

GRADUATE STUDY: DEGREES AND OPTIONS

Graduate academic programs at ESF share a foundation of rigorous science and dedication to wise use of natural resources. ESF offers advanced degrees in eight academic departments/divisions. Each program provides a unique opportunity for you to further your education with professors who are dedicated to both their teaching and research endeavors.

Ecosystems all over the world benefit from the professionalism and expertise of ESF graduates and the faculty members at the College of Environmental Science and Forestry. You will study with professors whose work improves and sustains the environment from the Yucatan Peninsula to Alaska and whose expertise is sought by government and corporations. That same faculty will be personally concerned with your progress. The professors' cutting-edge research will become part of your classes, and your classes will merge with the world beyond the College.

Degree Programs

ESF is authorized by the New York State Department of Education to offer undergraduate and graduate degree programs as described in this catalog. The Higher Education General Information Survey (HEGIS) code is the number assigned to programs registered by the commissioner of the New York State Department of Education. The Classification of Instructional Programs (CIP) Code allows the U.S. Department of Education to track educational programs for financial aid eligibility. Enrollment in programs that are not registered or otherwise approved may jeopardize a student's eligibility for certain financial aid programs.

Research Areas

The general area of study for each master's or doctoral student is implied by the title of the program in which the degree is awarded. Research or practice areas may be established within degree programs by individual departments that further define the student's area of specialization. For master of science and doctoral students, the research area is listed on the student's transcript if identified on their program of study form.

Graduate Degrees

Ph.D., M.S., M.P.S., M.L.A. & M.F.

Four master's degrees are offered at ESF—master of science, master of forestry, master of landscape architecture, and master of professional studies—as well as the doctor of philosophy degree. The following section describes the requirements for graduate degree programs offered by the College.

Master of Forestry (M.F.)

The Master of Forestry (M.F.) in Forest Management and Operations graduate degree program enables students to integrate knowledge and expertise drawn from both the natural and social sciences, and to apply their knowledge to solve practical forest management problems. The primary focus of the program is to provide an opportunity for graduates coming from diverse academic backgrounds with non-forestry baccalaureates to gain a professional education in forestry. Graduates will successfully function as professional foresters on multi-disciplinary forest

management teams and respond to the challenges related to the sustainable management of local, regional, and global forest resources.

The degree requires 37 graduate credits of coursework, of which at least 24 must be taken in residence at ESF. The degree accredited as a professional forestry program by the Society of American Foresters under Forestry.

The program is open to both students with some prior background in forestry and natural resources, and for those without such background. More than four (4) semesters may be required for students from non-science backgrounds who need additional basic undergraduate coursework as part of their degree program. The MF program is designed for May admission to accommodate a 4-week summer field course.

Policies and Requirements

The Master of Forestry (M.F.) degree is designed to be the first professional degree in forestry. This degree requires the successful completion of a minimum of 37 credits at the graduate level coursework, including a three-credit forestry internship (FOR 898) course, and a three-credit capstone course (FOR 690) which culminates with the development of a comprehensive forest management plan. Coursework distribution will meet requirements of the Society of American Forester (SAF) for accreditation; six graduate credit hours in each of four SAF-defined areas of study: Forest Ecology and Biology; Measurement of Forest Resources; Management of Forest Resources; and Forest Resource Policy & Administration.

Communication Skills

All students entering graduate programs at ESF are expected to be proficient in communication skills, including scientific writing and information literacy. Credits for such courses taken during the graduate program are not counted towards required coursework. Alternatively, graduate students can meet the requirement by demonstrating the equivalent in experience in writing and library skills, as determined by the steering committee.

Program outcomes for MF graduates include effective communication. Students will demonstrate this outcome by course/seminar presentations and papers, public presentations, and related activities.

Time Limits

Graduate students must complete all requirements for the Master's degree within four years of the first date of matriculation.

Major Professor

The student's major professor is appointed by the Associate Provost for Instruction and Dean of the Graduate School, upon the recommendation of the Department Chairperson. A major professor should be appointed upon the student's matriculation into a graduate program. For the graduate student accepted into a graduate program but lacking a major professor, a temporary advisor will be appointed by the Department Chairperson. However, every effort should be made to expedite appointment of a major professor as soon as possible.

It is the duty of the major professor to fulfill a primary role as the student's mentor. Aided by other members of the steering committee, the major professor guides the student in the development and implementation of the program of study, including course selection, choice

of the professional experience, and the completion of degree requirements. Students are not permitted to be unaffiliated; i.e. a major professor must be identified for each graduate student.

Steering Committee

The steering committee for Master of Forestry is composed of the major professor and at least one other faculty member or other qualified person. Other qualified people include faculty at other institutions or other recognized professionals. The student's steering committee is appointed by the Associate Provost for Instruction and Dean of the Graduate School upon the recommendation of the Department Chairperson. The steering committee should be appointed within the first semester. For all students, the steering committee must be established and must have met by the end of the second semester of graduate study. The steering committee assists in the development of the student's professional experience.

Completion Requirement

Completion of FOR 898 Professional Experience and the capstone course (FOR 690), which is a meaningful culminating experience that involves writing an intensive management plan.

Master of Landscape Architecture (M.L.A.)

The degree is accredited by the Landscape Architectural Accreditation Board (LAAB).

The M.L.A. program is designed for students who have no design or planning background and are seeking a first professional degree in landscape architecture. The curriculum provides the prerequisite work experience that qualifies the graduate to sit for the Landscape Architecture Registration Examination (L.A.R.E.). This degree requires successful completion of a minimum of 70 credit hours. This program is designed for students who intend to complete coursework full time.

Communication Skills

All students entering graduate programs at ESF are expected to be proficient in communication skills, including scientific writing and information literacy. Credits for such courses taken during the graduate program are not counted towards required coursework. Alternatively, graduate students can meet the requirement by demonstrating the equivalent in experience in writing and library skills, as determined by the steering committee.

A program outcome for MLA is graduates will be able to effectively communicate design ideas using appropriate methods to a variety of audiences, using analog and digital graphics, oral presentations, and written documents. Students will demonstrate this outcome by course/seminar presentations and papers, conference/organization presentations, public presentations, and journal publications and related activities.

Major Professor

The Dean of the Graduate School appoints the student's major professor upon the recommendation of the department chair at the time of admission. For the graduate student accepted into a graduate program but lacking a major professor, a temporary advisor

will be appointed by the Department Chairperson. However, every effort should be made to expedite appointment of a major professor as soon as possible.

It is the duty of the major professor to fulfill a primary role as the student's mentor. Aided by other members of the steering committee, the major professor guides the student in the development and implementation of the study plan, including course selection, research planning, and choice of professional experience. The major professor also guides the student in reviews of their final project / capstone document and presentation. Students are not permitted to be unaffiliated; i.e. a major professor must be identified for each graduate student.

Steering Committee

The steering committee for Master of Landscape Architecture is composed of the major professor and at least one other faculty member or other qualified person. Other qualified people include faculty at other institutions or other recognized professionals. The student's steering committee is appointed by the Associate Provost for Instruction and Dean of the Graduate Schools upon the recommendation of the Department Chairperson. For all students, the steering committee must be established and must have met by the end of the second semester of graduate study.

Completion Requirement

Master of Landscape Architecture students must complete an integrative experience, participate in the LSA 800 Capstone Studio during the final semester of the program, and disseminate the results of their integrative studies through capstone seminars.

Master of Professional Studies (M.P.S.)

www.esf.edu/graduate/programs/mps.php

The Master of Professional Studies (M.P.S.) degree is intended to be a terminal degree. The M.P.S. is offered in the following degree programs: bioprocess engineering, environmental biology, environmental and forest chemistry, environmental leadership, justice, and communication, environmental resources engineering, environmental science, environmental studies, forest resources management, natural resources management, paper science and engineering, sustainable construction management, sustainable energy, and sustainable engineering management.

This degree requires the successful completion of a minimum of 30 credits at the graduate level, of which at least 24 must be in course work. The student's program of study must be approved by the major professor, steering committee and Department Chairperson.

In addition, individual programs may require an integrative experience such as an internship, team project, a paper and presentation, and/or comprehensive examination. If an examination is required, it is developed and managed by the department responsible for the program.

Master of Professional Studies Degree Programs

The **Master of Professional Studies (M.P.S.)** degree that prepares graduates for a specific profession, rather than academic research. The M.P.S. is offered in the following degree programs: Bioprocess Engineering, Ecological Restoration, Environmental and Forest Chemistry, Environmental Leadership, Justice, and Communication, Environmental Resources Engineering,

Environmental Science, Environmental Studies, Forest Resources Management, Natural Resources Management, Paper Science and Engineering, Sustainable Construction Management, Sustainable Energy, and Sustainable Engineering Management.

The minimum credit-hour requirement is the successful completion of 30 graduate credit including a minimum 24 graduate coursework credits and at least 3 credits of an internship or applied project. The student's program of study must be approved by the major professor, steering committee and Department Chairperson.

Program of Study

All students are required to complete the [Program of Study](#) form by the end of the second semester of matriculation. The Program of study form must be signed by the major professor, all steering committee members, and the graduate coordinator/department chair.

The Graduate Program of Study is a list of courses comprising the required elements of a particular degree program. It is unique to each graduate student and serves as both the "plan," which lays out the intended array of courses needed to achieve their educational goals, as well as a "contract" with the college specifying each of the required courses, credit hours, experiences (such as seminars or internships), examinations, and skill or knowledge requirements necessary to complete the degree. Your Program of Study must include the sequence of courses you are required to complete and an internship/project plan. The [Program of Study](#) form, developed by you with the advice and approval of your major professor and the other member of your steering committee, must be submitted to your Graduate Coordinator/Department Chair for approval, and then forwarded to the Graduate School. The Program of Study should be developed during the first semester of study in the graduate program. It should be filed with the Graduate School no later than the end of the second semester of matriculation. The Program of Study can be revised during graduate study. Changes to the Program of Study must be approved by your major professor, Department Chair, and the Graduate School. Changes are formalized by submitting the [Revision to the Program of Study](#) form.

Major Professor

The Dean of the Graduate School appoints the student's major professor upon the recommendation of the department chair at the time of admission. A major professor should be appointed upon the student's matriculation into a graduate program. In cases where the major professor is not available, the department will appoint a major professor as a temporary advisor. The appointment process should be completed within the first semester of the student's academic year. Students are not permitted to be unaffiliated; i.e. a major professor must be identified for each graduate student.

The major professor shall be a member of the ESF faculty, except those with visiting appointments. The major professor, or at least one of the co-major professors, must hold a degree equal to or higher than the degree sought by the student. The major professor, or at least one of the co-major professors, must be a full-time member of the department granting the degree sought by the student. An adjunct faculty member may also serve as a co-major professor. It is the duty of the major professor to fulfill a primary role as the student's mentor. Aided by other members of the steering committee, the major professor guides the student in the development and implementation of the student's Program of Study, including course selection, internship/project planning, choice of the professional experience, and the completion of degree requirements. The major professor also guides the student in reviews of their final project / capstone presentation and document.

Steering Committee

The steering committee for Master of Professional Studies is composed of the major professor and at least one other faculty member or other qualified person (such as faculty members from different institutions or recognized professionals). The student's steering committee is appointed by the Dean of Instruction and Graduate Studies, upon the recommendation of the Department Chairperson. The Dean of the Graduate School appoints the student's steering committee upon the recommendation of the department chair. The [steering committee](#) should be appointed within the student's first semester (for part time students, this should be done after completing 12 credit hours). For all students, the steering committee must be established and must have met by the end of the second semester of graduate study.

The steering committee assists the student in the development of the program of study, including the development of the student's internship/project/professional experience.

Communication Skills

All students entering graduate programs at ESF are expected to be proficient in communication skills, including scientific writing and information literacy. Credits for such courses taken during the graduate program are not counted towards required coursework.

A program outcome for MPS degrees is graduates will be able to demonstrate effective oral and written communication skills. Students will demonstrate this outcome by course/seminar presentations and papers, conference/organization presentations, research, and public presentations.

Time Limits

Graduate students must complete all requirements for the Master's degree within four years of the first date of matriculation.

Completion Requirement

Students completing the Master's degree are required to make a public presentation. The purpose of the presentation is to provide an opportunity for the graduate student to present technical information to a critical body of professionals and peers. This presentation should be attended by the student's steering committee. Each presentation is open to the College community and will be announced College-wide to encourage attendance by students and faculty.

Additional completion requirements, such as an internship, team project, a paper may apply, depending on the program.

Master of Science (M.S.)

The master of science (M.S.) degree is an academic degree offered in the following programs:

biomaterials engineering, bioprocess engineering, environmental biology, environmental and forest chemistry, environmental resources engineering, environmental science, environmental studies, forest resources management, landscape architecture, natural resources management, paper science and engineering, sustainable construction management, and sustainable energy.

The minimum credit-hour requirement is the successful completion of 30 graduate credits distributed between coursework and research/professional experience.

Master of Science with Thesis Track

- Of the 30 credits, a minimum of 18 are course credits and a minimum of 6 credit hours are thesis research
- In programs requiring thesis research, students must investigate a problem that initiates, expands, or clarifies knowledge in the field and prepare a thesis based on this research. Students are required to define an appropriate problem for investigation, review relevant information, develop a study plan incorporating investigative techniques appropriate to the problem, implement the plan, and relate the results to theory or a body of knowledge in the field. The student must successfully defend the thesis for degree completion.

Master of Science with Non-Thesis Track

- Of the 30 credits, a minimum of 24 are course credits and a minimum of 3 credits are Master Research or Professional Experience
- All master students must successfully defend their thesis or complete their public presentation (for non-thesis track) to complete the degree. The thesis must be prepared according to college standards and submitted to ESF Experts for online electronic publication.

Program of Study

All students are required to complete the [Program of Study](#) form by the end of the second semester of matriculation. The Program of study form must be signed by the major professor, all steering committee members, and the graduate coordinator/department chair.

The Graduate Program of Study is a list of courses comprising the required elements of a particular degree program. It is unique to each graduate student and serves as both the "plan," which lays out the intended array of courses and research needed to achieve their educational goals, as well as a "contract" with the college specifying each of the required courses, credit hours, experiences (such as seminars or internships), examinations, thesis documents, and skill or knowledge requirements necessary to complete the degree. Your Program of Study must include the sequence of courses you are required to complete and a research plan. The [Program of Study](#) form, developed by you with the advice and approval of your major professor and other members of your steering committee, must be submitted to your Graduate Coordinator/Department Chair for approval, and then forwarded to the Graduate School. The Program of Study should be developed during the first semester of study in the graduate program. It should be filed with the Graduate School no later than the end of the second semester of matriculation. The Program of Study can be revised during graduate study. Changes to the Program of Study must be approved by your major professor, Department Chair, and the Graduate School. Changes are formalized by submitting the [Revision to the Program of Study](#) Revision to the Program of Study form.

Major Professor: Appointment and Responsibilities

The Dean of the Graduate School appoints the student's major professor upon the recommendation of the department chair at the time of admission. A major professor should be appointed upon the student's matriculation into a graduate program. In cases where the major professor is not available, the department will appoint a major professor as a temporary advisor. The appointment process should be completed within the first semester of the student's

academic year. Students are not permitted to be unaffiliated; i.e. a major professor must be identified for each graduate student.

The major professor shall be a member of the ESF faculty, except those with visiting appointments. The major professor, or at least one of the co-major professors, must hold a degree equal to or higher than the degree sought by the student. The major professor, or at least one of the co-major professors, must be a full-time member of the department granting the degree sought by the student. An adjunct faculty member may also serve as a co-major professor. It is the duty of the major professor to fulfill a primary role as the student's mentor. Aided by other members of the steering committee, the major professor guides the student in the development and implementation of the student's Program of Study, including course selection, research planning, choice of the professional experience, and facilitation of the examination schedule. The major professor also guides the student in reviewing thesis drafts, including a comprehensive review of the thesis before the final copy is presented for defense. It is the responsibility of the major professor to ensure that the document presented at the defense is the final version, subject only to minor grammatical changes.

Steering Committee: Appointment and Responsibilities

The steering committee for Master of Science students is composed of the major professor and at least two faculty members or other qualified individuals (such as faculty members from different institutions or recognized professionals).

The Dean of the Graduate School appoints the student's steering committee upon the recommendation of the department chair. The [steering committee](#) should be appointed within the student's first semester (for part time students, this should be done after completing 12 credit hours). For all students, the steering committee must be established and must have met by the end of the second semester of graduate study.

The steering committee assists the student in the development of the student's Program of Study, including the development of the student's research or professional experience. The steering committee guides the development of the thesis including a review of the thesis or thesis before the final copy is presented for defense.

Communication Skills

All students entering graduate programs at ESF are expected to be proficient in communication skills, including scientific writing and information literacy. Credits for such courses taken during the graduate program are not counted towards required coursework. A program outcome for MS degrees is graduates will be able to effectively communicate research findings to scholarly and practitioner audiences. Students will demonstrate this outcome by course/seminar presentations and papers, conference/organization presentations, thesis research public presentation and defense, and journal publications and related activities.

Seminars

Participation in seminars, including the preparation and presentation of technical material, is vital to the student's graduate education. All graduate students at ESF are required to participate in graduate seminars as outlined in their degree requirements.

Master's Thesis Proposal

All students participating in a Master of Science degree program, thesis track, must complete a thesis proposal for approval by the members of the student's steering committee. The major professor and each of the graduate steering committee members must approve the proposal using the Graduate School's [Thesis or Dissertation Proposal Approval](#) form.

Thesis Preparation

The thesis must be prepared according to college standards and [guidelines for formatting thesis](#). The thesis needs to be sent to the Graduate School at least two weeks before the thesis defense. After the successful defense, the revised thesis must be sent to the graduate school for final approval. Once approved, the student is responsible for submitting the final approved thesis to ESF Experts for online electronic publication.

Public Presentation

Students completing the master's degree are required to make a public presentation. The purpose of this presentation is to provide an opportunity for the graduate student to present scientific information to a critical body of professionals and peers. For students completing the MS with thesis, this public presentation precedes the thesis defense and is attended by the student's examination committee. Each presentation is open to the college community and will be announced college-wide to encourage attendance by students and faculty.

Thesis Defense Examination

At the conclusion of the study and research program, each Master's candidate completing a thesis must successfully defend the thesis. The objectives of the defense examination are (1) to probe the validity and significance of the data and information presented in the thesis, (2) to assess the student as a critical thinker and data analyst, (3) to evaluate the student's scientific creativity, including the student's ability to relate research results to scientific theory within the chosen field, and (4) to present the results effectively in writing.

Students should follow the academic guidelines for timely completion of their degree: [Academic Year Deadlines](#)

Upon the recommendation of the appropriate Department Chairperson, the Graduate School appoints the [Thesis Defense Examination Committee](#). It consists of members of the steering committee and at least one examiner, external to the steering committee. An examiner is an independent faculty member or qualified external researcher appointed to evaluate a graduate student and their thesis. The examiner reads the thesis and participates fully in the defense but is not involved in the supervision of the research or thesis. Additionally, the Graduate School appoints a committee chair who is not from the student's degree program or major professor's department..

- [Information about the thesis defense process, and to request appointment of the defense committee](#)
- This defense examination covers principally the material in the thesis as well as literature and information relating to the thesis. At least 14 days before the oral examination date, the student is required to submit a final thesis or dissertation to all members of the examination committee. Five days prior to the oral exam, the major professor confirms with the chair of the examining committee 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 defense, the exam may be postponed by the Dean of the Graduate School at the recommendation of the chair of the student's exam committee. 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 faculty member may be an observer. The student examinee may invite a silent student observer to attend the examination. The composition of a defense examination committee, once formally appointed and constituted by the Graduate School, may not change following the commencement of the defense examination. In the event of a suspension of proceedings, or a failure on the first attempt of the defense examination, the composition of the committee may only be changed in the presence of a legitimate extenuating circumstance (illness, departure from the institution, sabbatical leave, etc.) which prevents the participation of one or more of its members.

The defense examination usually lasts two hours, although this time period may be extended as required. At the completion of the examination, the candidate and observers are excused from the room and the examination committee determines whether the candidate has successfully defended the thesis. Unanimous agreement is required to pass the student. If less than unanimous agreement is reached, the student is considered to have failed the first thesis defense examination. A student who fails the first defense may request a second defense. At the second defense, the student has passed the defense if there is no more than one negative vote. A student who has failed the second defense is terminated from the graduate program.

Final Thesis Review and Submission:

The final thesis should also be submitted to the Graduate School (gradservices@esf.edu) at least 2 weeks before the dissertation defense examination for formatting review. Feedback regarding proper formatting guidelines adhering to contemporary styles of scientific or technical writing with proper literature citation styles will be provided by the Graduate School. Once the final version of the thesis has been approved by the committee, indicated by signing the thesis/dissertation approval form, the final version should be sent to the the Graduate School (gradservices@esf.edu) with the subject: Last name_Final Thesis.

Doctor of Philosophy (Ph.D.)

The doctor of philosophy (Ph.D.) degree is an academic degree offered in the following degree programs:

biomaterials engineering, bioprocess engineering, environmental biology, environmental and forest chemistry, environmental resources engineering, environmental science, environmental studies, forest resources management natural resources management, paper science and engineering, sustainable construction management, and sustainable energy.

The doctor of philosophy degree requires a minimum of 60 graduate credits, of which 30 to 48 credits are for coursework and 12 to 30 credits are awarded for dissertation. Individual departments will determine the applicable credit hour requirements within these ranges to reflect individual program requirements and emphases. The graduate credits earned for a master's degree that are applicable to a student's doctoral study plan (Form 3B) are determined on an individual basis by the steering committee. All steering committee members should sign the 3B form by the end of the student's second semester. Students may not use master's thesis credits to fulfill doctoral program coursework requirements.

Students must pass the doctoral candidacy examination covering selected fields of study at least one year prior to dissertation defense and successfully defend the dissertation. At the

conclusion of the study and research program, each Doctoral Candidate must successfully defend the dissertation.

The Doctor of Philosophy degree requires a minimum of 60 graduate credits, a minimum of 30 credits for coursework and a minimum of 12 dissertation research credits. Individual departments will determine the applicable credit hour requirements to reflect individual program requirements and emphasis.

The dissertation research consists of investigating a problem that initiates, expands, or clarifies knowledge in the field. Doctoral students prepare a dissertation based on this research. Students are required to define problems for investigation, review relevant information, develop a study plan incorporating investigative techniques appropriate to the problem, implement the plan, and relate the results to theory or a body of knowledge in the field.

The graduate credits earned for a master's degree that apply to a student's doctoral Program of Study are determined on an individual basis by the student's doctoral study committee.

All steering committee members should sign the [Program of Study](#) form and it should be filed with the Graduate School no later than the end of the third semester of matriculation. Students may not use master's thesis credits to fulfill doctoral program coursework requirements.

Students must pass the doctoral candidacy examination covering selected fields of study no later than the third year since the first date of matriculation and at least one year prior to dissertation defense and successfully defend the dissertation. The dissertation must be prepared according to college standards and submitted to ESF Graduate School and ESF Experts digital repository.

Program of Study

All students are required to complete the [Program of Study](#) form by the end of the third semester of matriculation. The Program of study form must be signed by the major professor, all steering committee members, and the graduate coordinator/department chair.

The Graduate Program of Study is a list of courses comprising the required elements of a particular degree program. It is unique to each graduate student and serves as both the "plan," which lays out the intended array of courses and research needed to achieve their educational goals, as well as a "contract" with the college specifying each of the required courses, credit hours, experiences (such as seminars or internships), examinations, dissertation documents, and skill or knowledge requirements necessary to complete the degree. Your Program of Study must include the sequence of courses you are required to complete and a research plan. The [Program of Study](#) form, developed by you with the advice and approval of your major professor and other members of your steering committee, must be submitted to your Graduate Coordinator/Department Chair for approval, and then forwarded to the Graduate School. The Program of Study should be developed during the first year of study in the graduate program. It should be filed with the Graduate School no later than the end of the third semester of matriculation. The Program of Study can be revised during graduate study. Changes to the Program of Study must be approved by your major professor, Department Chair, and the Graduate School. Changes are formalized by submitting the [Revision to the Program of Study](#) Revision to the Program of Study form.

Major Professor: Appointment and Responsibilities

The Dean of the Graduate School appoints the student's major professor upon the recommendation of the department chair at the time of admission. A major professor should be appointed upon the student's matriculation into a graduate program. In cases where the major professor is not available, the department will appoint a major professor as a temporary advisor. The appointment process should be completed within the first semester of the student's academic year. Students are not permitted to be unaffiliated, i.e. a major professor must be identified for each graduate student.

The major professor shall be a member of the ESF faculty, except those with visiting appointments. The major professor, or at least one of the co-major professors, must hold a degree equal to or higher than the degree sought by the student. The major professor, or at least one of the co-major professors, must be a full-time member of the department granting the degree sought by the student. An adjunct faculty member may also serve as a co-major professor. It is the duty of the major professor to fulfill a primary role as the student's mentor. Aided by other members of the steering committee, the major professor guides the student in the development and implementation of the student's Program of Study, including course selection, research planning, choice of the professional experience, and facilitation of the examination schedule. The major professor also guides the student in reviewing dissertation drafts, including a comprehensive review of the dissertation before the final copy is presented for defense. It is the responsibility of the major professor to ensure that the document presented at the defense is the final version, subject only to minor grammatical changes.

Steering Committee: Appointment and Responsibilities

The steering committee for doctoral students is composed of the major professor and at least two faculty members or other qualified individuals (such as faculty members from different institutions or recognized professionals).

The Dean of the Graduate School appoints the student's steering committee upon the recommendation of the department chair. The steering committee should be appointed within the student's first semester (for part time students, this should be done after completing 12 credit hours). For all students, the steering committee must be established and must have met by the end of the third semester of graduate study.

The steering committee assists the student in the development of the student's Program of Study, including the development of the student's research or professional experience. The steering committee guides the development of the dissertation, including a review of the dissertation before the final copy is presented for defense.

Communication Skills

All students entering graduate programs at ESF are expected to be proficient in communication skills, including scientific writing and information literacy. Credits for such courses taken during the graduate program are not counted towards required coursework. A program outcome for PhD degrees is graduates will be able to effectively communicate research findings to scholarly and practitioner audiences. Students will demonstrate this outcome by course/ seminar presentations and papers, conference/organization presentations, thesis research public presentation and defense, and journal publications and related activities.

Seminars

Participation in seminars, including the preparation and presentation of technical material, is vital to the student's graduate education. All graduate students at ESF are required to participate in graduate seminars as outlined in their degree requirements.

PhD Dissertation Proposal

All students participating in a Doctor of Philosophy degree program must complete a dissertation proposal for approval by the members of the student's steering committee. The major professor and each of the graduate steering committee members must approve the proposal using the Graduate School's [Thesis or Dissertation Proposal Approval](#) form.

PhD dissertation research proposals must be approved by the steering committee and submitted to the graduate school by the completion of their candidacy exam to achieve candidacy. A department may, at its discretion, incorporate an oral defense of the dissertation proposal as a part of the oral component of the Graduate School's required candidacy examination.

Doctoral Candidacy Examination

The objectives of this examination are to determine the breadth and depth of knowledge in the chosen field of study and assess the student's understanding of the scientific process. The doctoral candidacy examination is taken when the majority of coursework is completed and no more than three years have elapsed from the first date of matriculation, or the student may be dismissed from the doctoral program. This examination must be taken at least one year before the dissertation defense.

Students who wish to complete the doctoral candidacy examination should request the formation of their examining committee to their department chair, guided by the schedule provided by the Graduate School. Upon the recommendation of the appropriate department chair, the Dean of the Graduate School appoints the doctoral candidacy examination committee, which consists of the student's major professor, the student's steering committee, and an additional faculty member from an appropriate area, external to the steering committee, that will serve in the role of examiner. An examiner is an independent faculty member or qualified external researcher appointed to evaluate a graduate student and their work. The examiner participates fully in both the written and oral portions of the candidacy exam. Additionally, the Graduate School appoints a committee chair who is not from the student's department in the degree program. The examination must have both written and oral components.

The role of the examination committee chair is to manage the examination, ensure its integrity, and represent the interests of both the faculty and the student. Any faculty member may serve as an observer. The student examinee may invite a silent student observer to attend the oral examination, provided notification is given to the chair of the student's exam committee.

The composition of a candidacy examination committee, once formally appointed and constituted by the Dean of the Graduate School, may not change following the commencement of the candidacy examination. In the event of a suspension of proceedings or a failure of the examination, the composition of the committee may only be changed in the presence of a legitimate extenuating circumstance (illness, departure from the institution, sabbatical leave, etc.) that prevents the participation of one or more of its members.

Written Examination: The examining committee shall convene at a planning meeting with the student. During the first part of the planning meeting, the committee determines the type, the schedule for the process and establishes the date for the oral component. During the second part, the student is then excused from the meeting, and the committee develops and discusses the exam content.

There are **three alternative types** for the written component, as follows:

- **Type 1:** The committee members submit questions or problems related to the exam's objectives. The questions are discussed and agreed upon at the planning meeting. The major professor administers the written examination. Usually, one-half day is allocated to questions submitted by each examiner. Upon completion by the student, the examination questions are reviewed and graded by the committee members who prepared them. The committee then reviews the entire examination.
- **Type 2:** The student prepares a written report on a topic or problem assigned by the examining committee. The topic or problem must align with the objectives of this examination, and its content cannot be directly related to the student's thesis research. The student has approximately one month to develop a thorough understanding of the assigned topic and prepare a written report. The committee members and the committee chair review the report.
- **Type 3:** This type is **only available** to doctoral students in the **Environmental and Forest Chemistry and Environmental Resources Engineering Departments**. The student prepares and defends a written proposal of future research likely to be carried out during their Ph.D. project. This research prospectus must be presented to the examining committee two weeks before the candidacy exam and should include preliminary studies supporting the feasibility of the proposed research. The exam will test the candidate's understanding of concepts directly related to their immediate area of research, their knowledge of prior related studies conducted by others, their ability to design and interpret experiments in this area, and their capacity to think and write independently, as well as present work plans orally clearly and rationally. The committee members and the committee chair review the report.
- **Oral Examination:** Following the completion of the written examination under Type 1, the report under Type 2, or the proposal under Type 3, the committee meets with the student for an oral examination, which usually lasts two hours. However, the duration can be longer if required. The questions may address the report or other areas relevant to the examination's objectives, including subject matter in related fields.

To ensure the integrity of the examination process, all members of the examination committee appointed by the Dean of the Graduate School will be present at the oral examination. Students must complete the oral examination within six months of the appointment of the examination committee; otherwise, they will be required to request the assignment of a new examination committee. The Dean of the Graduate School may grant exceptions.

At the conclusion of the examination period, the student examinee and observers are excused from the room, and the examination committee determines whether the student has passed the examination. Unanimous agreement is required to pass the student. If less than unanimous agreement is reached, the student is considered to have failed the first doctoral candidacy examination. The student may request a second examination, which must be taken no more than one year after the date of the first examination. A student is considered to have passed the second examination if there is not more than one negative vote. A student who has failed the second examination is terminated from the graduate program.

Dissertation Preparation

The thesis must be prepared according to college standards and [guidelines for formatting thesis](#).

The dissertation needs to be sent to the Graduate School at least two weeks before the thesis defense. After the successful defense, the revised dissertation must be sent to the graduate school for final approval. Once approved, the student is responsible for submitting the final approved dissertation to ESF Experts for online electronic publication.

Public Presentation

Students completing the Ph.D. degree are required to make a public presentation on their dissertation research. The purpose of this presentation is to provide an opportunity for the graduate student to present scientific information to a critical body of professionals and peers. This presentation precedes the dissertation defense and should be attended by the student's dissertation examination committee. Each presentation is open to the college community and will be announced collegewide to encourage attendance by students and faculty.

Dissertation Defense Examination

At the conclusion of the study and research program, each Doctoral Candidate must successfully defend the dissertation. The objectives of the defense examination are (1) to probe the validity and significance of the data and information presented; (2) to assess the student as a critical thinker and data analyst; (3) to evaluate the student's scientific creativity, including the student's ability to relate research results to scientific theory within the chosen field; and (4) to present the results effectively in writing.

Upon the recommendation of the appropriate Department Chairperson, the Graduate School appoints the [Dissertation Defense Examination Committee](#). It consists of members of the steering committee and at least two examiners, external to the steering committee. An examiner is an independent faculty member or qualified external researcher appointed to evaluate a graduate student and their dissertation. The examiner reads the dissertation and participates full in the defense but is not involved in the supervision of the research or dissertation. Additionally, the Graduate School appoints a committee chair who is not from the student's degree program or major professor's department.

[Information about the dissertation defense process, and to request appointment of the defense committee.](#)

This defense examination primarily covers the material in the thesis or dissertation, as well as literature and information relating to it. At least 14 days before the oral examination date, the student is required to submit a final thesis or dissertation to all members of the examination committee. Five days prior to the oral exam, the major professor confirms with the chair of the examining committee 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 dissertation defense, the exam may be postponed by the Dean of the Graduate School at the recommendation of the chair of the student's exam committee.

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 faculty member may serve as an observer. The student examinee may invite a silent student observer to attend the examination. The composition of a defense examination committee, once formally appointed and constituted by

the Dean of the Graduate School, may not change following the commencement of the defense examination. In the event of a suspension of proceedings, or a failure on the first attempt of the defense examination, the composition of the committee may only be changed in the presence of a legitimate extenuating circumstance (illness, departure from the institution, sabbatical leave, etc.) which prevents the participation of one or more of its members.

The defense examination usually lasts two hours, although this time period may be extended as required. At the completion of the examination, the candidate and observers are excused from the room and the examination committee determines whether the candidate has successfully defended the dissertation. The committee chair has the option to vote. Unanimous agreement is required to pass the student. If less than unanimous agreement is reached, the student is considered to have failed the first defense examination. A student who fails the first defense 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 passes if there is no more than one negative vote. A student who has failed the second defense is terminated from the graduate program.

Final Dissertation Review and Submission:

The final dissertation should also be submitted to the Graduate School (gradservices@esf.edu) at least 2 weeks before the dissertation defense examination for formatting review. Feedback regarding proper formatting guidelines adhering to contemporary styles of scientific or technical writing with proper literature citation styles will be provided by the Graduate School. Once the final version of the dissertation has been approved by the committee, indicated by signing the thesis/dissertation approval form, the final version should be sent to the the Graduate School (gradservices@esf.edu) with the subject: Last name_Final Dissertation.

Certificates of Advanced Study

In addition to degree programs for matriculated students, ESF offers study towards the earning of advanced certificates for professionals in:

- Environmental Decision Making
- Environmental Leadership (online)
- Environmental Justice and Inequality (online)
- Indigenous Peoples and the Environment
- Science & Environmental Communication (online)

Concurrent Programs

Concurrent Programs for Syracuse University Students

The joint Juris Doctor (J.D.) and Forest and Natural Resources Management (FNRM) Master of Professional Studies (M.P.S.) degree is designed for Syracuse University students who are interested in legal careers involved with forest, natural, and environmental resources. As human demands on the environment increase, society needs attorneys who understand the economic, demographic, social, and political issues that drive resource use allocation. Students learn the complexities of managing both resources and people recognizing that resource and environmental decisions involve value-driven conflicts. The degree provides a comprehensive foundation in forest, natural, and environmental resources issues and an understanding of both biophysical and social science.

Students enrolled in the joint J.D./FNRM degree program must earn a minimum of ninety-six (96) credits at both the College of Law and ESF. The J.D. normally requires eighty-seven (87) credits,

but joint-degree students must take at least seventy-two (72) Law School credits. Students can transfer fifteen (15) credits from ESF to the College of Law. The M.P.S. degree requires thirty (30) credits, a minimum of twenty-four (24) of which must be ESF courses and six (6) of which may be applied by transfer from coursework at the College of Law.

Students can apply to the joint J.D./FNRM degree program at two points: 1) simultaneously, before entering the College of Law, or 2) after completing the fall semester of study at the College of Law. Applicants applying simultaneously must complete a College of Law application and an ESF graduate application. Applicants applying after enrolling at the College of Law must complete an “internal” College of Law application and ESF graduate application.

Intra-ESF Concurrent Degree Programs

ESF graduate students may pursue concurrent graduate degrees in two different departments or academic units within the College. Please consult with individual departments for details regarding specific degree or program combinations. Concurrent degrees require a minimum of 80 percent of the credit hour requirements of each of the paired degrees.

Concurrent degrees magnify the strengths of academic program offerings within ESF. Pairing an academic degree (Ph.D. or M.S.) with a professional degree (M.L.A., M.P.S., M.F.), or pairing two professional degrees (M.L.A., M.P.S., M.F.) are attractive choices for ESF students. Please consult with individual departments for details regarding specific degree or program combinations. Concurrent degrees require a minimum of 80 percent of the credit hour requirements of each of the paired degrees. Students may apply for admission to both degrees at matriculation, or they may apply to add the second degree following completion of at least 12 credit hours of coursework with a minimum GPA of 3.5. Graduate students interested in these opportunities should contact the ESF Graduate School.

