

Department of Environmental Studies

Undergraduate Handbook

***Bachelor of Science  
in Environmental Studies***

**and**

***Bachelor of Science in Environmental Education &  
Interpretation***

State University of New York

College of Environmental Science and Forestry (ESF)

106 Marshall Hall

1 Forestry Drive

Syracuse, NY 13210

2025-2026

*Online version:*

<https://www.esf.edu/envstudies/handbook.php>

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## **Important Deadlines**

### **FALL 2025**

Last day to add a class: Tuesday, September 2

Last day to drop a class: Friday, September 19

Advising for Spring 2026: Oct 27- Nov. 4, 2025

Registration for Spring 2026: Nov. 5, 2024-Jan. 2, 2026

### **SPRING 2026**

Last day to add a class: Tuesday, January 20

Last day to drop a class: Friday, February 6

Advising for Fall 2026 April 1-7

Registration for Fall 2026: April 8- June 30, 2026

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# Environmental Studies Department Guiding Principles

Six principles guide the design and implementation of ESF's Bachelor of Science degrees in Environmental Studies (ES) and Environmental Education and Interpretation (EE&I):

1. **Holistic Interdisciplinary Education:** demonstration of the interconnectedness of the many disciplines and fields that intersect with environmental concerns.
2. **Critical Skills:** encouragement to become active learners with invaluable lifelong skills, including research, analysis, writing, and critical thinking.
3. **Ecological Literacy:** development of awareness, knowledge, and appreciation of the intrinsic values of ecological processes and communities.
4. **Diversity and Complexity:** recognition and respect for the diversity and complexity of ecological and social systems and the perspectives that inform social and institutional understanding of environmental affairs.
5. **Justice and Equity:** encouragement to seek understanding and build value of social and ecological justice and equity in each context.
6. **Thoughtful Professionalism:** preparation to be reflective and sensitive, yet also effective and professional in whatever endeavors students choose to pursue.

# Bachelor of Science in Environmental Studies

## The Role of Environmental Studies in Addressing Societal Issues

To address environmental issues, humanity must first understand the problems that underlie them. Because those issues exist at the interface of complex human and natural systems, understanding and addressing them requires the right synthesis of social, cultural, and scientific knowledge and skills. The Bachelor of Science in Environmental Studies program at ESF offers students learning and skill-development opportunities in the context of a well-rounded, yet substantial, education.

The Bachelor of Science in Environmental Studies program has been carefully designed to provide students with as comprehensive an understanding of environmental affairs as is possible in an undergraduate education. That means learning about the scientific diagnosis of environmental issues and having enough knowledge to work with scientists. It also means learning about the social, cultural, and technological causes of those issues. Finally, it means understanding the diversity of approaches needed to treat the problems. In the pursuit of these objectives, the Environmental Studies program brings together philosophical, theoretical, and practical perspectives on a wide range of environmental concerns. In this way, the program prepares students with the knowledge, skills, and experience to work for a more ecologically sustainable and socially just world.

The Bachelor of Science in Environmental Studies program provides a broad-based liberal education, requiring proficiency across a breadth of scholarly and practical areas. Alumni of the Environmental Studies program have gone on to graduate school in many different disciplines as well as to law and medical schools. They also have gone on to work in non-governmental organizations (NGOs), education, government, and the private sector, pursuing careers in such areas as environmental policy, advocacy, conservation, consulting, administration, law, and education, to name a few.

## Environmental Studies Program Learning Outcomes

By the time students have completed requirement for the **Bachelor of Science in Environmental Studies** (ES) degree at ESF, they are expected to have gained competency in at least five areas:

1. **Critical Thinking:** demonstrate critical thinking skills in relation to environmental affairs.
2. **Communication:** demonstrate knowledge and application of communication skills and the ability to write effectively in a variety of contexts.
3. **Interdisciplinary Synthesis:** demonstrate an ability to integrate the many disciplines and fields that intersect with environmental concerns.
4. **Ecological Literacy:** demonstrate an awareness, knowledge, and appreciation of the intrinsic values of ecological processes and communities.

5. **Sustainability:** demonstrate an integrative approach to environmental issues with a focus on sustainability.

## **Environmental Studies Program Overview**

The B.S. in Environmental Studies program at ESF is designed to provide a solid framework for environmental careers as well as individual flexibility, allowing students to build upon unique strengths and interests.

In the first two years of the program, students will develop a foundation in the humanities, social sciences, and natural sciences as they relate to environmental affairs. A key part of the first (fall) semester is student participation in EST 132, Orientation Seminar for Environmental Studies, and EST 133, Introduction to Environmental Studies, the “gateway” courses for our department’s two majors; EST 133 is required for all incoming first year and transfer students. During that time, students also fulfill SUNY general education requirements and take some open elective courses.

By the beginning of their junior year, each student should select one of three concentrations in the major (also known as "Options") which will be developed in the final two years of the program:

- ***Environment, Communication, and Society:*** This Option focuses on how communication and social systems influence environmental affairs and shape our perceptions of the non-human world. It addresses the subjects of rhetoric and discourse; news media; public participation; advocacy campaigns; collaboration; conflict resolution; risk communication; social processes; and representations of nature in literature and popular culture.
- ***Environmental Policy, Planning, and Law:*** This Option is concerned with how environmental policies, plans, and laws from the local to the global are created, implemented, and contested. It emphasizes legislative, regulatory, and collaborative approaches to addressing environmental issues.
- ***Natural Systems Applications:*** This Option is designed for students interested in the interface between biology and socio-economic issues. It provides an emphasis on biological systems and their interaction with societal issues ranging from education to systems management.

Each Environmental Studies Option area has the flexibility to allow students to pursue their own interests. Also, several undergraduate minors are available for ES majors (see Appendix B). Selection of your Option should be done with your academic advisor prior to registering for coursework for your junior year.

To help prepare for professional employment opportunities and/or graduate studies, all students complete a **Synthesis Project** in their senior year. The Synthesis Project is developed in consultation with the student's faculty advisor. You may choose **one** of the following:

- Environmental Studies Internship (EST 499);
- Senior Paper (EST 400)
- a designated 400-level synthesis course (EST 426, EST 427, EST 493 – have synthesis-oriented, semester-long project);
- or an advanced, graduate-level synthesis course (talk with your advisor).



## Lower Division Courses

The first two years of the Bachelor of Science in Environmental Studies program consists of two categories of courses. **General education** courses provide students with knowledge and skills that are useful and important for all educated persons regardless of their profession. Such courses also help lay the intellectual foundation for successful completion of advanced courses, which in turn can lead to a specific profession. **Professional courses** provide students with direct preparation for specialization in environmental studies and career opportunities. Transfer students wishing to receive credit towards the B.S. in Environmental Studies degree for courses completed at their previous institution(s) should talk to their academic advisor promptly.

### *Advising*

- 1<sup>st</sup> and 2<sup>nd</sup> year & transfer students are assigned to a professional advisor
- All others are assigned an EST faculty member advisor

### *General Education Options*

Choose one of the four categories, minimum of three credit hours each. See webpage for choices: [General Education Courses \(https://www.esf.edu/registrar/gened.php\)](https://www.esf.edu/registrar/gened.php)

*US History and Civic Engagement*  
*World History and Global Awareness*  
*The Arts*  
*World Language*

### *General Education Required*

*Diversity, Equity, Inclusion and Social Justice --- three credit hours required.*

### *Open Electives*

In addition to core requirements and option courses, students are permitted 18 open elective credits in any area. At least nine credit hours should be at or above the 300-level.

### *Accessory Instruction Fee*

Students who choose to take courses from Syracuse University will be subject to an [accessory instruction fee](#).

## Lower Division Courses Required for All Environmental Studies Option Areas

Course	Credits	Notes
EST 132 Orientation Seminar for Environmental Studies	1	<i>Required for all Environmental Studies majors except for transfer students</i>
EST 133 Introduction to Environmental Studies	3	<i>Required for all Environmental Studies majors, including transfer students</i>
APM 103 Applied College Algebra and Trigonometry <b>OR</b> APM 104 College Algebra & Pre-Calculus <b>OR</b> APM 105 Survey of Calculus & its applications	3-4	<i>Students who pursue the Natural Systems Applications Option need to complete APM 105</i>
EWP 190 Writing and the Environment	3	<i>Highly recommended for all first-year students, including those who have successfully completed an advanced placement writing course.</i>
EWP 290 Research Writing and Humanities	3	
EFB 120 Global Environment and the Evolution of Human Society	3	
EFB 100 Survey of Biology <b>OR</b> EFB 101/102 General Biology II: Cell Biology and Genetics	4	<i>Students who pursue the Natural Systems Applications Option need to complete EFB 103/104</i>
EST 231 Environmental Geology <b>OR</b> EFB 103/104 General Biology II: Cell Biology and Genetics	3-4	<i>Students who pursue the Natural Systems Applications Option need to complete EFB 103/104</i>
ESF 200 Information Literacy	1	
EST 221 Introduction to American Government	3	
EWP 245 Foundations of Environmental Communication	3	
EWP 220 Public Presentation Skills	3	
EST 255 Research Methods for Environmental Studies	3	<i>Required for all Environmental Studies majors including transfer students</i>
FCH 110/111 Survey of Chemical Principles with Lab <b>OR</b> FCH 150/151 General Chemistry I with Lab	4	<i>Students who pursue the Natural Systems Applications Option need to complete FCH 150/151</i>
FOR 207 Introduction to Economics	3	
Elective <b>OR</b> FCH 152/153 General Chemistry II with Lab	3-4	<i>Students who pursue the Natural Systems Applications Option need to complete FCH 152/153</i>
SUNY DEISJ Course	3	<i>Students must take one DEISJ course</i>
SUNY Gen Ed course	3	<i>Students must take one course meeting specific General Education requirements within SUNY's specified skill and knowledge areas</i>
<b>Total Required Credits</b>	<b>52-55</b>	

## Representative Course Sequence

This is a typical sequence of the first two years in the Environmental Studies program. In consultation with your Advisor, you may need to adjust this sequence to suit your specific situation.

### First Year

#### Fall Semester

Course	Description	Credits
EST 132	Orientation Seminar for Environmental Studies	1
EST 133	Introduction to Environmental Studies	3
EWP 190	Writing and the Environment	3
EST 221	Introduction to American Government	3
FOR 207	Introduction to Economics	3
APM 103 or 104 or APM 105	College Algebra & Pre-Calculus or Applied College Algebra and Trigonometry (EPPL & ECS students) or Survey of Calculus and Its Applications 1 (NSA students)	3-4
<b>Total Semester Credits</b>		<b>16-17</b>

#### Spring Semester

Course	Description	Credits
ESF 200	Information Literacy	1
EST 231 or GEN ED	Environmental Geology (EPPL & ECS students) or SUNY Gen Ed or DEISJ course (NSA students)	3
EFB 120	Global Environment and the Evolution of Human Society	3
EFB 100 or EFB 103/104	Survey of Biology (EPPL & ECS students) or General Biology II: Cell Biology and Genetics & Laboratory (NSA students)	4
EST 255	Research Methods for Environmental Studies	3
<b>Total Semester Credits</b>		<b>14</b>

### Sophomore Year

#### Fall Semester

Course	Description	Credits
EST 245	Foundations of Environmental Communication	3
FCH 110/111 or FCH 150/151	Survey of Chemical Principles & Laboratory (EPPL & ECS students) or General Chemistry I & Laboratory (NSA students)	4
EWP 220	Public Presentation Skills	3
ELECTIVE	Elective	3
GEN ED or EFB 101/102	SUNY Gen Ed or DEISJ course (EPPL & ECS Students) or General Biology I & Laboratory (NSA students)	4
<b>Total Semester Credits</b>		<b>17</b>

**Spring Semester**

<b>Course</b>	<b>Description</b>	<b>Credits</b>
EWP 290	Research, Writing, and the Humanities	3
GEN ED	SUNY Gen Ed	3
ELECTIVE or FCH 152/153	Elective (EPPL & ECS students) or General Chemistry II & Laboratory (NSA students)	3-4
ELECTIVE	Elective	3
ELECTIVE	Elective or Option Course	3
	<b>Total Semester Credits</b>	<b>15-16</b>

## Upper Division Requirements

Environmental Studies students may select an Option at any time. This is typically done in the spring semester of the sophomore year; however, **an Option must be selected prior to registration for junior coursework**. Each Option is described in detail below. The Junior and Senior years of the Environmental Studies program are designed to meet four goals:

1. Extend and deepen foundations in the Social Sciences, Humanities, and Natural Sciences.
2. Provide a focus for professional employment and/or graduate studies.
3. Allow students to customize a Synthesis Project experience; and
4. Bring all students in the department together in the Senior Seminar in Environmental Studies.

The Upper Division consists of two parts: Core course requirements all students must fulfill (23 credits) and Option requirements (30 credits).

### *Upper Division Core Requirements*

The following is a list of Upper Division core requirements (R) for all Environmental Studies majors, regardless of Option area:

Course	Credits	Notes
APM 391 Introduction to Probability & Statistics (R)	3	
EWP 407 Writing for Environmental Professionals (R)	3	
EFB 320 General Ecology <b>OR</b> Ecology Course	3-4	<i>Students who pursue the Natural Systems Applications Option need to complete EFB 320; for other Options, recommended courses are listed below</i>
EST 321 Government & the Environment (R)	3	
EST 361 Diverse Histories of the American Environmental Movement (R)	3	
Upper Division Natural Science <b>OR</b> Upper Division Computing Course	3	<i>Recommended courses are listed below</i>
Senior Synthesis (R)	3	<i>See page 14</i>
EST 494 Senior Seminar in Environmental Studies (R)		<i>See page 15</i>
<b>Total Semester Credits</b>	<b>22-23</b>	

## ***Ecology Courses***

This requirement is intended to satisfy the ecological competency program learning outcome. Students are required to take one of the following courses.

### **Ecology Courses**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
EFB 320	General Ecology	4
FOR 232	Natural Resources Ecology	3
FOR 442	Watershed Ecology & Mgmt.	3
EST 220	Urban Ecology	3
LSA 321	Ecological Applications	3

**SU Courses may be approved by consulting with your advisor.**

## ***Natural Science or Computing Science Courses***

This requirement is intended to broaden students' knowledge of environmental science. Students are required to take at least one Upper Division (300 or 400 level) course in Natural Science or Computing. The following is a list of courses students may select from. Other Upper Division Natural Science or Computing courses may be selected in consultation with your Advisor. Be sure you meet the prerequisites for a course before signing up for it.

### **Natural Science Courses**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
LSA 311	Natural Processes in Design & Planning	3
FOR 332	Forest Ecology	3
FOR 338	Meteorology	3
FOR 340	Watershed Hydrology	3
FOR 345	Introduction to Soils	3
EFB 303	Introductory Environmental Microbiology	4
EFB 326	Diversity of Plants	3
EFB 327	Adirondack Flora	3
EFB 336	Dendrology	3
EFB 342	Fungal Diversity and Ecology	3
EFB 345	Forest Health	3
EFB 352	Entomology	3
EFB 355	Invertebrate Zoology	4
EFB 384	Field Herpetology	3
EFB 388	Ecology of Adirondack Fishes	3
EFB 400	Toxic Health Hazards	3
EFB 413	Introduction to Conservation Biology	3
EFB 415	Ecological Biogeochemistry	3
EFB 440	Mycology	3
EFB 444	Biodiversity and Geography of Nature	3
EFB 445	Plant Ecology and Global Change	3
EFB 446	Ecology of Mosses	3
EFB 462	Animal Physiology: Environmental and Ecological	3

Course	Course Name	Credits
EFB 480	Principles of Animal Behavior	4
EFB 482	Ornithology	4
EFB 483	Mammal Diversity	3
EFB 485	Herpetology	3
EFB 486	Ichthyology	3
EFB 493	Wildlife Habitats and Populations	4

### Computing Science Courses

Course	Course Name	Credits
ESF 300	Introduction to Geospatial Information Technologies	3

Additional Courses may be approved by consulting with your advisor.

### Senior Synthesis Project

**All Environmental Studies students must complete a Senior Synthesis Project related to their Option, completed during their final year of study.** This experience allows for reflection upon completed coursework, real world problems, and research issues. The selection should be **carefully planned with the student's faculty advisor**, using the Environmental Studies learning objectives as guidance for each step of the planning and implementation process. **Planning should begin early in the junior year to prepare for completion of the synthesis project during the summer or the fall of senior year.** Students who have completed 90 credit hours of coursework may request approval of an internship for the summer between the junior and senior years. In general, there are **four Senior Synthesis Project alternatives**:

1. ***Environmental Studies Internship (EST 499)***: This is an opportunity for hands-on experience and application of skills and knowledge. This requires a pre-approved agreement with the host organization and College Internship Agreement Form and departmental materials signed by your Academic Advisor; a written internship report; and a supervisor evaluation, as described in Appendix A. Students register for the EST 499 course with their Advisor. **Note:** Pre-approved internship agreements are required prior to the end of the semester BEFORE doing the internship (e.g., internship agreement needed prior to the end of spring semester for a summer semester internship). Credits for internships must be **approved prior to** the start of the internship.
2. ***Senior Paper (EST 400)***: This is an opportunity for the student to define and develop scholarly written or digital products about a topic of interest with the supervision of a college faculty member. The work may be undertaken in the summer prior to the senior year. This alternative is described in Appendix B. Students register for an EST 400 course in the fall or spring semester. Some students have published their Senior Paper (usually with a professor), and this is suggested for very ambitious, skilled, and dedicated students, including those intending to attend graduate school. Students in the ESF Honors Program may utilize their Honors Research paper to satisfy the Senior Synthesis requirement. Students and Advisors should refer to the Honors Program materials later in this Handbook for details.

3. **400-Level Courses involving Synthesis Projects:** With their faculty advisor's and the course Instructor's approval, the student may use one of the following courses to fulfill the senior synthesis requirement: EST 426 (Community Planning and Sustainability), EST 427 (Environmental and Energy Auditing), and EST 493 (Environmental Communication Workshop). If one or more of these courses is a requirement for the option area, it cannot be used as a senior synthesis course (i.e., no double-counting).
4. **Advanced Coursework:** With the faculty advisor's and course instructor's approval, the student may select an applied project or introductory graduate course that synthesizes content from two or more Option courses. The selected course should include a "product," such as a term paper or team project report.

Carried out independently in consultation with the project supervisor, Synthesis Project results are shared with other Environmental Studies majors, program faculty, and the campus community through presentation of research-style posters in the Senior Seminar in Environmental Studies (see below). The project supervisor typically is the faculty advisor (EST 400 or 499) or another faculty member (EST 400).

### **Senior Seminar Course**

**EST 494, Senior Seminar in Environmental Studies**, provides Environmental Studies and EE&I majors a capstone experience in their last fall semester, pulling together their accomplishments over four years. Students will be asked to reflect on the Environmental Studies learning objectives in understanding environmental issues, knowledge gained through coursework and extracurricular activities (internships, research, etc.). Additionally, students prepare and present research-style posters on their Synthesis Projects. The Senior Seminar is a required course for all Environmental Studies and EE&I students.

### **Independent Study Courses**

Both EST 495 (Selected Readings in Environmental Studies) and EST 498 (Intro to Research Problems) are available to Upper Division students as an opportunity for independent study and research. NOTE: Neither EST 495 nor EST 498 may be used for completing the Senior Synthesis requirement.

EST 495 and 498 require students to propose a specific topic for study or research that is not available in conventional coursework at the College. They are not substitutes for other courses, but rather present opportunities for students to extend their knowledge of a subject area beyond general program requirements. Because the focus is on independent work, these courses provide less faculty supervision than regularly scheduled courses and therefore are suitable for highly motivated students only.

To schedule EST 495 or EST 498 courses, students should provide a written request to a faculty member identifying the intended topic of study, and a list or sample of readings to be completed.



The topic should match the instructor's area of expertise. Students should be aware that faculty are not required or even expected to offer independent study courses but will often do so if the student presents solid preparation for the proposed course. If the faculty member agrees to offer this course, he or she will provide a course authorization form that permits registration.

One hour of course credit is normally awarded for independent study based on the satisfactory completion of the equivalent of 45 hours of academically related activity by a well-prepared student. The instructor is responsible for providing initial study guidance, criticism, review, and the final evaluation of the student's performance. It is expected that the student will prepare a written plan of study including a description of the final product to be evaluated. This plan of study should be signed by both student and instructor prior to registration, with a copy placed in the student's advising file.

## Option in Environment, Communication and Society (ECS)

The Environment, Communication and Society Option focuses on the many ways that communication, broadly defined, intersects with environmental affairs. These include activism, media, education, public participation, and conflict resolution. In addition, the Option helps students explore the diversity of ways that environmental problems are understood, and ways that cultural meanings of nature are expressed, including through literature and the arts.

No matter where your career path leads, the critical value of having a strategic, systems-based, and skilled understanding of communication dynamics and processes cannot be underestimated. The Environment Communication and Society Option is based on the premise that it is through written, oral, and visual communication that humans determine their relationship with the rest of the planet and with each other concerning it. Therefore, the Option is committed to equipping students with increased knowledge and skills to contribute to the effectiveness of all aspects of environmental, civic, governmental, non-government organizations, and business communication.

We provide a broad-based foundation in environmental communication theory and application through core courses that all students in the Option take. Yet we know students have individual interests and plans, so the Option is flexible enough so students can choose Option courses and Option methods courses that make the most sense. Individual interests that students may pursue as part of this Option include literature of nature, environmental values and ethics, the meanings of nature, advocacy, collaboration, leadership and group processes, dispute resolution, mass media and popular culture, information use, environmental journalism, and environmental education/ interpretation.

The Environment Communication and Society Option is based on four key ideas:

- *Communication among Diverse Perspectives:* We seek to strengthen students' ability to identify and appreciate their own and others' ideological and cultural perspectives as expressed in written, oral, and visual discourse. This increases students' ability to better understand and participate in key ecological debates; work effectively with scientific, resource management, governmental and advocacy communities to address complex environmental issues; and build campaigns and educational programs.
- *Theory into Practice:* We place a primary emphasis on the application of theory so that students gain informed skills they can strategically use in diverse settings in non-government organizations, industry, government or wherever their professional lives take them. We highly value service learning, experiential learning, and field experiences as part of a student's program.
- *Critical Thinking:* We encourage students to think critically about cultural patterns, economic and political lives, ethics, risk, science, the mass media, popular culture, literature, and other means by which we humans socially construct our beliefs, attitudes, policies, and behaviors. We encourage students to especially think critically about ecological degradation, power, and beauty.
- *Preparing for the Long Haul:* We recognize the value of the "whole person" and reflect this in our emphasis on spirit, imagination, celebration, connection to the natural world, emotional and artistic expression, building an affirming community, and sharing reflections on the personal challenges environmental professionals face. We want students to connect with the sources of their own deepest passions.

## Environment, Communication and Society (ECS) Option Courses

An ECS Option Course is one that allows students to expand or deepen their understanding of those aspects and intersections of environment, communication, and society. It is in the selection of these courses that students can more deeply explore their individual interests. The following is a list of courses students may select from. Be careful to make sure that you meet the prerequisites for a course before signing up for it.

### *Option Requirement Overview*

Category	Course Name	Credits
Required	EST 390, EST 395, and EST 493	9
Methods	Two from Methods list below	6
Option Electives	Five Courses from the list below. <b>NOTE:</b> Limitations exist for Environmental Writing & Rhetoric (EWR) Minors	15
<b>Total Option Credits</b>		<b>30</b>

### *Option Required Courses*

Course	Course Name	Credits
EST 390	Social Processes and the Environment	3
EST 395	Public Communication of Science & Technology	3
EST 493	Environmental Communication Workshop	3

### *Option Methods Courses (two of the following)*

Course	Course Name	Credits
EWP 495 / EST 695	Environmental Journalism	3
EWP 420	Public Presentation Skills	3
EST 370	Introduction to Personal Environmental Interpretation Methods	3
EST 471	Non-Personal Environmental Interpretive Methods	3
ESF 300	Introduction to Geospatial Information Technologies	3

**Additional courses may be approved by consulting with your advisor.**

### *Option Elective Courses (five of the following)*

**For all ESC students, regardless of whether they are pursuing the EWR Minor**

Course	Course Name	Credits
EST 312	Sociology of Natural Resources	3
EST 353	Behavior Change and the Environment	3
EST 366	Attitudes, Values, and the Environment	3
EST 370	Introduction to Personal Environmental Interpretation Methods	3
EST 405	Gender, Culture, and the Environment	3
EST 415	Environmental Justice	3

Course	Course Name	Credits
EST 450	Sustainable Enterprise	3
EST 471	Non-Personal Environmental Interpretive Methods	3
EST 550	Environmental Impact Analysis	3
LSA 312	Place/Culture/Design	3
FOR 372	Fundamentals of Outdoor Recreation	3
EWP 394	The Art of Storytelling	3
EWP 450	Digital Storytelling	3
EWP 495/EST 695	Environmental Journalism	3
EWP 420	Public Presentation Skills	3

**For all ECS students NOT pursuing the EWR Minor**

Course	Course Name	Credits
EWP 300	Survey of Environmental Writing	3
EWP 311	Urban Environmental Literature	3
EWP 390	Literature of Nature	3
EWP 490	Contemporary Literature of Nature	3
EWP 494/696	Creative Non-Fiction in the Sciences	3

**Possible SU courses for all ECS students, regardless of them pursuing the EWR Minor**

Course	Course Name	Credits
CRS 338	Communication in Organizations	3
CRS 355	Political Communication	3
CRS 426	Persuasion	3
PAF 420	Interpersonal Conflict Resolution Skills	3
PSC 315	Media & Politics	3

**Additional courses may be approved by consulting with your advisor.**

EWP 300 and EST 395 should be taken early in the program cycle, typically in the fall and spring of junior year, respectively. Other courses may be taken in any sequence. Students should consult college catalogs and discuss other possibilities with their Advisors to support individual areas of interest. The most relevant courses at Syracuse University to look at include those offered by the departments of Communication and Rhetorical Studies, Political Science, and Sociology, respectively\*. The Program for Advanced Research on Conflict and Collaboration (PARCC, <http://www.maxwell.syr.edu/parcc.aspx>) also offers courses in conflict resolution methods and skills\*.

\*Students who choose to take courses from Syracuse University will be subject to an [accessory instruction fee](#).

# Typical Courses Sequence

This is a possible sequence for the Environment, Communication and Society Option. In consultation with your faculty advisor, you may adjust this sequence to suit your specific situation.

Year	Semester	Course	Credits
Junior	Fall	Ecology Course	3-4
Junior	Fall	EWP 407 Writing for Environmental Professionals (R)	3
Junior	Fall	EST 361 Diverse Histories of the American Env. Movement (R)	3
Junior	Fall	ECS Elective	3
Junior	Fall	EST 395 Public Communication of Science & Technology (R)	3
		<b>Total Semester Credits</b>	<b>15-16</b>
Junior	Spring	EST 321 Government and the Environment (R)	3
Junior	Spring	APM 391 Introduction to Probability and Statistics (R)	3
Junior	Spring	ECS Elective	3
Junior	Spring	EST 390 Social Processes and the Environment (R)	3
Junior	Spring	General Elective	3
		<b>Total Semester Credits</b>	<b>15</b>
Senior	Fall	Upper Division Computing or Natural Science Course	3-4
Senior	Fall	Senior Synthesis (R)	3
Senior	Fall	ECS Elective Course	3
Senior	Fall	ECS Method Course	3
Senior	Fall	EST 494 Senior Seminar in Environmental Studies (R)	1
Senior	Fall	General Elective	3
		<b>Total Semester Credits</b>	<b>16-17</b>
Senior	Spring		
Senior	Spring	EST 493 Environmental Communication Workshop (R)	3
Senior	Spring	ECS Elective Course	3
Senior	Spring	ECS Elective Course	3
Senior	Spring	ESC Elective Course	3
Senior	Spring	General Elective	3
		<b>Total Semester Credits</b>	<b>15</b>

## **Option in Environmental Policy, Planning and Law (EPPL)**

This Option is concerned with how environmental policies and plans are created, implemented, and contested. It emphasizes legislative, regulatory, and collaborative approaches to solving or managing environmental problems. Policies are guidelines for action such as laws, regulations, treaties, agreements, prescribed practices, professional standards, corporate strategies, operating procedures, and personal codes of conduct. Studies will focus on how policies come to be, how they are implemented, enforced, evaluated, affirmed, rejected, or revised. Environmental planning includes plan formulation to implementation. As environmental problems grow more complex and urgent, the need grows for professionals in government, advocacy, business, education and the law to have a sound understanding of the policy process in its many dimensions and a clear grasp of the interdependencies between ecological and social systems. Policy and planning approaches increasingly involve public-private collaborations of diverse actors and stakeholders that address the unique environmental, legal, social, and cultural components of the resource systems to be managed.

The Environmental Policy, Planning and Law Option promotes an understanding of the many facets of the policy process and the development of skills used within these processes, including:

- How policies and plans come into being (proposed, advocated, communicated, adopted, implemented, evaluated, reformed)
- Types of policies and plans (laws, regulations, economic incentives and disincentives, education, and communication)
- Scale (personal, local, state, national, international, global)
- Activities (industrial processes, consumer behavior, resource extraction and use, transportation, marketing, and social infrastructure)
- How society selects among competing aims (individual freedom, economic efficiency, social cohesion, safety and security and others)
- The role of politics and political ideology in policy making (conservatism, liberalism, environmental radicalism, deep ecology, government, and governance)
- The interaction between environmental policy and social justice (racism and the environment, feminism, indigenous and First Nations rights and perspectives, issues of globalism and global resource inequities)

Environmental Policy, Planning and Law graduates have career opportunities in all environmental sectors, working for federal, state and local governments, industry and consulting firms, and environmental non-government-organizations (NGOs). Many, either directly upon graduation or after a few years of work experience, go to graduate school in programs including law, public administration, planning, landscape architecture, and environmental management.

### ***Option Requirement Overview***

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
	Option Methods Courses (2)	6
	Option Electives (5)	15
	Environmental Law Course	3
	Environmental Planning Course	3
EST 550	Environmental Impact Analysis	3
	<b>Total Option Credits</b>	<b>30</b>

### ***Option Methods Courses***

Methods are tool-related topics that are used to analyze existing policies, to evaluate the need for new policies, and to facilitate effective collaborations. Below is a list of approved courses. **Your EPPL Option Advisor may substitute, without petition, other courses that they determine meets the analysis/ facilitation tool intent.** Students are strongly encouraged to take at least one Geographic Information Systems course.

### **ESF Courses**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
EST 370	Introduction to Personal Environmental Interpretation Methods	3
EST 427	Environmental and Energy Auditing	3
EST 471	Non-personal Environmental Interpretive Methods	3
ESF 300	Introduction to Geospatial Information Technologies	3
ERE 365	Principles of Remote Sensing	3
LSA 311	Natural Processes in Design and Planning	3
LSA 451	Comprehensive Land Planning	3

### **SU Courses – NOTE: Accessory Instruction Fee applies to SU courses**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
ANT 372	Issues in Intercultural Communication and Conflict	3
ANT 484	Social Movement Research Methods	3
GEO 361	Global Economic Geography	3
GEO 372	Political Geography	3
GEO 386	Quantitative Geographic Analysis	3

**Additional methods courses may be approved by consulting with your advisor.**

### ***Option Electives***

The courses listed on the following page are some of the multiple courses at ESF and SU that are policy focused\*. In addition, all Law courses listed below may also count as Policy, Planning and Law Option elective courses. Students are strongly encouraged to work with their Advisor to develop a coherent set of courses that provide breadth and depth suitable as a foundation for graduate study and/or entry-level professional positions. \*Students who choose to take courses from Syracuse University will be subject to an [accessory instruction fee](#).

## ESF Courses

Course	Course Name	Credits
EST 220	Urban Ecology	3
EST 312	Sociology of Natural Resources	3
EST 353	Behavior Change and the Environment	3
EST 366	Attitudes, Values & the Environment	3
EST 370	Introduction to Personal Environmental Interpretation Methods	3
EST 390	Social Processes and the Environment	3
EST 395	Public Communication of Science & Technology	3
EST 405	Gender, Culture, and the Environment	3
EST 415	Environmental Justice	3
EST 426	Community Planning and Sustainability	3
EST 427	Environmental and Energy Auditing	3
EST 450	Sustainable Enterprise	3
EST 471	Non-personal Environmental Interpretive Methods	3
EST 493	Environmental Communication Workshop	3
EFB 400	Toxic Health Hazards	3
EFB 405	Literature of Natural History	3
EFB 522	Biophysical Economics	3
ENS 519	Spatial Ecology	3
ERE 365	Principles of Remote Sensing	3
ESF 300	Introduction to Geospatial Information Technology	3
EWP 394	The Art of Storytelling	3
EWP 450	Digital Storytelling	3
FOR 333	Natural Resources Managerial Economics	3
FOR 372	Fundamentals of Outdoor Recreation	3
FOR 442	Watershed Ecology and Management	3
FOR 465	Natural Resources Policy	3
FOR 478	Wilderness and Wildlands Management	3
LSA 311	Natural Processes in Design and Planning	3
LSA 451	Comprehensive Land Planning	3

## SU Courses– NOTE: Accessory Instruction Fee applies to SU courses

Course	Course Name	Credits
ANT/GEO 405	Conservation and Management Protected Areas	3
ANT 407	Environment and Policy in the Tropics	3
ANT 414	Cities, Spaces, and Power	3
ANT 475	Culture and Disputing	3
ECN 365	The World Economy	3
GEO 353	Geographies of Environmental Justice	3
GEO 356	Environmental Ideas and Policy	3
GEO 383	Geographic Information Systems	3
GEO 388	Geographic Information and Society	3
GEO 573	The Geography of Capital	3



<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
PAF 416	Community Problem Solving	3
PAF 451	Environmental Policy	3
PSC 305	The Legislative Process and the U.S. Congress	3
PSC 308	The Politics of U.S. Public Policy	3
PSC 318	Technology, Politics, and Environment	3
PSC 328	American Social Movements	3
PSC 355	International Political Economy	3
PSC 365	International Political Economy of the Third World	3
AAS 346	Comparative Third World Politics	3
SOC 363	Urban Sociology	3
SOC 421	Population Issues	3
SOC 466	Organizations and Society	3

**Additional courses may be approved by consulting with your advisor.**

### ***Environmental Law Courses***

Legal processes play a critical role in the creation and implementation of environmental policies. All students must take at least one Law course and are encouraged to take additional offerings from the recommended list below:

### **ESF Courses**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
ESF 460	Land Use Law	3
FOR 487	Environmental Law and Policy	3
FOR 489	Natural Resources Law and Policy	3

### **SU Courses– NOTE: Accessory Instruction Fee applies to SU courses**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
LPP 255	Introduction to the Legal System	3
LPP 458	Environmental Law and Public Policy <sup>1</sup>	3
PSC 304	The Judicial Process	3
PSC 324	Constitutional Law I	3
PSC 325	Constitutional Law II (PSC 324 is an unofficial prerequisite)	3
PSC 352	International Law	3

**Additional courses may be approved by consulting with your advisor.**

## ***Environmental Planning Courses***

### **ESF Courses**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
EST 426	Community Planning and Sustainability	3
EST 471	Non-personal Environmental Interpretive Methods	3
FOR 372	Fundamentals of Outdoor Recreation	3
FOR 442	Watershed Ecology and Management	3
FOR 475	Human Dimensions and Recreation Visitor Management	3
LSA 311	Natural Processes in Design & Planning	3
LSA 451	Comprehensive Land Planning	3

### **SU Courses– NOTE: Accessory Instruction Fee applies to SU courses**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
ANT/GEO 405	Conservation and Mgmt. of Protected Areas	3
ANT 414	Cities, Spaces, and Power	3
PAF 416	Community Problem Solving	3

**Additional courses may be approved by consulting with your advisor.**

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<sup>1</sup> Since SU's LPP 485 this course is the same course as ESF's FOR 487 Environmental Law and Policy, students may only take LPP 458 if they are unable to take FOR 487.

## Typical Course Sequence

This is a *possible* sequence for the Environmental Policy, Planning and Law Option. In consultation with your faculty advisor, you may adjust this sequence to suit your specific situation.

Year	Semester	Course	Credits
Junior	Fall	Ecology Course	3-4
Junior	Fall	EWP 407 Writing for Environmental Professionals (R)	3
Junior	Fall	EST 361 Diverse Histories of the American Env. Movement (R)	3
Junior	Fall	EPPL Option Elective	3
Junior	Fall	EPPL Option Elective	3
		<b>Total Semester Credits</b>	<b>15-16</b>
Junior	Spring	APM 391 Introduction to Probability and Statistics (R)	3
Junior	Spring	EST 321 Government and the Environment (R)	3
Junior	Spring	EPPL Option Elective	3
Junior	Spring	EPPL Option Elective	3
Junior	Spring	General Elective	3
		<b>Total Semester Credits</b>	<b>15</b>
Senior	Fall	Upper Division Computing or Natural Science Course	3-4
Senior	Fall	EPPL Option Methods Course (GIS recommended)	3
Senior	Fall	EPPL Option Environmental Planning Course	3
Senior	Fall	EPPL Option Environmental Law Course	3
Senior	Fall	EST 494 Senior Seminar in Environmental Studies (R)	1
Senior	Fall	EST 550 Environmental Impact Analysis (R)	3
		<b>Total Semester Credits</b>	<b>16-17</b>
Senior	Spring		
Senior	Spring	Senior Synthesis (R)	3
Senior	Spring	EPPL Option Elective	3
Senior	Spring	EPPL Option Method Course	3
Senior	Spring	General Elective	3
Senior	Spring	General Elective	3
		<b>Total Semester Credits</b>	<b>15</b>

## Option in Natural Systems Applications (NSA)

The Natural Systems Applications Option is designed for students interested in careers at the interface of natural science, social, and economic issues. This Option provides solid background in the natural sciences pertinent to our resources and ecosystems as well as a foundation in the social sciences. In contrast to the traditional science programs, this Option emphasizes the interaction of both natural sciences and societal issues. Specific goals are:

- Provide a sound background in both biophysical and social science
- Foster a broad, systems view of our society, natural resources, and ecosystems (or some other level of natural science such as an endangered population or microbial process or biotechnology) affected by human activity
- Develop a capacity to make independent judgments of environmental issues based on scientific principles and socio-political understanding; and
- Enhance effective skills in communicating scientific/technical issues of natural sciences in socio-political settings.

Students in this Option prepare for careers dealing with many environmental issues of society including regulatory, consulting, and advisory positions in governmental agencies as well as employment in education or in the private sector such as environmental consulting firms and activist organizations. Many of these contexts demand practical solutions that require sound judgment of natural scientific facts against the realities of our society. Graduates of the NSA option will do best in careers that demand articulate communication skills supported by scientific understanding. Many of our students go on for advanced degrees in science, law or business. Some become university teachers or researchers. Students in this Option may wish to consider also taking ESF's Renewable Energy Minor; both together will prepare students well for a job or graduate studies in the energy fields.

### *Option Overview*

Category	Description	Requirement	Credits
Field Methods	GIS	ESF 300	3
Field Methods	Scientific Breadth	One course required from scientific breadth	3
Natural Science Sub-Option	Natural Systems	One upper-division course required	3
Natural Science Sub-Option	Environmental Quality	One upper-division course required	3
Social Science	Policy and Decision Making	3 upper-division classes required	9
Social Science	Communication and Interpretation	2 upper-division classes required	3
Social Science	Critical Perspectives	1 upper-division classes required	3
		<b>Total Option Credits</b>	<b>30</b>

### *Field Methods*

ESF 300 Introduction to Geospatial Information Technologies or equivalent (required) and one upper-division course for scientific breadth. Suggested courses are as follows:

Course	Course Name	Credits
EFB 303	Introduction to Environmental Microbiology	3
EFB 352	Entomology	3
EFB 445	Plant Ecology & Global Change	3
EFB 326	Diversity of Plants	3
EFB 355	Invertebrate Zoology	3
EFB 483	Mammal Diversity	3
EFB 336	Dendrology	3
EFB 440	Mycology	3
EFB 486	Ichthyology	3
EFB 340	Forest Shade Tree Pathology	3
EFB 443	Plant Virology	3
EFB 505	Microbial Ecology	3

Additional courses may be approved by consulting with your advisor.

### ***Natural Science Sub-options***

One upper-division class from each sub-option is required. Suggested courses are as follows:

#### **Natural Systems and Management Sub-Option**

Course	Course Name	Credits
EFB 390	Wildlife Ecology & Management	3
EFB 413	Conservation Biology	3
EFB 415	Ecological Biogeochemistry	3
EFB 424	Limnology	3
EFB 444	Biodiversity and Geography of Nature	3
EFB 445	Plant Ecology and Global Change	3
EFB 487	Fisheries Science & Management	3
EFB 491	Applied Wildlife Science	3
EFB 493	Wildlife Habitats and Population	3
EFB 516	Ecosystems	3
EFB 518	Systems Ecology	3
EFB 519	Geographic Modeling	3
EFB 523	Tropical Ecology	3
EFB 542	Freshwater Wetland Ecosystems	3

#### **Environmental Quality Sub-Option**

Course	Course Name	Credits
EFB 351	Forest Entomology	3
EFB 400	Toxic Health Hazards	3
EFB 439	Forest Health Monitoring	3
EST 550	Environmental Impact Analysis	3
FOR 334	Silviculture	3

Additional courses may be approved by consulting with your advisor.

### ***Social Science***

Take three policy and decision-making courses (9 credits), two communication and interpretation courses (6 credits) and one critical perspectives course (3 credits). Suggested classes are as follows:

### **Policy and Decision-Making**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
EST 426	Community Planning & Sustainability	3
EST 427	Environmental & Energy Auditing	3
EST 450	Sustainable Enterprise	3
EST 460	Land Use Law	3
EST 550	Environmental Impact Analysis	3
FOR 451	Comprehensive Land Planning	3
FOR 465	Natural Resources Policy	3
FOR 487	Environmental Law & Policy	3
FOR 489	Natural Resources Law	3

### **Communication and Interpretation**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
EST 370	Introduction to Personal Environmental Interpretation Methods	3
EST 395	Public Comm. Of Science and Technology	3
EST 471	Non-Personal Environmental Interpretation Methods	3
EST 493	Environmental Comm. Workshop	3
EWP 394	The Art of Storytelling	3
EWP 450	Digital Storytelling	3
FOR 372	Fundamentals of Outdoor Recreation	3

### **Critical Perspectives**

<b>Course</b>	<b>Course Name</b>	<b>Credits</b>
EST 312	Sociology of Natural Resources	3
EST 353	Behavior Change and the Environment	3
EST 366	Attitudes, Values, and the Environment	3
EST 390	Social Processes and the Environment	3
EST 405	Gender, Culture, and the Environment	3
EST 415	Environmental Justice	3

**Additional courses may be approved by consulting with your advisor.**

***Recommended Senior Synthesis Advanced Courses:*** NSA students pursuing the advanced coursework Option should consider the following:

EFB 400 Toxic Health Hazards  
 EFB 518 Systems Ecology  
 EFB 522 Biophysical Economics

## Typical Course Sequence

This is a *possible* sequence for the Natural Systems Applications Option. In consultation with your faculty advisor, you may adjust this sequence to suit your specific situation.

Year	Semester	Course	Credits
Junior	Fall	EFB 320 General Ecology (R)	4
Junior	Fall	EST 361 Diverse Histories of the American Env. Movement (R)	3
Junior	Fall	NSA Sub-option	3
Junior	Fall	NSA Scientific Breadth Option	3
Junior	Fall	NSA Sub-option Natural Systems and Management	3
		<b>Total Semester Credits</b>	<b>16</b>
Junior	Spring	EWP 407 Writing for Environmental Professionals (R)	3
Junior	Spring	EST 321 Government and the Environment (R)	3
Junior	Spring	APM 391 Introduction to Probability and Statistics (R)	3
Junior	Spring	NSA Sub-option – Environmental Quality	3
Junior	Spring	General Elective	3
		<b>Total Semester Credits</b>	<b>15</b>
Senior	Fall	Upper Division Computing or Natural Science Course	4
Senior	Fall	GIS course (R)	3
Senior	Fall	NSA sub-option	3
Senior	Fall	NSA sub-option	3
Senior	Fall	EST 494 Senior Seminar in Environmental Studies ®	1
Senior	Fall	Senior Synthesis (R)	3
		<b>Total Semester Credits</b>	<b>17</b>
Senior	Spring		
Senior	Spring	NSA Option Policy Course or Law Course	3
Senior	Spring	NSA Option Focus Area Course	3
Senior	Spring	NSA Option Focus Area Course	3
Senior	Spring	General Elective	3
Senior	Spring	General Elective	3
		<b>Total Semester Credits</b>	<b>15</b>

# Bachelor of Science in Environmental Education and Interpretation

The Environmental Education and Interpretation Program inspires students to discover and design impactful ways to connect diverse learners with science and with natural and built environments. Students collaborate with communities to develop experiential educational programs and materials that create meaningful learning. These inclusive approaches foster environmental literacy, stewardship, and community engagement in ways that create a more equitable, sustainable future. Both ecological and social sciences form the core of student learning.

The program prepares learners for non-formal and informal education and interpretation positions with a wide array of potential employers. Graduates of this program have found richly satisfying careers in nature centers, zoos, aquaria, urban parks, regional park systems, wilderness areas, federal/state agencies such as the National Park Service or the NYS Department of Environmental Conservation, nonprofit organizations focused on conservation and/or environmental justice, museums, and travel/ecotourism industries. This program can also serve as a valuable springboard for participants to enter graduate programs in K-12 science teaching, early childhood education in nature, or other relevant areas.

## EE&I Program Learning Outcomes

By the time students have completed requirements for the Bachelor of Science in **Environmental Education and Interpretation** degree at ESF, they will have gained competency in at least five areas:

- 1) **Environmental Literacy:** demonstrate an awareness, knowledge, and appreciation of ecological inquiry, processes, ecosystems and complex environmental, social and justice issues.
- 2) **Interdisciplinary Synthesis and JEDAI (Justice, Equity, Diversity, Accessibility, and Inclusion)** demonstrate the integration of many disciplines and fields that intersect with EE&I. This necessitates the inclusion of diverse knowledge and values systems (e.g., Indigenous Science, local and traditional knowledge, place-based and bioregional knowledge).
- 3) **Community Engagement:** demonstrate abilities to identify diverse communities, actors, and knowledge systems in environmental and social issues; facilitate co-learning among these diverse learners and *with* communities.
- 4) **Education communications and Evaluation:** demonstrate knowledge and application of education communication skills (e.g., lesson and program planning, technologies, program implementation, creative/humanities responses to the environment, inquiry-based science education, interpretative materials and exhibit design and writing); plan and conduct evaluation; critique/adapt/use existing environmental and interpretive educational sources.



- 5) **Reflective Scholarship and Practice:** demonstrate understanding of the evolution of EE&I and theories which underpin non-formal education; employ critical thinking and reflection (personal and professional) to chart courses for one's place in these fields and for the professions.

### **Lower Division Courses**

The first two years of the Bachelor of Science in Environmental Education and Interpretation program consists of two broad categories of courses. **General education** courses provide students with knowledge and skills that are useful and important for all educated persons regardless of their profession. Such courses also help lay the intellectual foundation for successful completion of advanced courses, which in turn can lead to a specific profession. **Professional courses** provide students with direct preparation for specialization in environmental education and interpretation and career opportunities. Transfer students wishing to receive credit towards the B.S. in Environmental Education and Interpretation degree for courses completed at their previous institution(s) should talk to their academic advisor promptly.

- **1<sup>st</sup> and 2<sup>nd</sup> year academic advisor: Erin Tochelli** (232 Marshall Hall. Tel. 315-470-6943, email [ertoachel@esf.edu](mailto:ertoachel@esf.edu)), provides professional advising for first and second year, and transfer students in the B.S. Environmental Education and Interpretation program.
- Students considering a graduate degree in K-12 teaching credentials should meet with their advisor during the 3<sup>rd</sup> and 4<sup>th</sup> year to ensure that the state-required minimum of 30 credits in biological courses is met.

### ***General Education Options***

Choose one of the three categories, minimum of three credit hours each. See webpage for choices: [General Education Courses](https://www.esf.edu/registrar/gened.php) (<https://www.esf.edu/registrar/gened.php>)

*World History and Global Awareness, The Arts, World Language*

### ***General Education Required***

*Diversity, Equity, Inclusion and Social Justice, three credit hours required.*

### ***Open Electives***

In addition to core requirements and option courses, students are permitted to take 18 open elective credits in any area. At least nine credit hours should be at or above the 300-level.

### ***Summary***

<b>Course</b>	<b>Credits</b>
General Education Course	3
Directed Electives	30
Core Curriculum Courses	69
Open Electives	18
SUNY DEI/SJ	3
Total Required credits for degree	123

### **Typical Schedule**

Following this schedule would allow a ***four-year student*** to complete all degree requirements. Variations should be discussed with your curriculum advisor. Schedules of ***transfer students*** may vary significantly.

### **First Year**

#### **Fall Semester**

<b>Course</b>	<b>Credits</b>
EST 132 Orientation to Environmental Studies	1
EST 133 Introduction to Environmental Studies	3
EFB 101 General Biology 1: Organismal Bio & Ecology	3
EFB 102 General Biology 1 Laboratory	1
EWP 190 Writing and the Environment	3
APM 104 Precalculus OR APM 105 Survey of Calculus 1	3-4
<b>Total Semester Credits</b>	<b>14-15</b>

#### **Spring Semester**

<b>Course</b>	<b>Credits</b>
EFB 103 General Biology II: Cell Biology & Genetics	3
EFB 104 General Biology II Laboratory	1
EFB 120 Global Environment	3
EWP 290 Research Writing & Humanities	3
General Education	3
DEISJ	3
Total Semester Credits	<b>16</b>

## Second year

### Fall Semester

Description	Credits
EST 361 Diverse Histories of the American Environmental Movement	3
EFB 210 Diversity of Life	3
EFB 320 General Ecology	4
FCH 150 General Chemistry 1 Lecture	3
FCH 151 General Chemistry 1 Laboratory	1
<b>Total Semester Credits</b>	<b>14</b>

### Spring Semester

Description	Credits
EST 471 Non-personal Environmental Interpretation Meths.	3
EFB 211 Diversity of Life II	3
APM 391 Probability and Statistics	3
FOR 372 Fundamentals of Outdoor Recreation	3
Open Elective	3
<b>Total Semester Credits</b>	<b>15</b>

## Junior Year

### Fall Semester

Description	Credits
EST 370 Intro to Pers. Env. Interp. Methods	3
Open Elective	3
Directed Elective	3
Directed Elective	3
Open Elective	3
<b>Total Semester Credits</b>	<b>15</b>

### Spring Semester

Description	Credits
EST 415 Environmental Justice	3
Directed Elective	3
Directed Elective	3
Directed Elective	3
Open Elective	
<b>Total Semester Credits</b>	<b>15</b>

**SUMMER between 3<sup>rd</sup> (junior) and 4<sup>th</sup> (senior) years – EST 499 Environmental Studies Internship (enroll for one credit in summer and two credits in Fall semester)**

## Senior Year

### Fall Semester

Description	Credits
EST 444 Creative Responses to the Environmental (online)	3
EST 499 Internship in Env Studies*	2-3
EST 494 Senior Seminar	1
Directed Elective	3
Directed Elective	3
Open Elective	3
<b>Total Semester Credits</b>	<b>15-16</b>

### Spring Semester

Description	Credits
EST 407 Assessment for Env Programs	3
Directed Elective	3
Directed Elective	3
Open Elective	3
<b>Total Semester Credits</b>	<b>15</b>

**\*Potential summer courses (ideally between Junior and Senior years)**

EST 499 – Environmental Studies Internship

Directed Electives (see courses indicated as Maymester, Summer Courses, or CLBS – Cranberry Lake Biological Station)

### Directed Electives

**Note:** courses offered during Maymester or at Cranberry Lake Biological Station (CLBS) are indicated below.

#### A. Conservation Biology and Resource Management

At least 6 credit hours must be in the subject area of conservation biology and management. Allowable courses are listed below. The list may vary from year to year.

Course	Course Name	Credit	Semester
EFB 370	Population Ecology and Management	3	S
EFB 390	Wildlife Ecology & Management	4	F
EFB 413	Introduction to Conservation Biology	4	S
ESF 423	Marine Biology	4	S even yrs.
ESF 487	Fisheries Science and Management	3	F
EST 220	Urban Ecology	3	F
FOR 332	Forest Ecology	4	F
FOR 404	Ecotourism Abroad	3	S
FOR 475	Recreation Behavior and Management	3	F
FOR 476	Ecotourism and Nature Tourism	3	F

### **B. Advanced Communication**

At least 6 credit hours must be in the subject area of advanced communication. Allowable courses are listed below. The list may vary from year to year.

Course	Course Name	Credit	Semester
EST 395	Public Communication of Science and Technology	3	S
EST 493	Environmental Communication Workshop	3	S
EWP 390	Literature of Nature	3	F, S
EWP 394	The Art of Storytelling	3	F
EWP 407	Writing for Environmental and Science Professionals	3	F, S
EWP 420	Public Presentation Skill	3	F, S
EWP 450	Digital Storytelling	3	F, S
EWP 494	Creative Non-fiction in the Sciences	3	S
LSA 300	Digital Methods and Graphics 1	3	F

### **B. Advanced Environmental Education & Interpretation**

At least 3 credit hours must be in the subject area of advanced interpretation. Allowable courses are listed below. The list may vary from year to year.

Course	Course Name	Credit	Semester
EST 333	Inquiry-Based Science Education	3	S - Online
EST 472	Natural History Museums and Modern Science	3	Maymester
EST 474	Advanced Interpretation and Environmental Ed.	3	S

### **C. Ecosystem and Organismal Diversity**

To encourage breadth in organism-level biology, students must complete 12 credit hours in any combination from this list.

#### **1. Environmental Biology**

Course	Course Name	Credit	Semester
EFB 202	Ecol. Monitoring and Bio Assessment	3	CLBS

## 2. Earth Sciences

Course	Course Name	Credit	Semester
EST 231	Environmental Geology	3	S
FOR 338	Meteorology	3	S
FOR 340	Watershed Hydrology	3	S
FOR 345	Introduction to Soils	3	F
FOR 442	Watershed Ecology and Management	3	F

## 3. Diversity of Microorganisms

Course	Course Name	Credit	Semester
EFB 303	Introductory Environmental Microbiology	4	F
EFB 340	Forest and Shade Tree Pathology	3	S
EFB 342	Fungal Diversity and Ecology	3	CLBS
EFB 428	Mycorrhizal Ecology	3	F even yrs.
EFB 440	Mycology	3	F

## 4. Diversity of Plants

Course	Course Name	Credit	Semester
EFB 326	Plant Evolution, Diversification & Conservation	3	S
EFB 327	Adirondack Flora	3	CLBS
EFB 336	Dendrology	3	F
EFB 337	Field Ethnobotany	3	CLBS
EFB 435	Flowering Plants: Diversity, Evolution, Systematics	3	F
EFB 446	Ecology of Mosses	3	S
EFB 496	Flora of Central NY	3	Maymester
EFB 496	Wetland Plants & Communities of Adirondacks	3	CLBS

## 5. Diversity of Invertebrate Animals

Course	Course Name	Credit	Semester
EFB 351	Principles of Forest Entomology	3	S
EFB 352	Elements of Entomology	3	F
EFB 355	Invertebrate Zoology	3	S
EFB 453	Parasitology	3	F
EFB 554	Aquatic Entomology	3	F

## 6. Diversity of Vertebrate Animals

<b>Course</b>	<b>Course Name</b>	<b>Credit</b>	<b>Semester</b>
EFB 388	Ecology of Adirondack Fishes	3	CLBS
EFB 482	Ornithology	4	S
EFB 483	Mammal Diversity	4	F
EFB 484	Winter Mammalian Ecology	3	S -Newcomb
EFB 485	Herpetology	3	S
EFB 486	Ichthyology	3	S

#### **D. Diversity, Equity, Inclusion, and Social Justice**

At least 3 credit hours are required in this subject area related to the inclusion of diverse perspectives in Environmental Education and Interpretation.

<b>Course</b>	<b>Course Name</b>	<b>Credit</b>	<b>Semester</b>
EST 140	Introduction to Native Peoples, Lands and Cultures	3	S
EST 204	Diversity and Knowledge of the environment	3	F
EST 366	Attitudes, Values, and the Environment	3	F even yrs.
EST 205	Identity, Culture, Environment	3	F/Sp

**Total Minimum Credits for Degree: 123**

## Additional Departmental Resources

In addition to this Handbook, please consult the following website:

- [Department of Environmental Studies \(https://www.esf.edu/envstudies/\)](https://www.esf.edu/envstudies/)

Timely e-mail announcements are made via the ES-Majors e-mail listserv.

*Environmental Studies Departmental Student Organizations (see [ENGAGE](https://engage.esf.edu) for schedule of meetings <https://engage.esf.edu>)*

### ***ESSO – Environmental Studies Student Organization***

The [Environmental Studies Student Organization](https://engage.esf.edu) (ESSO) helps build a common identity for students in the Environmental Studies Department by providing a medium for student and faculty interaction and a means to represent student interests. The basic goals of the ESSO are to engage the ESF student body and to provide a unified voice for Environmental Studies students. The organization promotes participation and student activity within the major and educates incoming students and fellow ESF students about Environmental Studies. For further information, see: <https://engage.esf.edu/organization/esfesso>

### ***SEEC - Student Environmental Education Coalition***

The purpose of SEEC is to increase environmental awareness through on- and off-campus education. The goal of environmental awareness is to understand the effects of our individual and collective actions on the global environment.

### ***Program Assessment***

The Department of Environmental Studies is committed to ongoing assessment and improvement of all its academic programs. Accordingly, data will be periodically collected at the beginning, end, and mid-points throughout this and other programs, with the purpose of contributing to the evaluation of program effectiveness and to assist in program improvement.



## Appendix A: EST 499 Internship

An internship (EST 499) is required for those in the Environmental Education and Interpretation program. Doing an internship (EST 499) is one choice for Environmental Studies majors to fulfill the Senior Synthesis Project requirement. Internships are an excellent integrative experience and should be scheduled during the **end of your 3<sup>rd</sup> (junior) year**, during the summer between third and fourth years, or at the **beginning of your 4<sup>th</sup> (senior) year**.

While most individual courses concentrate in a disciplinary area, few environmental problems are resolved without integrating knowledge from different fields. The internship gives students the opportunity to work in a real-life situation in which knowledge and skills from previous courses are applied.

An internship experience is an opportunity to use skills and knowledge learned from courses in a professional work/occupational setting. These experiences can be either paid or unpaid depending on the internship. To be considered for internship credit, the experience **must have the following items designated before the internship starts**:

- 1) **ESF Internship Registration and Agreement Form** Submitted for review to the site supervisor and faculty sponsor (Academic Advisor) This must be completed and submitted to the Registrar (signed by all parties) BEFORE you begin work. This is a SUNY requirement.
- 2) **ES Departmental Internship Learning Plan** – provides additional details for your Advisor; this includes anticipated work schedule that allows you to earn credit hours that coordinate with the number of hours worked (Note: assignment of credit is made according to ESF's policy that three hours of academically-related work per week for a 15-week semester = 45 hours = the equivalent of 1 credit hour). An internship must be at least 3 credits to be considered for meeting degree program credit requirements. Three credits = at least 135 hours of work experience.)

**You CANNOT receive credit for a 499 internship experience retroactively!**

Completion of the following assignments is required to receive a grade:

1. **Weekly logs**, explaining what activities/work you have done
2. **SUMMER ONLY – Final Progress Report** – brief summary of your activities and learning
3. **Internship Evaluation Form** (completed by the site supervisor) – Requested by your Faculty Advisor at the end of the internship.
4. **Internship Reflection and Synthesis Paper**– (10 pages, at least) Due by the end of the semester (can be submitted earlier if internship is completed before the end of the semester). Discuss with your EST 499 Faculty Sponsor (your advisor); they may ask you to do a detailed outline for this paper, before you write the full reflection.

**Finding an appropriate internship and preparation of an EST 499 Internship Registration and Agreement is the responsibility of the student.** This process begins by meeting with your

faculty Academic Advisor early in your 3<sup>rd</sup> year to discuss when you will complete the internship work and complete the Internship Reflection and Synthesis Paper. They may be able to steer you to an organization or agency that has accepted interns with your professional focus and interests, but faculty are not expected to find an internship for you. Your Faculty Advisor is also responsible for reviewing your internship agreement to make sure the internship is suitable for EST 499. Finding an internship takes time, so start the process early. **You may only sign up for EST 499 if an internship agreement has been established.**

To assist in your internship search, take advantage of the [ESF Career Services](#) office, which provides support for finding and successfully completing an internship. Students should also sign up for [Handshake](#) to view job postings and make appointments with Career Services staff. Attend career/job fairs each semester. Students should explore interests and career opportunities through a variety of resources they provide. Internship opportunities exist for students in all majors. Please visit their website: <https://www.esf.edu/career/students/internships.php>

The internship is just as much a part of your degree program as classroom instruction. It must be carefully planned in order to ensure that it meets your educational objectives. The EST 499 Internship Registration and Agreement Form AND the ES department's Internship Learning Plan are the formal agreements that serve as the basis for preparing, conducting and evaluating your internship.

Internships do not always fall neatly into the academic calendar, and the process of finding an internship, completing the paperwork, working the hours, and writing the paper may take place over three semesters.

Here are some recommended milestones to guide your process. MOST students opt for the timing shown in the shaded blocks below.

<b>Timeline:</b>	<b>When student submits to their Faculty Sponsor (Academic Advisor) the Internship Agreement and Registration Form and additional information for the Dept of ES:</b>	<b>When student takes the course:</b>
Fall Advising Week of 3 <sup>rd</sup> (junior) Year	[Conversation with Advisor about when and where to do internship]	
Least Common and least preferring timing: Primarily between Jan 1 and May 1 of their JUNIOR (3 <sup>rd</sup> ) Year*	Decide during Fall Advising Week., and submit Internship Agreement forms by Nov 15	Take 3 credits in Spring
If a student plans to complete their hours PRIMARILY in Summer between JUNIOR AND SENIOR YEAR May 15 and Sept 1*	Submit Internship Agreement forms before April 15 (best to discuss details during Spring Advising Week)	Take 1 credit of EST 499 in Summer, and 2 credits in Fall
Primarily in Fall OF SENIOR YEAR between Aug 15 and December 20	Submit forms before the Last Day to Add Classes, or no later than Sept 15	Take 3 credits of EST 499 in Fall
Least preferred timing: Spring of Senior year	Submit forms by Nov 15	Take 3 credits in spring

\*SUNY requires that a student working on their internship during the summer MUST register for a minimum of 1 credit in the summer.

\*\*Note: to be ready for EST 494 Senior Seminar in Fall of their last year, EST 499 is ideally completed before beginning of that Fall semester.

**ES Departmental Internship Learning Plan (to supplement the college form for Registration)**

- 1. Your Name and Major**
- 2. Internship Title:** Please use a descriptive yet concise title.
- 3. Duration of Internship, Start and End Dates:** How long will the internship be? (If it takes more time than estimated, an extension of up to one semester may be given and credit will be awarded when it is completed.)
- 4. Anticipated Work Schedule:** The field supervisor and student establish an anticipated regular work schedule. This should include the number of hours to be worked each week.
- 5. Total Hours of Internship Work:** # of hours per week multiplied by the # of weeks.
- 6. Credit Hours:** The internship requirement is a minimum 135 hours (equal to 3 credit hours of academically related work). Normally no more than three credit hours of internship should be included to meet EST 499 requirements. Check with your Site Supervisor to make sure that this number of work hours can be achieved.
- 7. Necessary Skills and Previous Experience:** What skills are necessary to fulfill the scope of work? In what way have you prepared yourself to provide these skills? Have you studied this topic before? List course numbers where appropriate. Or have you developed the interest on your own? To what extent?
- 8. Support Being Provided:** What kind of guidance will the site supervisor provide? How often will you meet? What will be their responsibilities in arranging for the use of resources and equipment? You and the Site supervisor should be satisfied with the exact terms of the Agreement before signing the cover sheet. Your Faculty Sponsor (your Academic Advisor) will also review to make sure this is suitable.

## SUNY ESF Department of Environmental Studies

### Internship Evaluation Form

**Supervisor:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Student:** \_\_\_\_\_

*Please rate the student intern on each of the characteristics listed below: (4) Outstanding, (3) Above Average, (2) Average, (1) Unsatisfactory or (N/A) Unable to Judge.*

1. Ability to learn \_\_\_\_\_
2. Interest \_\_\_\_\_
3. Preparation of tasks and assignments \_\_\_\_\_
4. Initiative: desire and willingness to take on new assignments \_\_\_\_\_
5. Quality of work performed \_\_\_\_\_
6. Acceptance of work performed \_\_\_\_\_
7. Reaction to criticism \_\_\_\_\_
8. Cooperation: willingness to work effectively with others \_\_\_\_\_
9. Dependability: working through an assignment to completion \_\_\_\_\_
10. Judgement \_\_\_\_\_
11. Communication skill \_\_\_\_\_
12. Potential for further development in the field \_\_\_\_\_
13. Creativity and/or resourcefulness \_\_\_\_\_
14. Degree in which the intern accomplished the internship objectives \_\_\_\_\_
15. Overall evaluation of the intern's performance \_\_\_\_\_

1. Did the intern fulfill the number of working hours specified for the internship period?

2. Were your expectations of the intern met, exceed, or not met?

3. In what ways? Please comment on the student's overall performance, including any strengths or weaknesses you feel are important.)

4. Did you find the College staff helpful?

5. In what ways? (Please comment or make suggestions regarding improvement of the program and/or its service to your organization.)

6. Would you be willing to host another such intern in the future? Why?

**Site Supervisor Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Organization:** \_\_\_\_\_

**Please email or mail this completed internship evaluation to the Faculty Sponsor listed on the Internship Registration and Agreement Form you signed prior to the Internship.**

## Required Internship Reflection and Synthesis Paper Details

**Strongly suggested:** share a detailed outline with citations several weeks before the due date (approximately week 6 of a semester); have your Faculty Sponsor provide feedback.

Paper format requirements:

- 2500 words (about 10 pages, double-spaced) + the References Cited
- 12 pt. Times New Roman, double-spaced, 1" margins, page numbers
- MS word document (not a pdf).

**Paper Contents** – the paper should have the following **sections/headings**.

1. **Your name, Title of your internship, dates**
2. **Introduction** – short and direct. Explain the purpose of the paper (i.e. “The purpose of this paper is to....”). Tell the name and location of the internship; make a statement about yourself and this internship (this is your thesis); describe how the paper will roll out
3. **Background** (on organization, and site) – describe the organization and site of your internship. Use the site’s website to get information, such as the organizational mission (be sure to cite all references). If your site is a government agency, describe how it fits in with the organization of government.
4. **Job description** – Describe the job based on the job description presented when you applied for or were hired for, and don’t forget to review your Internship Registration and Agreement Form. What activities did you do, what experiences did you have?
5. **Expected Learning Outcomes and Experiences** – what knowledge, skills and experience did you hope to obtain?
6. **Summary of Activities** – Describe your day-to-day activities on the job. You can organize this in various ways. Examples: By project (e.g., a campaign, a conference presentation, a report), by type of work (e.g., clerical, outreach, public facing, or executive support), or chronologically (this is especially effective if the job is bound by a season). You may reference support materials, trainings, websites or surveys and include links or docs in an Appendix. (Please do not include everything in the body of this section!)
7. **Actual Learning Outcomes (and their relationship to my Major)**– Look at the Undergraduate Handbook to find the Program Learning Outcomes for your Major. Describe what experience you actually obtained. This section is the “heart” of your

Reflection and Synthesis – explain what you learned in the internship and how it applies to what you learned in your major? How has your coursework prepared you to understand and link to the professional work you described in part 6, above. How did your experience affect your career journey (if at all)? Were there surprises? What lessons related to the Program Learning Outcomes for your major will be lasting lessons for you?

8. **Closing:** Keep it short. Recap what you accomplished in your paper, and restate your thesis.
9. **References Cited** --USE APA in-line citations where appropriate. Please provide a References Cited section, listing all references used in this paper.



## Appendix B: EST 400 Senior Paper

A Senior Paper or Project (EST 400) provides an additional opportunity for Environmental Studies Seniors to complete their program requirement for a 3 credit-hour Senior Synthesis. How to fulfill this required Senior Synthesis three credits should be discussed in advance with your faculty advisor. The Senior Paper/ Project will be on an environmental subject and completed according to the guidelines below.

This experience is intended to provide an opportunity for synthesis of the student's Environmental Studies education with an emphasis on learning within the student's Option area. As such, it depends on prior learning in other courses and is normally completed in the final semester of study.

### Guidelines

- A. *Work required:* To complete the requirements for this course, students must undertake the effort and produce a quantity of work that is required in a typical advanced 3 credit hour Environmental Studies course (an average of 3 hours of work per week over a 15-week semester). The work must also be original and must not have been developed as part of another earlier course.
- B. *Paper/Project Options:* There are three ways to pursue the Senior Paper:
  - 1. A literature-based paper. In this case, the student researches the literature on a specific topic or question related to their Option area and produces a literature review style paper that makes an argument about what is known on the topic.
  - 2. A primary research paper. In this case, the student conducts a piece of original research on a specific topic related to their Option area and produces a journal article style paper. Care must be exercised if working with human subjects as the research may be subject to review by the IRB.
  - 3. A project. In this case, the student undertakes a creative or community-based project related to their Option area. Examples of creative projects include videos, art works, creative writing, etc. Examples of community-based projects include habitat conservation initiatives, public education projects, policy outreach, etc. There are many possibilities here, but care must be exercised in the choice of project and its ramifications for the student and any community stakeholders. In addition to undertaking the project, the student must provide a brief written report on the project that explains how the project demonstrates Synthesis in ES.
- C. *First steps:* Students should begin by discussing possible paper topics or projects with their Advisor and/or with other faculty members familiar with the subject area. Through these conversations, the student, the Advisor, and other relevant faculty members should agree on a topic, the details of the paper/project, and a timetable for completion. **Note:**

The Advisor is not required to supervise the Senior Paper/Project. Any faculty member can do so, if they agree to.

- D. *Memorandum of agreement*: Based on conversations with the Advisor and/or another relevant faculty member who has agreed to supervise the paper/project, the student should draft a memorandum of agreement about the paper/project. This should include the following:
1. Title of the paper/project
  2. Name and contact information for the student and the supervisor
  3. Description of the paper/project
  4. Explanation of how the paper/project will represent a synthesis of what has been learned in the program
  5. Learning objectives for the paper/project
  6. Timeline for the phases of the research/production and monitoring of progress
  7. Expected deliverables that will be produced and used as the basis for grading the paper/project

The supervising faculty member and the student will then work on a final version of the memo of agreement which should be signed well in advance of the registration deadline for the semester in which the student will enroll in EST 400. If the supervisor is not the student's Advisor, then the Advisor should be provided with a copy of the memo.

- E. *Registration*: The student should register for the section of EST 400 corresponding to the faculty member who is supervising the paper/ project. This should be done only after the student and the supervising faculty member have both signed the memo of agreement.
- F. *Monitoring of Progress*: The student and the supervising faculty member must be in regular contact during the semester to ensure timely progress and monitoring. This ensures the work gets done and good choices are made along the way.
- G. *Final Output and Submission*: The final output depends on the type of paper/project. In the case of a paper (either type), the output should be the paper. In the case of a project, the output will depend on how it can best be documented but must always include a brief written report on the project that explains how the project demonstrates synthesis in Environmental Studies. All materials should be completed no later than the last day of classes.

When the Senior Paper/ Project has been brought to final form and the supervising faculty member is satisfied that it is complete, it will be graded. An unmarked, digital copy of the final submission should be submitted to the Environmental Studies Department Office for permanent collection.

All work should meet a high standard in execution, formatting, documentation, and appearance. Written works (paper or report) must have a title page, with the title and author indicated at the center of the page, and in the Lower right, the words "Senior Paper/ Project in (Option Name)", the name of the faculty supervisor of the Senior Paper/ Project, and the date of submission.

# Appendix C: Environmental Studies Department Faculty and Staff

## Department Chair

### **Theresa Selfa**

Professor, 211 Baker Laboratory, 315-470-6570, [tselfa@esf.edu](mailto:tselfa@esf.edu)

Valerie Luzadis, Acting Chair Fall 2025 (see contact information below)

## Undergraduate Studies Coordinator

### **Christina Limpert**

Instructor, 230 Marshall Hall, 315-470-6722, [cmlimper@esf.edu](mailto:cmlimper@esf.edu)

## Graduate Studies Coordinator

### **Paul Hirsch**

Associate Professor, 229 Marshall Hall, 404-512-4473, [pahirsch@esf.edu](mailto:pahirsch@esf.edu)

## Staff

### **Rebecca Hart**

Administrative Assistant, 106 Marshall Hall, 315-470-6636, [rhart01@esf.edu](mailto:rhart01@esf.edu)

### **Erin Tochelli**

1st and 2nd Year Advisor, 232 Marshall Hall, 315-470-6943, [ertochel@esf.edu](mailto:ertochel@esf.edu)

## Faculty

**Joshua Cousins**, Associate Professor, (Political ecology, urban geography, urban sustainability and resilience, water policy and governance, water and energy infrastructure), 257 Marshall Hall, 315-470-6576, [jcousins@esf.edu](mailto:jcousins@esf.edu)

**Shari Dann**, Associate Professor, (Community engagement, environmental education, natural resources conservation)  
261 Marshall Hall, 315-470-4930, [sldann@esf.edu](mailto:sldann@esf.edu)

**Andrea Feldpausch-Parker**, Professor, (Environmental communication, advocacy, conflict resolution, public engagement in environmental decision-making), 234 Marshall Hall, 315-470-6573, [amparker@esf.edu](mailto:amparker@esf.edu)

**Paul Hirsch**, Associate Professor, (Biodiversity conservation, environmental conflict resolution, water) 229 Marshall Hall, 404-512-4473, [pahirsch@esf.edu](mailto:pahirsch@esf.edu)

**Jean Kayira**, Associate Professor (Indigenous knowledge systems, Food sovereignty, community-based participatory research), [jckayira@esf.edu](mailto:jckayira@esf.edu)

**Patrice Kohl**, Assistant Professor (Science and environmental communication; journalism) 226 Marshall Hall, 315-470-6908, [pakohl@esf.edu](mailto:pakohl@esf.edu)

**Eun Kyung Lee**, Assistant Professor (Environmental health, inequalities and environmental justice, place-based disparities, causal inference and mixed methods), [eklee02@esf.edu](mailto:eklee02@esf.edu)

**Valeria Luzadis, Acting Chair Fall 2025**, Professor (Ecological economics, ecosystems services, policy), contact via Main Office for Environmental Studies in Marshall, [vluzadis@esf.edu](mailto:vluzadis@esf.edu)

**Micheal Mikulewicz**, Assistant Professor (critical human geography, climate justice, critical theory, LGBTQ+ studies, participatory methods), [mmikulew@esf.edu](mailto:mmikulew@esf.edu)

**Sharon D. Moran**, Associate Professor (Environmental policy, government and water resources), 256 Marshall Hall, 315-470-6690, [smoran@esf.edu](mailto:smoran@esf.edu)

**Madeline Nyblade**, Assistant Professor (Water justice, community based participatory research, Indigenous Nation-University collaborations) [mlnyblad@esf.edu](mailto:mlnyblad@esf.edu)

**Theresa Selfa**, Professor (Environmental sociology, qualitative research methods, bioenergy and water Governance, Latin America), 106B Marshall Hall, 315-470-6570, [tselfa@esf.edu](mailto:tselfa@esf.edu)

**Jamie Shinn**, Associate Professor (Environmental governance and policy, climate change adaptation, water-society relationships, disaster response and recovery) [jeshinn@esf.edu](mailto:jeshinn@esf.edu)

**Chie Togami**, Assistant Professor (Sociology, environmental justice) [ctogami@esf.edu](mailto:ctogami@esf.edu)

**Jill Weiss**, Assistant Professor (Socio-ecological systems, co-adaptive management, conservation behaviors and psychology), 236 Marshall Hall, 315-470-6781, [jiweiss@esf.edu](mailto:jiweiss@esf.edu)

**Benette Whitmore**, Assistant Professor (Public relations, digital storytelling, film making, creative responses to the environment, science education), 262 Marshall Hall, 315-470-6695, [bwhitmor@esf.edu](mailto:bwhitmor@esf.edu)

Erica Zurawski, Assistant Professor (critical food and agriculture studies, social movements, human geographies, political ecology, and science and technology studies), 244 Marshall Hall, 315-470-6921, [ezurawsk@esf.edu](mailto:ezurawsk@esf.edu)

# Appendix D: Additional Educational Opportunities

## *Academic Minors*

### [Academics at ESF - Undergraduate Minors](#)

The list of available minors includes:

- Applied Statistics
- Bioprocess Science
- Biotechnology
- Chemistry
- Computer and Information Technology
- Construction Management
- Economics
- Environmental Biology
- Environmental Health
- Environmental Policy and Communication
- Environmental Writing & Rhetoric
- Food Studies
- Forestry
- Information Management and Technology
- Landscape Architecture Studies
- Management
- Marine Science
- Mathematics
- Microscopy
- Native Peoples and the Environment
- Paper Science
- Physics
- Recreation Resource and Protected Area Management
- Renewable Energy
- Sustainable Construction
- Urban Environmental Science
- Urban Forestry
- Water Resources

### [Study Abroad](#)

SUNY College of Environmental Science and Forestry (ESF) is committed to enhancing the internationalization of ESF students' academic experiences. ESF believes strongly that international experiences provide students with the opportunity to develop the skills necessary to be informed, active, responsible, and culturally sensitive global citizens. The Department of Environmental Studies has fostered relationships with Study Abroad programs including Sea Semester and a university in Argentina. We have also established programs for study away

semesters, including a semester in the Adirondacks at the ESF campus or with the Wild Rockies Field Institute in the Western US.

The Office of International Education assists students who wish to participate in the College's diverse study and research abroad opportunities noted below:

- ESF Faculty-led, Short-term International Academic Courses
- ESF Exchange Programs
- Off-Campus Study and Study Abroad Programs offered through Non-ESF Institutions (SUNY system, Syracuse University, affiliated programs, and non-affiliated programs)
- Student Research and Non-Academic Programs Abroad
- Study Abroad Related Inquires

Office of International Education, [ois@esf.edu](mailto:ois@esf.edu)  
Jules Findlay, Coordinator of Education Abroad  
211 Baker Lab  
[studyabroad@esf.edu](mailto:studyabroad@esf.edu)

### ***ESF Honors Program***

(<http://www.esf.edu/honors/>)

The ESF Honors Program is a two-way street: the College provides enrichment, experience and special opportunities for our most promising students and our honors students provide leadership and service to the Honors Program, the College, and the broader community. Honors students translate their academic skills into leadership, service, or both (e.g., undergraduate student government, leadership or membership on special committees, student clubs), or in campus service (e.g., Orientation Leaders, student mentors, ESF ambassadors). We hope former honors students will return to campus after graduation to share their postgraduate experiences with their younger peers.

In line with these broad goals, ESF offers two distinct honors programs, lower division honors and upper division honors.

The Lower Division Honors Program provides first- and second-year students with value-added educational experiences that engage students in unique challenges. Academic components of the program strengthen exploration and communication skills through interdisciplinary assignments and discussion. The Upper Division Honors Program provides opportunities for junior and senior students to complete intensive research and creative projects under the guidance of faculty, emphasizing and encouraging holistic and multidisciplinary awareness of the problems and opportunities in studying the environment.

Students who maintain good standing in honors will receive early Registration privileges and access to honors sections of courses offered at Syracuse University\* and ESF.

- **Dr. Stewart Diemont**, Co-Director, 460 Illick Hall, 315-470-4704, [sdienmont@esf.edu](mailto:sdienmont@esf.edu)

\*Students who choose to take courses from Syracuse University will be subject to an [accessory instruction fee](#).

### ***Pre-Law Advising***

(<http://www.esf.edu/prelaw/>)

ESF offers pre-professional advising to students interested in pursuing law as a profession. Unlike some other professional programs, law schools do not require or recommend a specific program of study or specific coursework. Instead, the Law School Admissions Council advises students who are interested in the legal profession to pursue undergraduate education that demonstrates success in intellectually challenging curricula that enhance students' critical thinking skills.

The ESF pre-law program helps students understand the opportunities in environmental law and develop a law school application package that demonstrates to law schools their true potential. The program is based primarily on individual pre-law advising between the student and ESF's Pre-law advisor.

- **ESF's Prelaw Advisor: Dr. Robert Malmshemer**, SUNY Distinguished Teaching Professor of Forest Policy and Law, 305 Bray Hall, 315-470-6909, [rwmalms@esf.edu](mailto:rwmalms@esf.edu)

A Pre-Law student club is also available to all students – (see ENGAGE)

# Appendix E: Academic Advising and Registration for both the Environmental Studies and Environmental Education & Interpretation Programs

## *The Role of Your Academic Advisor*

During your stay at ESF, many people will give you advice. The most important of those people is your academic advisor. Your academic advisor is responsible for advising you on all academic matters related to your program. They are also responsible for ensuring that your selection of courses each semester is appropriate to where you are in your program. Students are responsible for meeting with their advisors on a regular basis. In college, the primary responsibility for successful progress lies with students. **This EST student handbook and Degree Works are crucial student resources.**

Students typically have two advisors during their years in the Environmental Studies Department. The first and second-year advisor, Erin Tochelli, advises all incoming students, including transfer students. At the end of Sophomore year, students will be assigned a faculty advisor for their remaining years in the program.

To maximize your educational experience, it is important to use the resources of your advisor effectively. Students new to ESF, or to the Department of Environmental Studies, should meet with their academic advisor during the first few weeks of classes. The advising relationship begins here, making it easier to address student goals, concerns, and problems that arise.

*Office hours* meetings with your academic advisor help promote an advising relationship in which academic and career goals can be discussed in a more personal and individualized manner. Each faculty member posts regularly scheduled office hours at the start of the semester. Students may schedule appointments or drop by during these office hours. **Before registering for courses, students must meet with their advisor during advising week.**

When it is difficult to reach your academic advisor, other faculty members or administrators may be able to assist. If you can't get in touch with your academic advisor, see the Undergraduate Studies Coordinator during their office hours. For urgent matters, contact Rebecca Hart, the Departmental Secretary, in 106 Marshall, 8:00 am -4:00 pm for assistance.

## ***DEGREE WORKS***

**Degree Works** is the official record of progress toward meeting the program requirements for graduation. Your Degree Works profile available on-line, and it should be consulted periodically during the year to check your status and to plan for upcoming advising appointments and program-related course decisions. You should work with your academic advisor on a regular basis to make sure that it accurately reflects the courses you have taken and the requirements they fulfill. The Registrar's computer will automatically "match" courses in which you've registered that are exactly a specific course that is required, such as EST 132. *Any other course*



*which you take will be placed in the category “Fall Through” and will not be counted toward graduation until your Advisor informs the Registrar where to place it. This should be done twice a year, and students need to be proactive in this process.*

### ***Progress of First Year Students***

The College asks faculty who are teaching first-year students to submit “Mid-semester Progress Reports” in the Fall and Spring. This review contains four categories: Attendance, Participation, Submitted Work, and Exams/ Quizzes. Evaluations for each are: Satisfactory (S), or Unsatisfactory (U). Advisors are sent copies of the Reports. Students receiving any unsatisfactory reviews are expected to meet immediately with the professor of the course in question, and subsequently to meet with their academic advisor to discuss the situation and its resolution.

### ***Registration***

About three quarters of the way through each semester there is an advising period followed by a registration period for the next semester (see [ESF calendar](#)). During this time, you need to meet with your academic advisor and prepare your registration form Registration (SCORE)Form, available from the SUNY ESF Registrar’s website. After your academic advisor approves your course choices, you complete the registration process through the Registrar’s office and online using the registration system.

Prior to meeting with your academic advisor, you need to review your “fall through” courses, consider your outstanding course requirements and the possible Options for satisfying them. This means reviewing your Degree Works and course offerings and developing a preliminary schedule for discussion. The [Office of the Registrar’s FAQ page](#) is a helpful resource.

The College has clear policies on adding and dropping courses after the semester starts. You need to be aware of these policies and of the relevant deadlines (see the [academic calendar](#)). These actions require your academic advisor’s signature and revision of your Degree Works. You should be particularly aware of the implications (financial aid, insurance, etc.) if you drop below “full time” status. Generally, full time status is considered a course load of twelve (12) credit hours, though in some cases it may vary. Late drops are only approved for extenuating circumstances. See the section on The Petition Process later in this Handbook.

### ***Taking Courses at Syracuse University: [Accessory Instruction Fee](#)***

ESF and Syracuse University (SU) have an agreement governing accessory instruction. Find information on the accessory instruction fee at [Accessory Instruction Fee](#)

### ***Courses outside ESF/SU***

Any courses you take at other institutions after admission to ESF do not become part of your ESF program records until the **two following steps are completed**. First, you need to have an **official transcript** for that course sent to the ESF Registrar from the institution where you took the course. Second, you need to have an **approved petition** requesting that the course be accepted as meeting a specific Environmental Studies course requirement. As explained below, it

is best to have this petition completed and approved before you **enroll in the course**. That way, once courses are successfully completed, you are guaranteed to have the credits count at ESF.

### [Academic Petitions](#)

Actions that require a petition include transferring credit from another institution, undergraduates taking a graduate class, substituting a General Education requirement not on the approved list, UG taking more than 19 credit hours, late add, late drop. All information can be found on the Registrar's home page or at the link above. Petitions require several signatures

### [Transferring credit](#)

### [Cooperative Transfer Colleges](#)

Approval of a petition is not automatic. Depending on the type of petition, after the faculty advisor signs a petition form, each petition is reviewed by the Undergraduate Studies Coordinator and the Dean of Instruction and Graduate Studies or Department Chair. Further, the Dean may choose to consult with the Committee on Instruction (Academic Standards Subcommittee) before acting. Therefore, one important part of advising is when, where, and how to file a petition. A particularly problematic petition is the petition for late drop of a course. These are approved only rarely, and only under exceptional circumstances.

Environmental Studies Program Only: Occasionally, students may wish to change their Option. In this case, a change of academic advisor is required, and requests of this type should be brought to the attention of the Undergraduate Studies Curriculum Coordinator. However, you are CAUTIONED against requesting a change of Option without prior consultation with the coordinator of the intended new Option. Changing your Option can cause SIGNIFICANT CREDIT HOUR SLIPPAGE in the completion of your program, due to the need to make up Option courses scheduled for normal completion in the first semester(s) of study. Courses in one Option may not be useful in another Option. If Option changes are to be made, it is strongly recommended that such changes be requested during the first semester of study, and at as early a date as feasible in that semester. Changing your Option is done via the ESF Petition process.

### ***What to Include in Your Petition***

The following list identifies the information needed in each section of the petition form for each of the areas for which petitions may be filed and what information should be appended (if any).

<b>Type of Request</b>	<b>Program Variance</b>	<b>Transfer</b>	<b>Late Add/Drop</b>
<b>Required Information</b>	Complete all student parts of the form, sign and date and obtain your advisor's signature	Same as Program Variance	Same as Program Variance
<b>Request</b> (What is being petitioned for)	A careful wording of the variance includes what is to be replaced and what is to be replaced by (course numbers and names are helpful.)	A clear statement of course credits to be transferred, from what college, and how to allocate it on the plan sheet (course numbers and names are helpful).	A statement of what course is to be added and/or dropped (course numbers and names are helpful).
<b>Justification</b> (More detail is better here)	Explain clearly <i>why</i> this variance meets the goals and objectives of the program, as well as the course it is replacing, and how it contributes to a coherent program of student for the student.	More detail is better here. Explain clearly <i>why</i> this course and credit transfer meets the goals and objectives of the program and is the same or substantially similar to the course it is replacing.	Explain clearly <i>why</i> the course is being added or dropped late (financial aid problem, illness, etc.)
<b>Signatures</b>	In the following order: <ul style="list-style-type: none"> <li>• Faculty Advisor,</li> <li>• Undergraduate Studies (Co-) Coordinator</li> <li>• Dean of Instructions</li> </ul>	In the following order: <ul style="list-style-type: none"> <li>• Faculty Advisor,</li> <li>• Undergraduate Studies (Co-) Coordinator</li> <li>• Dean of Instruction</li> </ul>	In the following order: <ul style="list-style-type: none"> <li>• Faculty Advisor,</li> <li>• Undergraduate Studies (Co-) Coordinator</li> <li>• Dean of Instruction</li> </ul>
<b>Additional Information</b> (Things you should attach to the petition)	Improve the rate of approval by appending the following: <ul style="list-style-type: none"> <li>• The catalog description of the course, the course syllabus, or the internship or independent study approved proposal</li> <li>• The ESF catalog description of the course to be replaced.</li> </ul>	Improve the rate of approval by appending the following: <ul style="list-style-type: none"> <li>• The transfer college catalog description of the course (or the course syllabus)</li> <li>• The ESF catalog description of the course to be replaced</li> </ul>	Improve the rate of approval by appending the following: <ul style="list-style-type: none"> <li>• Verification of events which occurred generally at or after the drop date which make it impossible for the student to continue in the course.</li> <li>• Academic difficulty in the course is not considered justification.</li> </ul>
<b>NOTES</b>	To enroll in a 600-level course a student must meet several criteria: be a Senior, a GPA of 3.0 or better, an approved petition with the course instructor's consent (also required on the SCORE form)		Late course adds are generally easy to obtain. Late drops go automatically to the Academic Standards Sub-Committee of the Committee on instruction. Please see the section below on Guideline Criteria for Successful Late Drops.

### ***Withdrawal from Individual Courses***

Students may drop individual courses up until the last day to add as set by the Registrar in the ESF Academic Calendar using an add/drop form. Dropped courses during this period will be completely removed from the transcript when dropped on or before this deadline.

#### **Deadlines and actions to be taken after the last day to add deadline are:**

- **Last day to drop** – (as per the academic calendar), students may drop a course without record of registration, until the end of the 4<sup>th</sup> week of classes.
- **Weeks 5-9:** A student who withdraws from a course after the last day of the **4<sup>th</sup> week and by the last day of the 9<sup>th</sup> week** will receive a W (withdraw) grade on his or her permanent transcript, and the student will remain on the course roster. The W grade will not affect the GPA and is not replaceable with an R grade.
- **Weeks 10-14:** A student who withdraws from a course after the last day of the **9<sup>th</sup> week and by the last day of the 14<sup>th</sup> week** will receive a W or WF (withdraw failing) on his or her permanent transcript, and the student will remain on the course roster. The WF grade will not count in the student's GPA. W and WF grades are not replaceable with an R grade. The W (when assigned after the last day of the 9<sup>th</sup> week) and WF grade will be assigned by the instructor at the end of the semester.

Precise deadline dates noting the official end of weeks above shall be listed on the ESF Academic Calendar found on the Registrar's webpage (<https://www.esf.edu/registrar/calendar.php>)

#### **Relevant Advising Forms Available Online**

<https://www.esf.edu/registrar/index.php>

- Undergraduate Student Change of Major Form
- ESF Registration Form
- Request for Individual Course Withdrawal Form
- Option Declaration Form (for Environmental Studies BS Degree Students only)
- ESF Internship Registration and Agreement Form (for EST 499)
- ESF Minor Enrollment Form
- Petition Form
- Transfer Credit Petition Form

## Appendix F: Department of Environmental Studies Process for Transferring Majors as an ESF Student

Thank you for your interest in transferring into a Major in Environmental Studies (EST) or Environmental Education & Interpretation (EEI).

### Transfer Process

The following steps are part of the transfer process.

1. Put together a Transfer Packet including the following:
  - a. Statement of Purpose providing:
    - i. Short essay on why you want to major in Environmental Studies or Environmental Education & Interpretation,
    - ii. Table listing what courses you would need to take in the relevant curriculum (see relevant section in this handbook for guidance), and
    - iii. Best estimate of which semester and year you would anticipate graduating with said degree.
  - b. Copy of your ESF Grade Report, and
  - c. Copy of your current ESF Curriculum Plan Sheet.
2. Email the Transfer Packet as a single PDF document to the Departmental Secretary, Rebecca Hart ([rhart01@esf.edu](mailto:rhart01@esf.edu)).
  - a. The transfer packet submission **deadline is October 1<sup>st</sup>** in the fall semester, **March 1<sup>st</sup>** in the spring semester,
  - b. The subject line should read: “Transfer Packet: Last Name, First Name”,
  - c. In your message, please request a transfer planning meeting **within 2 weeks prior** to the transfer packet deadline.
3. Complete a transfer planning meeting with Environmental Studies Undergraduate Curriculum Coordinator. Please bring a Change of Major form with you to this meeting to start the paperwork process. All transfer planning meetings need to be held before the above deadline to ensure that you will be assigned an academic advisor before advising week.