

Graduate Handbook

**Master of Science
in Environmental Studies**

Department of Environmental Studies

State University of New York
College of Environmental Science and Forestry (ESF)
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2020 – 2021

Online version:

<http://www.esf.edu/es/handbook>

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I. INTRODUCTION

Welcome to the Master of Science (M.S.) in Environmental Studies graduate program at the State University of New York College of Environmental Science and Forestry (ESF). We are delighted that you have joined a unique set of graduate students, faculty, and researchers who share a deep interest in environmental policy, communication, and decision-making.

The program is intended for a wide range of students, including those with undergraduate degrees in fields other than Environmental Studies. At least one undergraduate course in environmental policy or environmental communication; an ecology course; and one additional environmental science course are required for admission, however.

The program facilitates student understanding of fundamental social, political, economic, cultural, and technological forces that drive environmental degradation as well as the application of emerging approaches that can foster sustainability. It does this by drawing on a range of frameworks from the social sciences, humanities, and natural sciences. Coursework combines theoretical, practical, and applied approaches to areas such as environmental policy, environmental communication, sustainable communities, human behavior, collaborative governance, public participation, environmental interpretation, and environmental impact analysis.

The program prepares students to critically analyze and engage emerging issues and problems related to environmental affairs and sustainability. As part of one of the world's foremost schools of environmental research, the program is enhanced by ESF's diverse expertise in the natural sciences and engineering, as well as by graduate courses at Syracuse University available to ESF students. Courses from Syracuse University allow us to supplement ESF faculty expertise in such fields as area studies, climate policy, environmental history, anthropology, religion, and management methods for public agencies and non-profits.

The New York State Department of Education and the State University of New York establish policy for all graduate programs. At ESF, the College Faculty has adopted a comprehensive set of Graduate Policies. These are published in the College Catalog. The policies and the procedures which implement College policy are contained in the ESF Faculty Governance body's "Graduate Academic Policies" document, available at: <http://www.esf.edu/catalog/policies.htm#Anchor-Graduate-53377>. In addition, the M.S. Environmental Studies program has its own specific policies, procedures, and guidelines as represented in this handbook.

II. REQUIREMENTS FOR THE M.S. DEGREE

The ESF Catalog description provides the basic framework of graduation requirements.

In their first semester, students work with their advisors to draft an *Environmental Studies MS Plan* to meet their specific goals (see below for details). The *Environmental Studies MS Plan* is an opportunity for students to give practical consideration to their learning, experiential, and career interests and objectives in narrative form and outline a sequence of courses and internship topic to help meet those objectives. As a student's program evolves, the *Environmental Studies MS Plan* may be updated in consultation with their Major Professor(s) and/or Steering Committee. All M.S. in Environmental Studies students are required to complete the *Environmental Studies MS Plan*.

Separate from the *Environmental Studies MS Plan*, all ESF graduate students are required to submit a list of courses called the *Graduate Program of Study*. This provides ESF's Graduate School with a formal record of the courses the student plans to take to meet their program requirements; it is submitted by filling out the MS-3B form. The *Graduate Program of Study*, developed by the student with the advice and approval of the Major Professor and other members of the Steering Committee, must be submitted no later than the end of the student's third semester; earlier is preferable. **Please note:** The *Graduate Program of Study* ('Form 3-B') and the *Environmental Studies MS Plan* are two distinct documents. More information can be found below.

Prerequisites

Students are expected to begin the M.S. in Environmental Studies program with academic background in Environmental Policy or Communication; Environmental Science; and Ecology, demonstrated through successful completion of at least one upper division course in each of these three areas. Deficiencies may have been identified in the letter of admission. If not completed prior to matriculation as an ESF graduate student, these must be taken as co-requisites during the first two semesters of residence. Upper division or graduate courses successfully completed for credit may be used to satisfy deficiencies. Undergraduate courses are not included in Grade Point Averages, and do not contribute to the minimum number of required graduate credit hours; graduate courses will be included in Grade Point Averages but may not be used to meet program requirements.

Advanced Standing

Course transfers. A maximum of six graduate credit hours with a grade of "B" or better that have not been applied to another degree may be transferred via Petition. The Petition must include an attached syllabus, and a justification of how the courses are to be included on the student's *Graduate Program of Studies*. Petitions for course transfers are submitted following matriculation.

Concurrent Degrees

Concurrent degree students may "double-count" no more than 8 credit hours toward their M.S. degree.

Program Requirements

The M.S. in Environmental Studies degree requires 37 credit hours focused on academic scholarship and research related to environmental affairs and sustainability. Program requirements are outlined below. All courses are 3 credit hours unless noted otherwise.

The Core (12 credits)

Six core Environmental Studies courses comprise the disciplinary and methodological scope of the field and demonstrate the applicability to problem analysis and the quest for sustainability. These courses must be taken in the first year of the program.

Required:

- EST 600 Foundations of Environmental Studies (Fall)
- EST 626 Concepts and Principles of Sustainable Development (Spring)

AND two courses selected from:

- EST 608 Environmental Advocacy Campaigns and Conflict Resolution
- EST 612 Environmental Policy and Governance
- EST 615 Environmental Justice
- EST 640 Environmental Thought and Ethics
- EST 650 Environmental Perception and Human Behavior

Research Methods (7 credits)

One core Environmental Studies research methods course, an additional methods course (selected from the list below), and one Environmental Studies Seminar provide the methodological preparation necessary for the M.S. thesis proposal development and research. These should be taken the first year of the program.

Recommended:

- EST 603 Research Methods and Design (Fall)

Required, one of the following. *Other research methods courses may be identified in collaboration with the student's advisor:*

- APM 510 Statistical Analysis
- APM 625 Introduction to Sampling Techniques
- APM 630 Regression Analysis
- APM 635 Multivariate Statistical Methods
- EST 604 Social Survey Research Methods for Environmental Issues
- EST 605 Qualitative Methods
- EST 702 Environmental and Natural Resource Program Evaluation
- EST 705 Environmental Policy Analysis

Required:

EST 797 Environmental Studies Seminar: Research Methods (1 cr; Spring)

Thematic Area (12 credits)

Four additional courses are selected in consultation with the student's Steering Committee. The Thematic Area is used to substantively prepare the student for thesis work by building a solid knowledge of some aspect of Environmental Studies.

Thesis Research (6 credits)

All students with an approved M.S. thesis research proposal take at least six (6) credits of:

EST 899 Master's Thesis Research

In taking these credits, students are expected to develop a research-based master's thesis clearly demonstrating the student's competency in interdisciplinary environmental research and analysis. Completion of the thesis is accompanied by a Capstone Seminar, and an Oral Examination and Thesis Defense (see below).

III. PROCEDURES FOR ACADEMIC ADVISING

Major Professor

Each student is assigned a Major Professor (or sometimes, co-Major Professors) as part of their admission to the M.S. in Environmental Studies program. Each new student should meet with their Major Professor(s) during the week prior to the start of classes to discuss their academic and career objectives; this will be helpful in selecting courses for the first semester. The session also will allow the Major Professor(s) and student to share expectations for their academic relationship and establish a schedule for work on the student's *Environmental Studies MS Plan*.

Environmental Studies MS Plan

The purpose of the *Environmental Studies MS Plan* is to provide structure and coherence to each student's individualized learning within the program requirements. Students are encouraged to think reflectively about their learning objectives and how they can be achieved through a systematic program of coursework and professional experience. The *Environmental Studies MS Plan* (5-6 pages) will consist of the following parts:

- A descriptive TITLE of the student's thematic area.
- A 100 word descriptive ABSTRACT of the student's thematic area.
- A list of the student's CAREER OBJECTIVES.
- A list of the student's LEARNING OBJECTIVES.
- A 500 word DESCRIPTION of the thematic area that defines its concerns, importance, and limits.
- A 500 word RATIONALE for the thematic area's relevance to the student's career and learning objectives.
- A MATRIX showing courses to be taken and their sequence in relation to the student's learning objectives and thematic area.

The *Environmental Studies MS Plan* must be approved prior to advising week of the first semester of matriculation (typically the end of October) and will provide the rationale for course selection for subsequent semesters. Each semester prior to advising week, the student and the Major Professor should review the *Environmental Studies MS Plan* to ensure that it continues to reflect the student's objectives and to provide an adequate structure for meeting those objectives. As a student's program evolves, the *Environmental Studies MS Plan* may be adjusted in consultation with their faculty advisor and Steering Committee. All M.S. in Environmental Studies students are required to complete the *Environmental Studies MS Plan*.

ESF Graduate Program of Study (Form MS-3B)

In addition to the overarching *Environmental Studies MS Plan*, students will complete and submit -- no later than the end of the third semester of matriculation -- an *ESF Graduate Program of Study* (Form MS-3B) that specifies the list of courses, seminars, and thesis credits necessary to meet degree requirements. The *Graduate Program of Study* must be reviewed and approved by the student's

Steering Committee (including Major Professor) and the Department's Graduate Studies Coordinator (or Department Chair) and submitted to ESF's Graduate School. The *Graduate Program of Study* can be changed; changes must be approved by all of the same parties. The student's Major Professor should have access to an updated version; each student is encouraged to maintain an updated personal copy. Please keep the *Graduate Program of Study* and the *Environmental Studies MS Plan* as two distinct documents. *Graduate Program of Study* (Form MS-3B) forms are available online at: <http://www.esf.edu/graduate/graddegreq.htm>.

Steering Committee

Ideally, by the end of the first semester of study, the student and their Major Professor(s) should seek appointment of the student's Steering Committee, consisting of the Major Professor and at least two other ESF faculty members or other qualified persons. The latter may include faculty members at other institutions, or other recognized professionals. The Steering Committee is responsible for reviewing and approving the student's ESF *Graduate Program of Study* (Form 3B) and thesis research proposal and reviews the thesis prior to the final copy being presented for defense. To ensure consistency and quality, each ESF *Graduate Program of Study* must be approved by the Steering Committee and Departmental Graduate Studies Coordinator (or Department Chair).

Master's Thesis Research

In the first (Fall) semester of their first year, all MS in Environmental Studies students are encouraged to take Research Methods and Design (EST 603); this three-credit course helps students conceptualize the research process and gain experience in developing a plan for successfully carrying out interdisciplinary environmental research. In the second (Spring) semester of their first year, all MS Environmental Studies students are required to take the section of the Environmental Studies Seminar (EST 797) focused on research proposal development. This one-credit course provides support for students finalizing their MS thesis research proposals in consultation with their Major Professor and Steering Committee. The latter course builds on what students have learned about research methods and interdisciplinary paradigms of knowledge during the previous (Fall) semester.

By the end of the second semester of the program, each student should have completed a master's thesis research proposal for approval by their Major Professor and Steering Committee. Thesis proposals typically include the following:

- Title
- Abstract
- Introduction
- Research question(s)
- Context of research
- Rationale for the study
- Literature review
- Research design
- Proposed methods for data collection and analysis
- Timeline

- Budget/ funding
- Outline of the thesis

The Major Professor will supervise the thesis research and preparation of the thesis, and will work with the student throughout the program, in consultation with other Steering Committee members.

Protection of Human Subjects

Prior to any primary data collection involving human subjects, a detailed plan for the protection of any and all such informants involved in research must be developed and submitted to ESF's Office of Research Programs, for transmission, review, and approval by Syracuse University's Institutional Review Board (IRB). The IRB application is submitted in hard copy under the name and signature of the student's Major Professor, with the student as the co-PI/ graduate student researcher for the project. Prior to submission of this application, both the Major Professor and graduate student researcher must successfully complete the required online CITI training modules on the protection of human subjects. For further information, see the SU IRB website, at: <http://orip.syr.edu/human-research/human-research-irb.html>. Following completion of data collection, a final report must be filed with the IRB to close the active file for the research project.

Instructions and Guidelines for Formatting a Thesis

For instructions and guidelines for formatting a thesis, download the document at <http://www.esf.edu/graduate/graddegreq.htm>.

Capstone Seminar, Oral Examination and Thesis Defense

At the conclusion of the study and research program, each MS Environmental Studies student must present their research at a public Capstone Seminar, and successfully defend their thesis in an oral examination. The objectives of the defense examination include: (1) probing the validity and significance of the data and information presented in the thesis document; (2) assessing the student's skills in critical thinking and data analysis; (3) evaluating the student's ability to relate research results to theory within the chosen field(s); and (4) assessing the student's effectiveness in the presentation of research results. The oral examination covers principally the material in the thesis, as well as literature and information relating to it.

Upon the recommendation of the Department's Graduate Studies Coordinator, the Dean of the Graduate School will appoint the thesis defense examination committee, which consists of members of the Steering Committee and at least one additional faculty member (the Examiner). Additionally, the Dean of the Graduate School will appoint an Examination Committee Chair who is not from the Environmental Studies Department. For students who intend to complete their thesis defense in the spring semester of their second academic year, the Examination Committee must be appointed by early December; for the exact date, see: <http://www.esf.edu/graduate/deadlines.htm>. The role of the Examination Committee Chair is to manage the defense, ensure its integrity, and represent the interests of the faculty and student. Any member of the faculty may be an observer. The student examinee may invite a silent student observer to attend the examination. Submit "Request for Thesis

Defense Committee" (Form 5B) with the ESF Graduate School for appointment of Chair and Examiner according to academic year deadlines.

At least two weeks prior to the date of the oral examination, the student will submit the finalized thesis to all members of the Examination Committee. Additionally, using Form 5A, the student must inform the Dean's office of the agreed upon date, time, and location for the defense at least two weeks in advance of the defense date. One final copy must be delivered to each member of the Examination Committee, including the Chair, at least seven (7) days prior to the scheduled defense date using Form 5A. Within five days of the oral exam, the Major Professor will confirm with the Examination Committee Chair that the oral examination should proceed as scheduled. If the Major Professor determines that the written document does not meet the standards established for the thesis exam, the exam may be postponed by the Dean of the Graduate School at the recommendation of the Examining Committee Chair.

The thesis defense typically lasts up to two hours, but its length may be extended. At the completion of the examination, the candidate and observers will be excused from the room and the Examination Committee will determine whether the candidate has successfully defended the thesis. The Examination Committee Chair has the option to vote. Unanimous agreement is required to pass the student. If less than unanimous agreement is reached, the student will be considered to have failed the first defense examination and may request a second defense, which must take place no more than one year from the date of the first examination. At the second defense, the student will pass the defense if there is no more than one negative vote. A student who fails the second defense is terminated from the graduate program.

Annual Review of Student Progress

At the beginning of each calendar year, the Department of Environmental Studies reviews academic progress of all affiliated graduate students, including those in this program. As input to this review, each student submits a report by mid-December, outlining their accomplishments during the preceding calendar year and progress toward completing degree requirements. Results of this review assist the Major Professor and departmental faculty in mentoring the student to successful completion of their degree and serve as input for departmental graduate assignments and support for the following academic year.

Program Assessment

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

IV. COURSE DESCRIPTIONS

The following courses are offered by the Department of Environmental Studies and are fundamental to this program. The names of the faculty who teach the courses appear beside the course titles.

EST 550 Environmental Impact Analysis (3) – Weiss

Three hours of lecture per week. The law, administration and natural/social science basis of the environmental impact assessment process in the federal government and New York state. Spring.

EST 600 Foundations of Environmental Studies (3) - Moran

Three hours lecture/discussion per week. Examines frameworks for understanding and solving environmental problems. Familiarizes students with the epistemological foundations of environment-society relations. Considers multiple methodological and analytical strategies. Uses a case study method to exemplify key principles. Fall.

EST 603 Research Methods and Design (3) – Luzadis

Comprehensive survey of research methods and design for Environmental Studies. Topics covered include the scientific method; research design; quantitative, qualitative, and mixed research methods; sampling; data collection techniques; data analysis and interpretation; research ethics; and research proposal development. Fall.

EST 604 Social Survey Research Methods for Environmental Issues (3) – Staff

Three hours of lecture and discussion. Provides a critical overview of survey methods used to study human dimensions of environmental problems. Explores fundamental theories, techniques, and applications of environmentally-related social survey research processes. Design of original survey research and critical assessment of existing research. Spring, **odd years**.

EST 605 Qualitative Methods (3) - Staff

Three hours of lecture and discussion. Survey of the generally recognized paradigms and methods that qualitative researchers use to better understand, evaluate, and perhaps influence complex social phenomenon. Research proposal, pilot study, final report, and oral presentation required. Spring, **even years**.

EST 606 Public Perception & Communication of the Environment, Science and Risk (3) – Kristiansen

Scientific and technological advancements entail both benefits and risks. How people perceive those benefits and risks will influence their acceptance or rejection of specific advances. In this class you will learn about the factors that influence people's perception of risk, science and environmental change, and learn how communication shapes the possibilities for dialog and decision-making. Content of this hybrid course will be divided between 70% online materials and 30% in-person sessions, for a total of 3 hr/week. Spring.

EST 608 Environmental Advocacy Campaigns and Conflict Resolution (3) - Parker

Three hours lecture and discussion. Addresses complex dynamics, strategies, and tactics of 1) organized campaigns by grassroots to international organizations to advocate for particular environmental policy and 2) processes that seek to resolve, manage, or prevent environmental conflicts when appropriate. Readings, simulations, projects, and case study analysis. Fall.

EST 609 Collaborative Governance Processes for Environmental and Natural Resource Management (3) - Staff

Intensive study in early January. Introduces the evolution of innovative multi-stakeholder processes that characterize collaborative governance (CG). Distinguishes CG from traditional public involvement and dispute resolution approaches, and explores its challenges and opportunities. Provides knowledge and introductory tools to design and be more productive participants in collaborative processes. Spring.

EST 612 Environmental Policy and Governance (3) - Hirsch

Three hours lecture and discussion. Examination of the dynamic relationships present in the creation and implementation of environmental policies. Considers the roles of the state, the private sector, and nongovernmental organizations. Explores background and implications of recent trends in environmental management. Spring.

EST 613 Urbanization and the Environment (3) - Cousins

This course provides a foundation for researching and writing about the social, political, economic, and material aspects of urban infrastructures and networks, resource development, urban environmental governance and decision-making as well as the practices of urban planners, engineers, and scientists in shaping urban space and processes.

EST 615 Environmental Justice (3) – Teron

Three hours of seminar/discussion per week. This course covers the origins, evolution and contemporary happenings of the environmental justice movement. It explores the legal and policy tools to advance environmental justice. It will also evaluate the underlying political economy that produces environmental inequality. Fall.

EST 624 Nature, Recreation and Society (3) – E. Vidon

Three hours of lecture/discussion per week. Introduces students to the theoretical underpinnings of tourism studies, and how “naturalness” contributes to the generation of environmental meaning. The course will examine linkages between society, recreation, tourism, and nature, and will attend to such concepts as sense of place, experience, power, and perception as they relate to nature and recreation. These concepts provide useful entry points into more critical investigations of tourism and recreation practices and motivations, and serve as points of departure for conversations about eco-imperialism, green-washing, and the marginalization and dispossession of local populations. Discussion related to the aforementioned critical investigations will be paired with attention to the experiential side of recreation, tourism, and nature. That is, how the act of pursuing nature and related natural adventure contributes to the development of identity, our knowledge of the reciprocal relationship between sense of self and sense of place, and how these concepts are dependent upon and manifest themselves differently in various sites and experiences. Fall.

EST 625 Wetland Management Policy (3) – Staff

Three hours of lecture and discussion. International, national, and local wetland management and conservation issues. Application of methods of policy research, critical evaluation and design of wetland management issues including delineation, functional evaluation, wetland banking, and property rights issues. Research paper required. Fall, **odd years**.

EST 626 Concepts of and Principles of Sustainable Development (3) – Staff

Three hours of lecture and discussion. Presents ecological and development concepts and theory guiding local and global initiatives for sustainable development. Four overlapping themes are considered and linked: the relationship between patterns of wealth, poverty and environmental quality; the role of efficiency in reducing environmental impacts; frugality and sufficiency in advancing development; and questions of environmental equity and the quality of development. Fall or Spring.

EST 627 Environmental and Energy Auditing (3) – Cousins

Three hours of lecture, demonstration, and discussion per week. Presents environmental and energy auditing concepts and theory guiding local and regional initiatives for greenhouse gas production and energy use reduction. This course utilizes a practicum approach through use of inventory and analysis tools by student teams for project application. Spring.

Note: Credit will not be granted for both EST 427 and EST 627.

EST 635 Public Participation and Decision Making: Theory and Application (3) – Hirsch

Three hours of discussion, presentation and exercises. Provides a student with fundamental theories and techniques for developing and applying citizen participation strategies and conflict resolution as they relate to environmental science and planning decision making. Spring.

EST 640 Environmental Thought and Ethics (3) - Hirsch

Three hours of discussion. Critical interdisciplinary introduction to philosophical, religious, cultural and historical dimensions of environmental affairs. How ecologically-significant cultural assumptions, ideologies, representations, and institutionalized practices contribute to human meanings and relationships to other-than-human-Nature. Special attention to the role of language and questions of environmental ethics and ontology. Fall.

EST 645 Mass Media and Environmental Affairs (3) – Kristiansen

Three hours of discussion. Introduces the mass media's role in environmental affairs. Relationships between media organizations, technology, content, and audiences frame examination of how Nature and environmental issues and problems are engaged by the media and with what consequences. News and current affairs, advertising and entertainment genres are considered. Fall.

EST 650 Environmental Perception and Human Behavior (3) - Weiss

Three hours of lecture and discussion. Application of environmental perception and human behavior paradigms and theories in understanding the causes and potential solution strategies to environmental issues. Interdisciplinary approach utilizes concepts, theories and research from disciplines including environmental psychology, sociology, anthropology, and risk perception to understand the myriad of influences on human behavior as it relates to environmental impacts. Spring.

EST 652 Managing Sustainability: Purpose, Principles and Practice (3) – Moran

Three hours of lecture, discussion, and/or field trips per week. Dynamics and interdependence of economic, social, and environmental systems. Sustainable management frameworks, tools, and metrics. Local, national, and international implications. Relevance of technology, ethics, law, and policy. Interdisciplinary emphasis. Fall or Spring.

EST 660 Land Use Law (3) – Staff

Three hours of lecture and discussion per week. This course provides an understanding of U.S., state and local laws affecting land use in New York, in the context of current environmental policy debates. Students learn to recognize and analyze legal issues involving land use in varying contexts. Spring.

EST 670, Water in the Middle East: Issues and Opportunities (3) – Sonnenfeld

Three hours of lecture/discussion per week. Seminar on water issues and initiatives in Israel, Jordan, and the Palestinian Territories. Participants explore a variety of perspectives on the biophysical, historical, and sociocultural roots of transboundary and other water-related issues in the region, as well as an array of top-down (technological, managerial) and bottom-up (community-based, participatory) approaches to developing solutions. Designed for graduate students in environmental and natural resource policy, water resources, international relations, conflict resolution, and related fields. Each week, graduate students write short critical commentaries on required readings; the essays serve as starting point for class discussion. Over the course of the semester, students develop and submit a research paper on a related topic. Note: Credit will not be granted for both EST 670 and 470. Spring.

EST 690, International Environmental Policy Consultancy (3-4) – Sonnenfeld

Group research practicum. An innovative, collaborative, applied course and practicum in environmental policy consultation at the global level. May be linked via digital/ online technology with students in a parallel course at another, international institution. Students engage in a semester-long, consultancy project with an international organization engaged in environmental policymaking. Client organization and topic may vary annually. Students learn group consulting skills including issue definition and stakeholder identification; proposal preparation, team building and leadership skills; data collection, analysis and interpretation; report writing and presentation skills. Students fulfill the client's Terms of Reference, producing and delivering contributions towards final, agreed-upon deliverables. Fall or Spring. Instructor's permission required.

EST 695 Environmental Journalism (3) – Staff

Three hours of lecture per week. This course covers a range of topics related to journalism: interviewing, writing the lead, style, writing and organizing the story, layout, editing and revising, writing features and follow-up stories, covering speeches, etc. In addition, students explore how the media covers scientific and environmental issues. Students work on writing skills--from basic editing techniques to more sophisticated areas of style. Spring.

EST 696 Special Topics in Environmental Studies (1-3) - ES Faculty

Experimental and developmental courses in new areas of interest to environmental studies faculty and graduate students not covered in regularly scheduled courses. Fall and Spring.

EST 702 Environmental and Natural Resource Program Evaluation (3) - Staff

Three hours of lecture and discussion per week. The systematic analysis of public environmental programs with an emphasis on the evaluation of resultant environmental outcomes. Topics include evaluation contexts, objective setting, environmental monitoring, and analysis of agency organization and procedures. Spring.

EST 705 Environmental Policy Analysis (3) – Luzadis

Three hours of lecture/discussion per week. This course covers current and classic literature in environmental policy analysis, as well as a variety of approaches to policy analysis that are relevant for working through complex environmental issues. While tools and methods for policy analysis will be treated, the overall intention of the course is to provide students with the scholarly background to think analytically, critically, and creatively across a variety of environmental policy contexts. Fall

Prerequisite(s): A graduate-level course in environmental policy.

EST 708 Social Theory and the Environment (3) – Selfa

Three hours of seminar/discussion per week. This course is an advanced graduate seminar that covers social theory related to the environment. Students will be exposed to foundational literature in environmental sociology in the first part of the course, after which other social science literatures will be explored that analyze the relationship between environment and society, such as Political Ecology, Environment and Citizenship, Environmental Governance, Geographies of Energy, Sustainability Indicators and Standards, Ecological Modernization, and Environmental Justice, among others. Environmental issues and scholarship from both industrialized and developing country contexts, and that represent a variety of social science disciplinary perspectives, will be discussed. Spring.

Prerequisite(s): EST 600 or consent of instructor.

EST 759 Sustainability-Driven Enterprise (3) – Moran

Three hours of project meetings and/or workshops per week. Certificate of Advanced Study in Sustainable Enterprise (CASSE) capstone. Sustainable approaches to complex organizational challenges, opportunities: organizational, industry, stakeholder analysis, sustainability objectives, strategies, and metrics. Multidisciplinary team consulting project. At least 1X Fall or Spring.

Prerequisites: EST 652/ECS 650/BUA 650 and ECS 651/BUA 651

EST 770 Ecological Economics and Policy (3) – Luzadis

Three hours of seminar per week. A transdisciplinary approach to understand the interface of human and ecological systems, includes concepts and methods of ecologists, economists, and social scientists. Focus is on historical, conceptual and epistemological foundations. Draws on contemporary economic and policy thought, evolutionary biology, ecology, systems theory, social psychology, and environmental ethics. Spring

Prerequisites: Graduate coursework in ecology or economics; doctoral student standing, or permission of instructor.

EST 796 Advanced Topics in Environmental Studies (1-3) - ES Faculty

Lectures and discussions, seminars, conferences and group research on advanced topics of special or current interest to environmental studies faculty and graduate students. Fall and Spring.

EST 797 Environmental Studies Seminar (1-3) - ES Faculty

Discussion of current topics and research related to environmental studies. Fall and Spring.

EST 798 Problems in Environmental Studies (1-3) - ES Faculty

Individualized, special study of environmental studies subjects and issues. Comprehensive oral or written report required for some problems. Fall, Spring and Summer.

EST 898 Professional Experience (1-12) - ES Faculty

Professional experience which applies, enriches and/or complements formal coursework. Graded on a "Satisfactory/Unsatisfactory" basis. Fall, Spring and Summer.

EST 899 Master's Thesis Research (1-12) - ES Faculty

Research and independent study for the master's degree and thesis. Fall, Spring, and Summer.

TYPICAL COURSE SEQUENCE

The following is a typical course sequence. Each student may tailor the specific courses and sequencing (within the limits of program requirements) to her own needs.

Year 1 Fall	
COURSE TITLE	Credits
EST 600. Foundations of Environmental Studies	3
EST 603. Research Methods and Design	3
Core Course	3
Area Course	3
Semester Total Credits	12
Year 1 Spring	
COURSE TITLE	Credits
EST 626. Concepts and Principles of Sustainable Development	3
EST 797. Environmental Studies Seminar: Research Methods	1
Core Course	3
Research Methods Course	3
Thematic Area Course	3
Semester Total Credits	13
Year 2 Fall	
COURSE TITLE	Credits
EST 798. Problems in Environmental Studies*	3*
EST 899. Master's Thesis Research	3
Thematic Area Course	3
Thematic Area Course	3
Semester Total Credits	12
Year 2 Spring	
COURSE TITLE	Credits
EST 899. Master's Thesis Research	3
Semester Total Credits	3
Total Program Credits	37+3*

* This is an extra course, above the program requirements, taken to maintain full-time status. Alternatively, another Thematic course or elective may be taken in the Fall of Year 2.

V. DEPARTMENTAL RESOURCES

Departmental Staff

The Environmental Studies Office (212 Baker Laboratory) maintains unofficial student records, a collection of course syllabi, graduate theses and internship reports that are available for reference. Various time-relevant opportunities are posted on the *ES-Grad-Announce* listserv.

It is not unusual for students, at some time during their studies, to encounter problems of a personal or academic nature for which they require assistance. An early full discussion of the situation and options is often the key to their resolution. Major Professors, the Departmental Graduate Studies Coordinator, and Department Chair are available to facilitate this process. The Departmental secretary can assist in making appointments as necessary.

Graduate Funding

Institutional funding opportunities for M.S. in Environmental Studies students are limited, and are clarified below.

Graduate Assistantships

A limited number of M.S. students receive offers of support concurrent with the admissions process. This support, referred to as “recruitment”, generally comes with a commitment up to two years of funding. Continued receipt of this funding is dependent on availability of funds and successful performance in the program.

For a given semester, additional Graduate Assistantships may available on an *ad hoc* basis. Students note their interest in being considered for available Graduate Assistantships by filling out a departmental Graduate Assistantship application in February of the previous year. These Assistantships are made based on appropriateness of fit and are competitive. They are also rare. Assistantship decisions are made on a semester-by-semester basis and receiving an Assistantship for one semester does not imply or guarantee future funding through a graduate Assistantship.

Graduate students in good standing may also apply for open GA positions in other units at ESF, such as ESF’s Graduate School or ESF Open Academy.

Research Assistantships

As a graduate-research institution, ESF is involved in numerous externally funded projects many of which involve Research Assistants (RAs). Each project is managed by a Principal Investigator who has the responsibility of selecting staff. The Department of Environmental Studies has no direct involvement in this process. Students interested in working as an RA should discuss opportunities with their Major Professor. Throughout the year, ESF's Office of Instruction and Graduate Studies (OIGS) and Office of Research Programs (ORP) circulate research, fellowship, and internship announcements. Students should periodically check their mailboxes and the ES bulletin board.

Grants and Fellowships

Some graduate students come to ESF with a grant or fellowship (e.g. the National Science Foundation [NSF] Graduate Research Fellowship, or through the Fulbright international exchange program) that covers some or all costs of graduate education. Note that the lead times for fellowships can be quite long - more than a year in some cases. It can be helpful to contact a prospective faculty advisor well in advance to work together to identify and obtain such funding opportunities.

Sometimes there are cooperative research funding opportunities for master's students through sponsoring governmental agencies (e.g. NYS Dept. of Environmental Conservation), not-for-profit organizations (e.g. The Nature Conservancy), or other organizations. ESF may have other internal funding opportunities, such as through the Randolph G. Pack Environmental Institute or the Sussman Fellowship (<https://www.esf.edu/Sussman/>) that can be used in support of research activities -- see departmental communications and the ESF Graduate School website for further information.

Self-Funded

Many graduate students come to ESF self-funded.

VI. ESF FACILITIES AND RESOURCES

Library Holdings

ESF's Moon Library holdings include 150,000 volumes and access to hundreds of electronic databases and thousands of electronic journals. The collection at Moon Library constitutes a specialized information source for the academic programs of the college with concentrations in such areas as botany and plant pathology, biochemistry, chemical ecology, forest chemistry, polymer chemistry, economics, entomology, environmental studies, landscape architecture, environmental design, management, paper science, photogrammetry, silviculture, soil science, urban planning, water resources, world forestry, wildlife biology, wood products engineering, and zoology. ESF students have access and borrowing privileges at all Syracuse University Libraries (three million volumes); please note, however, some limitations exist. Other library holdings located throughout the United States are accessible through interlibrary loan.

Access to Research Facilities Beyond Our Campus

ESF hosts the Great Lakes Research Consortium, which connects 19 New York state universities and colleges. ESF also has research campuses available for student research at the Thousand Islands Research station in Clayton, NY (on the St. Lawrence River). ESF has remote facilities also at Newcomb, Cranberry Lake and Wanakena in the Adirondacks, as well as in Tully and Lafayette, NY, closer to the campus. ESF also recently acquired a research campus in Costa Rica. Faculty members in the Department of Environmental Studies collaborated on a research exchange program with CINVESTAV in Merida, Mexico, and have participated in several other exchange programs.

Computer Facilities and Services

Graduate students have access to shared computer clusters in Moon Library and Baker Laboratory; most of the campus is served by Evergreen Wireless Network.

Writing Resource Center

ESF's Writing Resource Center (WRC; Moon Library 109) provides support and assistance to students struggling with writing. Students can consult with WRC staff about questions in the areas of grammar, organization, planning, style and other aspects of the writing process, and the WRC staff can provide refreshing reminders for graduate-level students who will engage scientific rigor expected of graduate scholars. The Center also offers a library of grammar and style books, reference materials, and tip sheets and also it houses dedicated computer work stations for student use.

APPENDIX A. M.S. THESIS PROPOSAL APPROVAL FORM

Approval of Proposals

M.S. in Environmental Studies graduate students are required to prepare a formal Thesis Proposal. The proposal must be approved by the student's Major Professor and Steering Committee using the form, below, for signatures, with a copy of the proposal attached, with one copy being submitted to the Departmental secretary for the student's file.

Although progress in developing a proposal may vary from student to student, in most cases students are required to produce an approved proposal prior to registering for more than 3 credits of ENS 899 Thesis Research.

Content of Proposals

Proposals will vary in content according to the nature of the planned research. These should be succinct statements of research plans describing the planned work. Thesis proposals will consist of the following parts:

- Title
- Abstract
- Introduction
- Research question(s)
- Context of research
- Rationale for the study
- Literature review
- Research design
- Proposed methods for data collection and analysis
- Timeline
- Budget/ funding
- Outline of the thesis



PROPOSAL APPROVAL

Student Name: _____

Thesis/Project Title: _____

Approved:

Major Professor: _____ Date: _____

Committee Member: _____ Date: _____

Committee Member: _____ Date: _____

A copy of the approved proposal should be affixed to this form, and copies of this document with attached proposal should be provided to each of the above signers, and to the Environmental Studies Office, 212 Baker Laboratory.

APPENDIX B. 'TYPICAL' TIMETABLE FOR M.S. THESIS RESEARCH

Corresponding required courses for MS in Environmental Studies students are listed in parentheses. Advisor(s) should be consulted throughout.

Year One

Fall Semester

August

- Meet with advisor(s) to discuss preliminary thesis ideas, possible data sources, collaborations
- Participate in EST 603 Research Methods and Design course

September

- Draft preliminary research question
- Commence review of prior scholarship/ bibliographical research
- Begin preliminary/ secondary research

October

- Draft expanded research question
- Submit "*Environmental Studies MS Plan*" to ES Graduate Studies Coordinator

November

- Submit "Appointment of Steering Committee" (Form 2A) to ES Grad Coordinator/ ESF Graduate School
- Initial contact w/ agency, organization, community or other potential research sponsor/ host

December

- Complete preliminary research proposal

Spring Semester

• *January*

- Enroll in in-depth research methods course
- Participate in EST 797 Environmental Studies Seminar
- Further develop relationship with prospective research sponsor/ local host
- Draft thesis abstract, including clearly stated research question (EST 797)

February

- Review research design with sponsor/ host agency; request formal letter of affiliation
- Draft literature review chapter (EST 797)

March

- Draft research methods chapter (EST 797)
- Outline applicable human subjects protections (EST 797)

April

- Complete draft of thesis research proposal (EST 797)
- Finalize research proposal; submit to Steering Committee for review and approval
- Submit Human Subjects application via Major Professor to ESF ORP/ SU IRB for review
- Upon receiving IRB approval, carry out pilot testing; submit amendments to IRB as needed

Summer

- Data collection
- For field-based, qualitative (or multi-methods) research, write up daily/ weekly field notes as appropriate
- Begin data processing, clean up, as feasible

Year Two

Fall Semester

August

- Commence EST 899, Thesis Research
- Continue data processing; commence data analysis (EST 899)

September

- Analyze and interpret data (EST 899)

October

- Informally present preliminary research findings to your colleagues or lab group
- Draft research findings chapter (EST 899)

November

- Meet with Steering Committee to review research findings, discuss conclusions
- Draft introduction and conclusion chapters (EST 899)

December

- Submit "Request for Thesis Defense Committee" (Form 5B) with ESF Graduate School, for appointment of Chair and Examiner

Spring Semester

January

- Continue EST 899, Thesis Research

February

- Complete full thesis draft; submit to Thesis Examination Committee for review
- Report draft research findings to host or sponsor of research activities, for feedback (EST 899)

March

- Capstone seminar; thesis defense
- Submit one or more papers based on your research for publication in scholarly journals

April

- Present findings at ESF Spotlight on Research and/or scholarly/ professional conference
- Make final revisions, corrections to thesis
- Submit copies of final version of thesis to ESF Graduate School

May

- Graduation!

APPENDIX C. FACULTY AND STAFF

Chair

Benette Whitmore

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Associate Chair

Theresa Selfa

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Shari Dann (Community Engagement, Environmental Education, Natural Resources Conservation)

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Rhea Jezer (*Energy and Environmental Policy*), Environmental Consultant

Barrett Pitner, Writer, *The Daily Beast*

Dianne Quigley (*Ethics Research*), Northeast Ethics Education Partnership (NEEP), Brown University

Todd Moss (*Sustainable Entrepreneurship*), Whitman School of Management, Syracuse University

William Sunderlin, Consultant, Center for International Forestry Research (CIFOR)