(fulfilled by major field req.)
Natural Science	0 cr	(fulfilled by major field req.)
Social Science	<u>0 cr</u>	(fulfilled by major field req.)

15 cr

Pathway\*

Courses addressing an interdisciplinary topic. 12 cr

**Total Core/Liberal Studies Requirement** 34 cr

4.0 Electives 9 cr

**Total Credit Requirement for Graduation** 120 cr

† May replace with MATH 241 Calculus I

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Breadth and Pathway courses may overlap, but all students must take a total of 36 distribution credits (including related field requirements). Students majoring in Breadth areas may apply a maximum of 6 credits to their distribution total. If applicable to a Pathway, 3 credits may come from disciplines outside of Core Breadth areas. Although foreign language and culture courses are not required within the Core, some courses in these fields may be used to fulfill distribution requirements. See the Core/LS Program website for a detailed list of all courses that satisfy distribution requirements.

\*\* Not all 200-level courses qualify; consult with advisor.

## THREE MINORS:

### 1) REQUIREMENTS FOR A MINOR IN ENVIRONMENTAL SCIENCE

Required Courses:

BIOL 130 General Biology I	4 cr
BIOL 131 General Biology II	4 cr
CHEM 101 Intro to Chemistry AND	3 cr
CHEM 102 Intro to Chemistry Lab	1 cr
OR	
CHEM 111 General Chemistry I	3 cr
CHEM 115 General Chemistry Laboratory I	1 cr
CHEM 112 General Chemistry I	3 cr
CHEM 116 General Chemistry Laboratory II	

ENSC 101 Intro to Environmental Issues	3 cr
ENSC/BIOL 360 Ecology: Principles & Practice	4 cr

19-23 cr

Elective Courses (at least six credits from the courses listed below):

ENSC 210 Intro to Geology	3 cr
ENSC 212 Intro to Geology Lab	1 cr
ENSC 230 Intro to Geographic Info Systems	3 cr
ENSC 305 Natural History of the Hudson Valley	3 cr
ENSC 306 Environmental Health	3 cr
ENSC 309 Environmental Chemistry Lab <sup>1</sup>	1 cr
ENSC 310 Environmental Chemistry <sup>1</sup>	3 cr
ENSC/BIOL 327 Freshwater Ecology	3 cr
ENSC 330 Advanced GIS	3 cr
ENSC 380 Principles of Environmental Assessment	3 cr
ENSC 340 Epidemiology	3 cr
ENSC 404 Environmental Toxicology	4 cr
BIOL 211 Plant Biology	4 cr
BIOL 420 Invertebrate Zoology	4 cr
BIOL/ENSC 435 Plant Physiology	4 cr

6 cr

**Total Credit Requirement for a Minor in Environmental Science**

25-29 cr

<sup>1</sup> Prerequisite courses required beyond those listed under Required Courses

## 2) REQUIREMENTS FOR A MINOR IN ENVIRONMENTAL POLICY

Required Courses

ENSC 101 Intro to Environmental Issues <sup>2</sup>	3 cr
ENSC/POSC 202 Environmental Politics & Policy <sup>3</sup>	3 cr
ENSC 230 Intro to Geographic Info Systems	3 cr
ENSC/ECON 305 Environmental Economics <sup>1,3</sup>	3 cr
ENSC/POSC 420 Environmental Planning <sup>1,3</sup>	3 cr
ENSC 425 Environmental Law	<u>3 cr</u>

18 cr

Electives

3 cr

Options:

a. Choose three elective credits related to the minor with approval of Chair of Environmental Science & Policy

ENSC 210 Intro to Geology	3 cr
ENSC 212 Intro to Geology Lab	3 cr
ENSC 230 Intro to GIS	3 cr
ENSC 306 Environmental Health	3 cr
ENSC 309 Environmental Chemistry <sup>1</sup>	3 cr
ENSC 310 Environmental Chemistry Laboratory <sup>1</sup>	3 cr
ENSC 315 Natural History of Hudson Valley	3 cr
ENSC 327 Freshwater Ecology	3 cr
ENSC 308 Intro to Occupational Safety and Health	3 cr
ENSC 330 Advance GIS	3 cr
ENSC 404 Environmental Toxicology	3 cr
BIOL 211 Plant Biology	3 cr

b. Complete a three-credit internship with approval of Internship Coordinator of Environmental Science & Policy

**Total Credit Requirement for a Minor in Environmental Policy**

21 cr

<sup>1</sup> Prerequisite courses required beyond those listed under Required Courses

<sup>2</sup> Counts for Core/LS Natural Science

<sup>3</sup> Counts for Core/LS Social Science

## 3) REQUIREMENTS FOR A MINOR IN ENVIRONMENTAL STUDIES

Course distribution:

ENSC 101 Intro to Environmental Issues	3 cr
Environmental sciences (courses listed below)	6 cr
Social sciences and humanities (courses listed below)	<u>9 cr</u>

**Total Credit Requirement for a Minor in Environmental Studies**

18 cr

Environmental Sciences

ENSC 210 Intro to Geology	3 cr
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ENSC 212 Intro to Geology Lab	1 cr
ENSC 306 Environmental Health	3 cr
ENSC 315 Natural History of Hudson Valley	3 cr
ENSC/BIOL 327 Freshwater Ecology <sup>1</sup>	3 cr
ENSC/CHEM 310 Environmental Chemistry <sup>1</sup>	3 cr
ENSC/BIOL 360 Ecology: Principles and Practice <sup>1</sup>	4 cr
ENSC 308 Intro to Occupational Safety and Health	3 cr
ENSC 404 Environmental Toxicology <sup>1</sup>	4 cr
BIOL 211 Plant Biology <sup>1</sup>	4 cr

Social Sciences and Humanities

ENSC/POSC 202 Environmental Politics & Policy	3 cr
ENSC/ECON 305 Environmental Economics <sup>1</sup>	3 cr
ENSC/POSC 420 Environmental Planning <sup>1</sup>	3 cr
ENSC 425 Environmental Law	3 cr
ENSC 230 Intro to Geographic Info Systems (GIS)	3 cr
ECON 150 Economics of Social Issues	3 cr
ECON 340 Economic Development: Toward Global Equality <sup>1</sup>	3 cr
POSC/GBST 103 Intro to Global Studies	3 cr

<sup>1</sup> Prerequisite courses required beyond ENSC 101

Some Special Topics courses may be substituted with prior approval of the Chair of Environmental Science & Policy. Recent examples of such relevant courses include PHIL 394 Environmental Ethics and ENG 293 Literature and Nature.

## RECOMMENDED PROGRAM SEQUENCE FOR ENVIRONMENTAL SCIENCE & POLICY, ASSESSMENT CONCENTRATION

### FRESHMAN YEAR

#### FALL

BIOL 130 General Biology I	4 cr
CHEM 111 General Chemistry I	3 cr
CHEM 115 General Chemistry Laboratory I	1 cr
ENSC 101 Intro to Environmental Issues	3 cr
ENSC 125 Field & Lab Experience	1 cr
FYS 101 First Year Seminar	4 cr
	<u>16 cr</u>

#### SPRING

BIOL 131 General Biology II	4 cr
CHEM 112 General Chemistry II	4 cr
CHEM 116 General Chemistry Laboratory II	1 cr
PHIL 101 Philosophy (Breadth)	3 cr
ENG 120 Writing for College	3 cr
	<u>14 cr</u>

### SOPHOMORE YEAR

#### FALL

BIOL 211 Plant Biology	4 cr
ENSC 230 Intro to GIS	3 cr
CHEM 201 Intro to Organic Chemistry	3 cr
CHEM 202 Intro to Organic Laboratory	1 cr
POSC 110 American Nat'l Gov't	3 cr
Breadth	3 cr
	<u>17 cr</u>

#### SPRING

ENSC 210 Intro to Geology	3 cr
ENSC 212 Geology Laboratory	1 cr
ENSC 202 Environ Politics & Policy	3 cr
ENSC 310 Environ Chemistry	3 cr
ENSC 309 Environ Chemistry Lab	1 cr
MATH 130 Statistics I	3 cr
Breadth	3 cr
	<u>17 cr</u>

### JUNIOR YEAR

#### FALL

ENSC 360 Ecology	4 cr
MATH 241 Calculus I	4 cr
Breadth	3 cr
Pathway	3 cr
	<u>14 cr</u>

#### SPRING

ENSC 380 Environ Assessment	3 cr
Related Field Elective	3-4 cr
ENSC 415 Environ Science & Policy Seminar	1 cr
ENSC 308 Intro to OSHA	3 cr
Pathway	3 cr
	<u>13-14 cr</u>

### SENIOR YEAR

#### FALL

ENSC 426 Environ Investigation & Remediation	3 cr
ENSC 440 Research I OR ENSC 398 Internship I	3 cr
Related Field Elective	3-4 cr
Breadth	3 cr
Pathway	3 cr
	<u>15-16 cr</u>

#### SPRING

ENSC 477 Environ Science & Human Values	3 cr
ENSC 404 Environmental Toxicology	4 cr
ENSC 425 Environmental Law	3 cr
Pathway	3 cr
	<u>13 cr</u>

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## RECOMMENDED PROGRAM SEQUENCE FOR ENVIRONMENTAL SCIENCE & POLICY, SCIENCE CONCENTRATION

### FRESHMAN YEAR

FALL		SPRING	
FYS 101 Freshman Year Seminar	4 cr	PHIL 101 Philosophical Perspectives	3 cr
BIOL 130 General Biology I	4 cr	BIOL 131 General Biology II	4 cr
CHEM 111 General Chemistry I	3 cr	CHEM 116 General Chemistry II	3 cr
CHEM 115 General Chemistry Laboratory I	1 cr	CHEM 116 General Chemistry Laboratory I	1 cr
ENSC 101 Intro to Environmental Issues	3 cr	ENG 120 Writing for College	3 cr
ENSC 125 Field & Laboratory Experience	3 cr		
	<u>16 cr</u>		<u>14 cr</u>

### SOPHOMORE YEAR

FALL		SPRING	
BIOL 211 Plant Biology	4 cr	ENSC 202 Environmental Politics & Policy	3 cr
ENSC 230 Introduction to GIS	3 cr	ENSC 210 Intro to Geology	3 cr
CHEM 201 Intro to Organic Chemistry I	3 cr	ENSC 212 Intro to Geology Lab	1 cr
CHEM 202 Intro to Organic Chemistry I Lab	1 cr	ENSC 310 Environmental Chemistry	3 cr
POSC 110 American National Government	3 cr	ENSC 309 Environmental Chemistry Lab	1 cr
Breadth	3 cr	MATH 130 Intro to Statistics I	3 cr
		Elective	1 cr
	<u>17 cr</u>		<u>14 cr</u>

### JUNIOR YEAR

FALL		SPRING	
ENSC 315 Natural History of the Hudson Valley	3 cr	ENSC 380 Principles of Env Assessment	3 cr
ENSC 360 Ecology: Principles & Practice	4 cr	ENSC 415 Environ Sci & Policy Seminar	1 cr
MATH 241 Calculus I	4 cr	Related Field Elective	3-4 cr
Related Field Elective	3 cr	Breadth	6 cr
		Pathway	3 cr
	<u>14 cr</u>		<u>16-17 cr</u>

### SENIOR YEAR

FALL		SPRING	
ENSC 440 Research I or ENSC 398 Internship I	3 cr	ENSC 441 Research II OR ENSC 399 Internship II	3 cr
Related Field Elective	3-4 cr	ENSC 404 Environmental Toxicology	4 cr
Breadth	3 cr	ENSC 477 Env Sci & Human Values	3 cr
Pathway	6 cr	Pathway	3 cr
	<u>15-16 cr</u>		<u>13 cr</u>

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## RECOMMENDED PROGRAM SEQUENCE FOR ENVIRONMENTAL SCIENCE & POLICY, POLICY CONCENTRATION

### FRESHMAN YEAR

FALL		SPRING	
FYS 101 Freshman Year Seminar	4 cr	PHIL 101 Philosophical Perspectives	3 cr
BIOL 130 General Biology I	4 cr	BIOL 131 General Biology II	4 cr
CHEM 101 Intro to Chemistry	3 cr	ENG 120 Writing for College	3 cr
CHEM 102 Intro to Chemistry Lab	1 cr	MATH 115 Calculus with Management	3 cr
ENSC 101 Intro to Environmental Issues	3 cr	Breadth	3 cr
ENSC 125 Field & Lab Exp	1 cr		
	<u>16 cr</u>		<u>16 cr</u>

### SOPHOMORE YEAR

FALL		SPRING	
ENSC 230 Introduction to GIS	3 cr	ENSC 202 Environmental Politics & Policy	3 cr
MATH 130 Intro to Statistics I	3 cr	ENSC 306 Environmental Health	3 cr
POSC 110 American National Government	3 cr	ECON 103 Microeconomics	3 cr
Breadth	3 cr	Related Field Elective	3-4 cr
Related Field Elective	3 cr	Breadth	3 cr
	<u>15 cr</u>		<u>15-16 cr</u>

### JUNIOR YEAR

FALL		SPRING	
ENSC 360 Ecology: Principles & Practice	4 cr	ENSC 380 Prin of Environ Assessment	3 cr
ENSC 305 Environmental Economics	3 cr	ENSC 420 Environmental Planning	3 cr
POSC 240 Intro to Public Policy	3 cr	ENSC 415 Environmental Sci & Policy Seminar	1 cr
Related Field Elective	3-4 cr	Breadth	3 cr
Pathway	3 cr	Pathway	3 cr
	<u>16-17 cr</u>		<u>13 cr</u>

### SENIOR YEAR

FALL	SPRING
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ENSC 440 Research I OR ENSC 398 Internship I	3 cr	ENSC 441 Research II OR ENSC 399 Internship II	3 cr
Related Field Elective Pathway	3-4 cr 3 cr	ENSC 425 Environmental Law ENSC 477 Environmental Sci & Human Values	3 cr 3 cr
Related field elective	3 cr	Related Field Elective Pathway	3 cr 3 cr
	<b><u>12-13 cr</u></b>		<b><u>15 cr</u></b>