

The Ohio State University

Environmental Science Graduate Program



2021-2022
Graduate
Program
Handbook

Please visit our web site for more information

*Environmental Science Graduate Program
The Ohio State University
3138A Smith Lab
174 West 18th Ave.
Columbus OH 43210
<http://esgp.osu.edu>*

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The Environmental Science Graduate Program (ESGP) is an interdisciplinary graduate program at The Ohio State University (OSU) comprised of faculty representing, multiple colleges and schools. Currently, faculty from the following colleges and schools are represented: Arts and Sciences; Engineering; Food, Agricultural, and Environmental Sciences; Law; Glenn College of Public Affairs; Public Health; and Veterinary Medicine.

The ESGP office is located at 3138A Smith Lab, 174 West 18th Avenue on the Columbus campus.

The purpose of this handbook is to familiarize graduate students with OSU's rules and recommendations and those that are specific to ESGP.

Program Contacts

Kelly Malone

Program Coordinator

3138A Smith Lab, 174 West 18th, Columbus, OH 43210
614 292-9762; malone.381@osu.edu

Dr. Nicholas Basta

Director of ESGP

410C Kottman Hall, 2021 Coffey Rd., Columbus, OH 43210
614 292-6282; basta.4@osu.edu

Dr. Mary Gardiner

Chair of ESGP Graduate Studies Committee

251 Kottman Hall, 2021 Coffey Rd., Columbus, Ohio 43210
gardiner.29@osu.edu

1. The Graduate Program in Environmental Science

1.1 The Graduate Council and the Graduate Program in Environmental Science

The Graduate Council is the principal advisory board of the Graduate School and participates in the development of rules, policies, and standards pertaining to graduate programs, graduate associates, and graduate fellowships. This handbook is a compilation of the policies, procedures, and requirements of ESGP as determined by the graduate faculty through its Graduate Studies Committee. Nothing in this handbook will replace or supersede regulations set forth by the Graduate Council as published in *The Graduate School Handbook* (gradsch.osu.edu/handbook).

1.2 Program Goals

The Ohio State University's Environmental Science Graduate Program is an interdisciplinary program with participating faculty from colleges throughout The Ohio State University. It is designed to provide sound and effective graduate education and research on important environmental issues. The program emphasizes basic research on environmental processes and effects and applied research and teaching that will contribute to solving the world's pressing environmental problems. Students graduating from our program will be able to:

1. Demonstrate an understanding of major global environmental problems and the role in which the biological, physical, social, and applied sciences serve in developing solutions.
2. Demonstrate expertise within a chosen field of environmental science, including the ability to analyze, synthesize, and apply research towards understanding of the complexity of environmental problems and their solutions.
3. Conduct original, environmental science research that may involve modeling, laboratory research, and field-based experiments/ research.
4. Collaborate effectively as an environmental scientist in interdisciplinary project planning and research efforts that engage multiple stakeholders.
5. Communicate environmental science theories, research and findings effectively in publications and oral presentations.

2. Admissions

2.1 Responsibility for Admission Decisions

The admission of students to ESGP is the responsibility of the ESGP Graduate Studies Committee (GSC).

2.2 Admissions Requirements for the Environmental Sciences Graduate Program

The following requirements are in addition to those of the Graduate School:

1. An undergraduate or graduate degree in a related field from an accredited college or university. Applications from those in fields outside the scope of environmental science shall be considered when special merit warrants.
2. A minimum undergraduate GPA of 3.0/4.0 is required.
3. A minimum of four semester credit hours of college mathematics and/or statistics; seven semester credit hours in physical sciences; and three semester credit hours in biological sciences are required.
4. All applicants must submit their scores on the verbal, quantitative, and analytical sections of the Graduate Record Exam (GRE). Successful applicants generally have a combined score and a score greater than 311 on the verbal and quantitative sections.
5. All applicants must have identified an ESGP affiliated faculty member who has agreed to serve as advisor for their degree program (MS or PhD). For information on ESGP faculty, please visit our website at: esgp.osu.edu/directory

ESGP MS to ESGP PhD (completing MS) Students enrolled in the ESGP Master of Science Program who wish to apply for admission to the PhD program upon completion of their MS must satisfy the same admission criteria as other applicants. The student should submit a 1-2 page statement outlining their research plan for the PhD. In addition, the student's advisor must submit a letter of support to the GSC (send to Kelly Malone, malone.381@osu.edu). Upon receipt of the statement and letter of support, the GSC will review the

application for admission at their next GSC meeting. Students may be eligible for an additional year of GA support from the ESGP (see section 8 for GA appointments details).

ESGP MS to ESGP PhD (without completing MS) Students currently enrolled in the MS program who wish to transfer to the PhD program without completion of the MS must formally request a transfer in writing to the GSC of the ESGP. This request must include a letter of concurrence signed by all members of the student's MS committee, as well as justification on why the scope of the students' research has expanded so much to merit a PhD. Upon a favorable decision by the GSC, the student will be admitted into the PhD program. Such a transfer will not count as a new degree and will not grant the student new financial support (in the form of GA, or Fay Fellowship) from the ESGP beyond what was originally committed when the student was first admitted to the MS Program.

Non-ESGP OSU graduate program to ESGP PhD Students completing MS degrees or wishing to transfer from another OSU PhD program to the ESGP PhD program must initiate an Intra University Transfer form through Graduate Admissions (<https://gpadmissions.osu.edu/apply/grad.html>). The same admission criteria are applied to external applicants that used in evaluating internal applicants.

Superior students who have earned only a bachelor's degree may be admitted directly to the PhD program with the expectation that they will earn their MS degree upon successfully completing their candidacy exams, in route to the PhD.

Applicants need to identify an ESGP faculty member willing to serve as their academic advisor prior to admittance to the program. Applicants will be recommended for admission by the GSC, pending identification of and confirmation of a faculty advisor. A list of the current ESGP faculty is available on the ESGP website and should be used when completing the Statement of Purpose required for admission. No student will be admitted to ESGP without a confirmed advisor.

2.3 Admission Dates

Admission to the ESGP is annually for Autumn Semester. Exceptions to this will be reviewed only via petition submitted by the applicant's potential advisor to the GSC. Students admitted for Autumn Semester may begin in the preceding Summer Session if the student's advisor supports the request for such admission.

Successful applicants will receive an official acceptance letter from ESGP and from Graduate Admissions indicating the semester of admission. Admitted students may request that their admission be moved back one semester, e.g. from Autumn semester to Summer semester, if they have support of their advisor and funding. Those wishing to make such changes must petition the GSC in writing. Admitted students who cannot begin their studies in the semester of admission, may defer for up to one year. This is done by letter to the chair of the GSC. Anyone wishing to defer longer than one year must reapply to the program.

2.4 Admission Procedures

After the published application deadlines, the GSC will review complete applications for admittance the following Autumn semester. Decisions on admission are typically made by the end of January. Applications received after March 1 will be reviewed only at the request of a member of the graduate faculty. No student is admitted to the program unless a faculty member has been identified and confirmed in writing as that student's advisor. It is understood that admitted students may change advisors after they arrive on campus. This is not

common, but when such cases occur, they are usually done in consultation with both the new and the original advisors.

Official applications for either the MS or PhD program must be submitted to Graduate Admissions electronically including supplemental materials such as letters of recommendation, statement of purpose, Résumé or Curriculum Vitae, transcripts, and all test scores (GRE and TOEFL). For more information see the Application Instructions page on the ESGP website at esgp.osu.edu/prospective-students/application-instructions. Admission does not mean an offer of funding. Funding typically is determined later in the spring and the packages are a combination of ESGP funding and advisor funding.

The GSC will also review files who meet minimum requirements for University and OARDC Fellowships, vote on them and nominate them.

2.5 Conditional Admission

Because the ESGP is an interdisciplinary program, otherwise well-qualified applicants may have some deficiencies in undergraduate course work. Such applicants may be conditionally admitted. Further non-traditional students occasionally have grade records that are not clear enough to enable the GSC to make a judgment about their likely success in our program. In such cases, applicants may also be admitted conditionally with the stipulation that they must maintain a 3.0 or higher grade-point average during their first 15 credits of graded graduate course work. Students admitted with such a condition may be terminated immediately if they fail to maintain the conditional GPA.

Students on Conditional status may petition the GSC to amend or remove some or all conditions. This must be done in writing to the chair and the reasons for the request must be clearly elaborated. A support letter from the student's advisor is recommended but not required.

All conditions must be satisfied no later than the end of the second semester of the student's enrollment in the program. Failure to do so can result in a recommendation to the Dean of the Graduate School for dismissal based on failure to maintain "reasonable progress." The GSC will review the progress of all students on Conditional status each semester. When a student satisfies all conditions, the chair of the committee will inform the Graduate School and request that the student be removed from Conditional status.

Students admitted conditionally must be transferred to Regular status before they may make Application to Graduate, e.g. the chair of the GSC may not sign an Application to Graduate form for a student still on Conditional status.

In the case of part-time students, this time limit may be extended on a pro rata basis.

It is the student's responsibility to understand and satisfy the conditions of admission within the allotted time. Students wishing for clarification should consult with the chair of the GSC. Students should also be aware that faculty advisors and graduate student committees could neither amend nor waive conditional requirements, including the two-semester time limit.

2.6 Graduate Non-degree Status

Up to 7 hours of semester graduate credit earned while on Graduate Non-degree status may be subsequently approved for transfer to a graduate degree program at the discretion of the GSC upon written request from the graduate student and with approval of the student's advisor. Such requests will not be accepted until the student has been admitted to the graduate program.

Students wishing to apply for admission to Graduate Non-degree status must:

- a. Provide the chair of the GSC with evidence of successful completion of a baccalaureate or higher degree, and
- b. Obtain written permission from the chair of the GSC on the appropriate form for submission to the Graduate School.

The chair of the GSC is empowered to grant Graduate Non-degree admission without approval of the committee. Graduate Non-degree students wishing to enter the graduate program to pursue a degree must follow the formal application procedures of the program and the Graduate School.

2.7 Inquiries from Potential Students

The ESGP Graduate Program Coordinator in consultation with the Director will be responsible for responding to inquiries and conducting much of the correspondence with potential applicants. However, faculty members are the most effective agents in graduate student recruitment, and graduate faculty members are encouraged to correspond directly with potential students. Likewise, prospective students are encouraged to reach out to faculty to learn more about their research and to identify potential advisors.

3. Student Records

3.1 Application files

The ESGP office, will maintain application files for all applicants to the program. Access to application files is open to all members of the graduate faculty. The file of any admitted student who does not matriculate for the designated semester of acceptance will be destroyed one year after the beginning of that semester.

3.2 Academic files

The ESGP office will maintain the academic files for all admitted ESGP students; however, The Graduate School maintains the official record of student grades. Academic files for matriculated students are restricted to members of the GSC, the student's advisor, and other faculty with permission of the chair of the GSC. Students may examine any item in their files.

4. Registration and Scheduling

4.1 Course Loads

- a. Full time graduate enrollment is 8 credit hours and above. ESGP encourages students to enroll in a combination of course work and research hours each semester and to enroll in 12-15 credits per semester. Graduate Associates (GTA, GRA, GAA) on 50% appointments must enroll for a minimum of 8 credits during Autumn and Spring Semesters, however we encourage 12-15 credit hours of enrollment per semester. Graduate Associates (GTA, GRA, GAA) on 50% appointments during the Summer session, must enroll for a minimum of 4 credit hours, however we encourage 12-15 credits, when possible.

- b. Post Candidacy enrollment requirement. All PhD students who have passed their Candidacy Examination must enroll for 3 graduate credits during Autumn and Spring Semester. Summer semester is excluded (unless you have a GA appointment).
- c. Fellowship students must enroll in a minimum of 12 credits each semester and a minimum of 6 credits for summer semester. ESGP encourages enrolling in 12-15 credits per semester.

Research credit reflects time spent by a graduate student pursuing thesis or dissertation research and time invested by faculty members in supervising such research. Therefore, students who are spending time on their thesis or dissertation research must register for appropriate numbers of research credit hours within the academic unit of their advisor. Please consult with your advisor for deciding on the number of research hours per semester.

Course Load Requirements

Student	Autumn and Spring		Summer	
	Max	Min	Max ^φ	Min
Graduate Associate, 50%	18	8	12	4
Graduate Associate, 25%	18	4	12	2
Graduate Fellow	18	12	12	6
Post-Candidacy Student	18*	3	12	3
For Financial Aid and Fees [#]	18	8	12	8

*Post-candidacy students will enroll in three hours. Post-candidacy students who wish to take more than three hours should speak with their graduate program.

[#]Students may be eligible for financial aid at half time. Please contact Buckeye Link for detailed information about financial aid.

^φThe 8-, 6-, and 4-week summer sessions have individual maximums that are not to be exceeded. See Summer Enrollment for more information.

4.2 Procedures for Registration

Graduate students are expected to register each semester or session through the online Buckeyelink system. They are encouraged to discuss their scheduling plans with their advisors, especially if they plan to take courses not on their Plan of Study. Graduate students may take courses not in their Plan of Study but may not graduate until all Plan of Study courses have been completed. Students needing assistance with any aspect of registration and scheduling may seek assistance from the ESGP office.

4.3 Core Course Requirements (MS and PhD)

All MS students are required to complete at least three credit hours in each of the three Core areas. All Ph.D. students are required to complete at least six credit hours in each of the three Core areas.

a. CORE COURSES IN BIOLOGICAL SCIENCE -

Environmental science focuses on the relationships between living organisms and their environment, so a strong understanding of ecology is foundational to the ESGP core. This understanding can be gained through coursework that focuses on a particular taxon or a particular ecosystem but must be broadly applicable to any environment.

b. CORE COURSES IN PHYSICAL SCIENCES AND ENGINEERING-

Physical Science core courses must (1) study fundamental physical, hydrological, chemical, or biogeochemical processes; and (2) study the effects of physical structure and processes on biotic components and their interactions with their ecosystems.

c. CORE COURSES IN SOCIAL SCIENCES AND POLICY-

The social science core uses qualitative and quantitative approaches to understand the relationships between human societies and their surrounding ecosystems. Core social science courses must engage social science in a combined theoretical and applied study of a physical, cultural, regulatory, or economic relationship between humans and physical environments.

A link to the approved core courses in each area is provided in Appendix I. Not all of the courses on the list may be offered every year. The GSC may approve adding or removing courses from the list. Course instructors may petition the GSC to add courses to a Core area. Courses must satisfy the objectives of the core course in the area they are to be added to.

In extraordinary circumstances, students may petition the GSC to accept an alternative course that was completed by the student but is not on the list of core courses in Appendix I, as a core course for their graduation requirements. **PLEASE NOTE THAT COURSE SUBSTITUTION PETITIONS MUST BE APPROVED BEFORE STUDENT TAKES THE COURSE BEING REQUESTED AS A SUBSTITUTION.**

4.4 Graduate Seminar Requirement (MS and PhD)

MS: Each MS student, whether pursuing the thesis or non-thesis option, is required to enroll to and attend the ESGP seminar (Env Sci 7899) for at least 3 semesters. During two of these semesters, students are also expected to make a presentation. There are two types of seminar presentations: entry and exit presentations. The entry presentation should provide the student's tentative research plans, or the background to their work and hypotheses. The exit presentation should provide some results from their research work, which may be preliminary results, results and discussion from their research, or final results that are included in the thesis. It is preferable that the entry presentation will take place during the first year of study, and that the exit presentation will take place at some point during the last 3 semesters before graduation. The exit presentation must be presented at a different and later semester than the entry presentation. The student-submitted "Application to Graduate" will not be approved until the exit seminar presentation is scheduled. Failure to present in the ESGP seminar will be considered "lack of reasonable progress" and permission to graduate will be rescinded. Participation in the ESGP Graduate Student Poster Forum (held during our recruiting day) can count as student's entry presentation, but not the exit presentation.

PhD: Each doctoral student is required to register for and attend the ESGP seminar (Env Sci 7899) for at least 3 semesters. During two of these semesters, students are also expected to make a presentation. There are two types of seminar presentations: entry and exit presentations. The entry presentation should provide the student's tentative research plans, or the background to their work and hypotheses. The exit presentation should provide some results from their research work, which may be preliminary results, results and discussion from a technical paper they published, or final results that are included in the dissertation. It is preferable that the entry presentation will take place during the first year of study, and that the exit presentation will take place at some point during the last 3 semesters before graduation. The exit presentation must be presented at a different and later semester than the entry presentation. The student-submitted "Application to Graduate" will not be approved until the exit seminar presentation is scheduled. Failure to present in the ESGP seminar will be considered "lack of reasonable progress" and permission to graduate will be rescinded.

5. Plan of Study (MS and PhD)

5.1 MS Plan of Study

The MS in the ESGP offers considerable flexibility, enabling students, their advisors, and committee members to design a Plan of Study that will satisfy the students' educational objectives. This Plan of Study becomes the official course plan and requirements for the individual student. Therefore, it is important that the Plan of Study for each student be approved early in that student's enrollment. The Plan of Study must be submitted to the Graduate Program Coordinator no later than the fifth week of the second semester of enrollment in the MS program. The advisor and all members of the committee must sign the Plan of Study.

The Plan of Study must form a cohesive body of course work, including but not limited to, specific classes described in the Core Curriculum of the ESGP.

Changes in the Plan of Study must be approved by the student's advisor and committee and reported to the ESGP Graduate Program Coordinator. Requests for course substitutions for core courses must be submitted in writing to the GSC and the advisor must submit supporting explanations in writing. Alteration of core requirements will be allowed only under extraordinary conditions.

5.2 PhD Plan of Study

The PhD in the ESGP offers considerable flexibility, enabling students, their advisors, and committee members to design a Plan of Study that will satisfy the students' educational objectives. This Plan of Study becomes the official course plan and requirements for the individual student. Therefore, it is important that the Plan of Study for each student be approved early in that student's enrollment. The Plan of Study must be submitted to the Graduate Program Coordinator no later than the end of the second semester of enrollment in the PhD program. The advisor and all members of the committee must sign the Plan of Study.

While Plans of Study will vary among students with different scholarly interests, all should be designed to prepare the student for the candidacy examination and for the successful pursuit of dissertation research. Further, the Plan of Study must combine the depth and breadth of course work designed to foster research and scholarship in the student's specialty while enabling the student to relate his or her studies to those being done in allied academic areas. The Plan of Study should provide ample opportunity through formal graded course work, directed independent study, or research experience for each doctoral student to demonstrate expertise in the three general core subject areas.

All courses listed on the Plan of Study must be completed before the student may take the candidacy Examination. The Plan of Study must form a cohesive body of course work, including but not limited to, specific classes described in the Core Curriculum of the ESGP.

Changes in the Plan of Study must be approved by the student's advisor and committee and reported to the ESGP Graduate Program Coordinator. Requests for course substitutions for core courses must be submitted in writing to the GSC and the advisor must submit supporting explanations in writing. Alteration of core requirements will be allowed only under extraordinary conditions. 1 of the Plan of Study rests with the student's committee, as long as general program requirements are met.

6. The Master of Science (MS) Degree

The MS in the ESGP is designed to provide students with advanced knowledge and skills in the various fields of environmental science and opportunities to learn how to design and carry out research or other scholarly activities. Students may follow either the thesis or non-thesis option and are guided by their advisors and committees.

6.1 Master's Committee

Each student's MS Committee should be determined by the end of the first semester of full-time enrollment or after 12 credits of part-time graduate course work. Please complete the [ESGP Notification of MS Committee](#) form to the ESGP Graduate Program Coordinator. The committee will be comprised of at least three members:

- a. Advisor (must be ESGP Faculty)
- b. Committee Member (OSU Faculty either ESGP or outside ESGP)
- c. Committee Member (OSU Faculty or ESGP Affiliated Scientist)

At least one member must be from outside the student's specialty area but should have expertise appropriate and applicable to the student's thesis research problem. The committee is responsible for approving the student's Plan of Study.

6.2 MS Degree Options

a. Thesis Option (minimum of 30 credits but check your individual plan of study for specific credit hour requirements)

The Thesis option provides for depth of study with an emphasis on the research process. The master's exam for this option must include a written portion (thesis) and an oral portion. Students intending to pursue doctoral work are advised to pursue the Thesis option. Please see [Section 6.0](#) of the Graduate School Handbook

b. Non-thesis Option (37 credits)

The Non-thesis option provides an opportunity for students who are not primarily interested in research careers to pursue advanced study in environmental science. This option must include a written portion and may include an oral portion. The written portion may be an in-depth research paper that must be approved by the student's advisor and committee. Please see [Section 6.0](#) of the Graduate School Handbook

6.3 Thesis Option Requirements

a. Thesis Form, Abstract and Approval

The thesis must be prepared in accordance with the rules and regulations of the Graduate School. Please see [Section 6.4](#) of the Graduate School Handbook

b. Master's Thesis Defense

Following the Master's thesis defense, the Master's thesis committee will determine the outcome of the oral exam and of the written thesis as Satisfactory or Unsatisfactory, and will record in the Gradforms webpage (each committee member will receive and email with a link for reporting results). The examination must follow all graduate school rules and be completed by the published graduate school deadlines for each semester. The vote in favor of passing the student must be unanimous.

The student can be allowed to deliver a public presentation as part of the exam. The public presentation should be no longer than half an hour and the entire exam should not exceed 2 hours. Except when video conferencing has been approved by the Graduate School, all members of the master's examination committee must be present during the entire examination and are expected to participate fully in questioning during the examination and in the discussion and decision on the result. Others may attend the public presentation part of the examination, subject to the rules of the Graduate Studies Committee.

All committee members, and the chair, will vote and report th. Each examiner indicates judgment by posting their decision on the Report on Final Examination by the published deadline for the autumn or spring semester or summer term of graduation. The advisor notifies the student and the Graduate Studies Committee of the master's examination committee's decision.

Upon recommendation by the student's committee, a student who has failed his or her final examination may retake that examination one time. The committee for the second examination will include the same faculty members as the first, unless the Dean of the Graduate School prior to the date of the second examination approves a substitution. If the student fails the second examination, the GSC will inform the Dean of the Graduate School and the student will be denied further enrollment in the ESGP.

6.4 Non-thesis Option Requirements

a. Technical Paper Requirement

Students in the non-thesis option will write an in-depth research paper on a subject approved by the student, advisor, and committee. The paper should be written in a style and format designated by a leading refereed journal in the student's field. The completed paper is to be evaluated by the advisor and committee to ensure that it is rigorous, detailed, analytical, and scholarly work. Further, the student must demonstrate a thorough knowledge of the literature relevant to the topics. Copies of the completed paper must be submitted to all committee members at least three weeks before the student's exam.

b. Final Master's Examination

A final master's examination comprising written and oral portions will be conducted after the student has completed all requirements, including the technical paper. The vote in favor of passing the student must be

unanimous. The written portion of at least four-hour duration will test the student's knowledge pertinent to the areas of research for the technical papers. The committee will formulate questions, and the advisor will administer the written portion. All committee members will evaluate the entire written portion of the examination and report their evaluations in writing to the advisor.

Following the written portion, the student must successfully complete an oral examination, no longer than two hours, also administered by the committee and chaired by the advisor. The vote in favor of passing the student must be unanimous.

Attendance at the oral portion of the master's examination is limited to the student and members of the student's committee, all of whom must be present during the entire examination. All committee members, and the chair, will vote and report their votes to the Gradforms website (all committee members will receive an email with a link for reporting results). A

If, after evaluating the written portion of the examination and the technical paper, the committee members see no possibility for a satisfactory overall performance on the master's examination, the student may waive the right to take the oral portion. The committee may not deny a student the opportunity to take the oral portion. If the student decides to waive the right to take the oral portion, s/he must provide the committee with a written request for the waiver. In such cases, the committee records the results as unsatisfactory on the master's examination form and returns it with a copy of the student's waiver request to the Graduate School along with a copy to the ESGP.

Upon recommendation by the examination committee, a student who has failed his or her final examination may retake that examination one time. The examination committee for the second examination will comprise the same faculty members as the first unless the Dean of the Graduate School prior to the date of the second examination approves substitution. If the student fails the second examination, the GSC will inform the Dean of the Graduate School and the student will be denied further enrollment in the ESGP.

6.5 Summary of MS Graduation Requirements

1. Submission of the Application to Graduate via Gradforms by the third Friday of the semester in which graduation is expected. Please make sure you allot time for your advisor and the ESGP Graduate Program Coordinator to approve your application. BOTH APPROVALS MUST HAPPEN BY THE DEADLINE. Before submitting your application, please complete the [ESGP Course Checklist](#) and submit to the ESGP Graduate Program Coordinator.
2. Registration for at least three graduate credit hours during the autumn or spring semester or summer term in which graduation is expected. You must observe enrollment requirements for GA or Fellowship funding.
3. Completion of a minimum of 30 graduate credit hours. Eighty percent of those required credit hours must be completed at this university over a period of at least two semesters.
4. Graduate cumulative grade-point (cGPA) average of at least 3.0
5. Submission of [MS Thesis Defense Form](#) to the ESGP Graduate Program Coordinator.
6. Announcement of student's MS defense by the advisor to the ESGP Faculty and Graduate Student Listserv (list serv addresses can be provided by the Graduate Program Coordinator).

7. Satisfactory completion of the master's examination and committee approval of the Report on Final Examination by the published deadline for the autumn or spring semester or summer term of graduation
8. For thesis option students: committee approval of the Report on Final Document and electronic submission of the approved thesis to OhioLINK by the published deadline for the autumn or spring semester or summer term of graduation.
9. Receipt of final grades in the University Registrar's Office by the published deadline

7. The Doctor of Philosophy (PhD) Program

The Doctor of Philosophy (PhD) is a research degree that provides students with opportunities to achieve a high level of scholarly competence and to develop the ability to contribute to the knowledge and theory base in the field of environmental science. The program includes a coherent program of course work, a candidacy examination taken after all required course work is completed, a research dissertation, and a final examination. During the program, the student will be guided and assisted by his or her advisor and committee. Upon completion of the degree, the student will be awarded the PhD. Please see [Section 7.0](#) of the Graduate School Handbook

7.1 Dissertation Committee

As soon as possible after entering the doctoral program, the student and his or her advisor should select a dissertation committee. No later than the end of the student's first year the student should submit the [Notification of PhD Committee form](#) to the Graduate Program Coordinator. Changes to the dissertation committee must be formalized no later than the third Friday of the semester or session in which the student expects to graduate (the deadline to file an application to graduate).

Each student's dissertation committee is to be comprised of at least four members:

1. The advisor (chair of the committee) and one other member must be ESGP faculty.
2. The remaining two members may be OSU faculty from outside ESGP
3. One committee member must be from outside the student's specialty area
4. Other faculty or an ESGP Affiliated Scientist may only serve as an additional or fifth member of the committee and student must file a petition with the Graduate School via the Gradforms system for approval.

The committee works with the student as s/he prepares the Plan of Study and provides guidance during planning, design, and execution of the dissertation research. The committee is also responsible for conducting and evaluating the final oral examination.

Normally, the dissertation committee will be the same as the candidacy examination committee, although substitutions and additions may occur at the discretion of the advisor. Additional graduate faculty members may include Category M faculty.

7.2 Candidacy Examination

The candidacy examination is a single examination consisting of two portions, written and oral, administered under the auspices of the Graduate Studies Committee in conjunction with the student's candidacy examination

committee and the Graduate School. Once all course requirements have been met, and in consultation with advisor, students may schedule a candidacy exam via Gradforms. Please see [Section 7.3](#) of the Graduate School Handbook.

a. Written Portion

The candidacy examination committee can choose between a traditional written exam and a grant proposal-based exam.

i. A traditional written exam is intended to assess the student's command of ideas, information, and methods related to the student's coursework, general background in science, and thesis research. It is expected that the written questions will test the student's capacity for independent thought and for integration of ideas and information across disciplines, as appropriate to an interdisciplinary graduate program. Portions of the written exam can be open or closed book questions at the discretion of each candidacy examination committee member. It is expected that the student be able to answer the written questions submitted by each committee member in two days or less.

The written exams must be distributed to all committee members and will be evaluated and marked by the appropriate committee members. Marked exam papers are returned to the student at least ten days prior to the scheduling of the oral examination. The student must schedule the oral defense via the Gradforms system and must schedule at least 2 weeks prior to the chosen date for the defense. Students should expect weaknesses in their written exam to be one of the focuses of questioning in the oral exam. The advisor and committee will deliberate after the oral exam to establish whether the student's performance on the written exam is satisfactory or unsatisfactory. All committee members will record their vote of satisfactory or unsatisfactory in the Gradforms system.

ii. A grant proposal-based exam is intended to test the student's ability to explore and critically examine an area of literature, integrate information from different subject areas, and develop a formal plan of research using modern research tools and techniques. A member of the student's candidacy exam committee (but not the advisor) is selected in consultation with the other committee members to formulate the topic of the research proposal. The research topic should reflect the student's general research area or interests, but it should not be closely related to the student's thesis research. The grant-based exam should not be construed as an opportunity for the student to write his or her thesis research proposal. The student may be invited to suggest research proposal topics. The student has 30 to 40 days to complete the written proposal. The proposal should follow the general format and style adopted by NSF, USDA, or other federal granting agencies. The proposal must be organized in such a way that it contains at least the following sections: abstract, background and significance, hypothesis, research objectives, experimental design and methods, anticipated problems and alternative approaches, and references. If in doubt about the style and organization, the student should consult the committee member who prepared the research topic. The body of the proposal is limited to 20 pages (double spaced) excluding the references. After completion, the student must give a copy of the proposal to each committee member along with an evaluation form at least ten days prior to the scheduling of the oral examination. The committee members will have one week to evaluate the merits and scientific content of the proposal. Copies of the marked proposal and the evaluation forms are returned to the advisor who will make them available to the student and make the evaluation forms available to each committee member. Using the evaluation forms, the committee members may request revisions or clarifications of the proposal document before the oral portion is scheduled. When the evaluations are complete, the student can schedule the oral portion via Gradforms (making sure the oral exam is scheduled 2 weeks prior to the chosen date of the exam). After the oral exam, all committee members will record their vote of satisfactory or unsatisfactory in the Gradforms system.

Please see [Section 7.3](#) of the Graduate School Handbook for more details on the University guidelines for the candidacy exam process.

b. Oral Portion

The oral portion of the candidacy examination, normally two hours long, must be completed within one month of the conclusion of the written portion.

- i.** Attendance: Attendance is limited to the student and members of the candidacy examination committee. Except when video conferencing is involved, all members of the candidacy examination committee must be present during the entire oral examination. The oral portion of the candidacy examination lasts no more than two hours, with questioning of the student occupying the entire period of the examination. All committee members are expected to participate fully in the questioning during the examination and in the discussion of and decision on the result of the candidacy examination

c. PhD Candidacy

PhD students who have passed the written and oral portion of the candidacy exam are referred to as doctoral candidates and are now ready to undertake independent and original research resulting in a dissertation. A doctoral candidate student is normally expected to enroll primarily in PhD research hours with their advisor until graduation.

i. Continuous Enrollment Policy

All doctoral candidates are required to be enrolled in at least 3 credit hours every autumn and spring semester of their candidacy (summer term excluded) until graduation. Doctoral candidates must be enrolled for at least three credits per semester.

ii. Time Limit

If a student fails to submit the approved final copy of his or her dissertation to the Graduate School within five years of being admitted to candidacy, candidacy is cancelled. In such cases, with the approval of the advisor, candidacy committee, and the GSC, the student may take a supplemental candidacy examination. If this supplemental candidacy examination is passed, the student is readmitted to candidacy and must then complete the degree within two years.

7.3 Dissertation

The dissertation is a scholarly contribution to knowledge in the doctoral candidate's area of specialization. It will consist of a written portion and an oral defense. Successful completion of the written and oral portions will result in the doctoral candidate earning a PhD. Please see [Section 7.8](#) of the Graduate School Handbook.

7.4 Summary of PhD Graduation Requirements

1. Submission of the Application to Graduate via Gradforms by the third Friday of the semester in which graduation is expected. Please make sure you allot time for your advisor and the ESGP Graduate

Program Coordinator to approve your application. BOTH APPROVALS MUST HAPPEN BY THE DEADLINE. Before submitting your application, please complete the [ESGP Course Checklist](#) and submit to the ESGP Graduate Program Coordinator.

2. Satisfactory completion of the candidacy examination and submission of the approved Report on Candidacy Examination.
3. Submission of the [Dissertation Defense form](#) to the Graduate Program Coordinator.
4. Announcement of student's Dissertation defense by the advisor to the ESGP Faculty and Graduate Student Listserv (list serv addresses can be provided by the Graduate Program Coordinator).
5. Satisfactory completion of the final oral examination (with reported satisfactory vote by all committee members via Gradforms by the published deadline for that semester.
6. Satisfactory approval of dissertation by the graduate school and electronic submission of dissertation and 500 word or less abstract through OhioLink.
7. Registration for at least three graduate credit hours per semester (excluding summer) during student's entire post candidacy tenure.
8. Completion of a minimum of 80 graduate credit hours, at least 50 of which must be completed beyond the master's degree.
9. Receipt of final grades in the University Registrar's Office by the published deadline
10. Grade-point average of at least 3.0 in the current graduate program

8. Financial Assistance

Financial support for graduate students falls under two categories:

1. Fellowships
2. Graduate Associateships: Research, Teaching and Administrative Associateships administered by ESGP or other departments on campus.

Each student who applies for admission to ESGP may indicate interest in a Fellowship and/or Graduate Associateship on their admission application. Students are also encouraged to write directly to faculty members for advice and information on the availability of research funds and other assistance.

8.1 Fellowships

University Fellowship competitions are highly competitive and are largely restricted to entering graduate students. Successful candidates usually have overall grade-point averages above 3.6 on a 4-point scale and high scores on the Graduate Record Examination (GRE). Fellows pursue a full-time schedule of courses or research and have no work responsibility over the tenure of the award. Furthermore, they must remain in good academic standing and may not work on or off campus during the period of the fellowship. More than one fellowship may not be held simultaneously.

8.2 Graduate Associates

A Graduate Associate (GA) is a full-time enrolled graduate student who holds an appointment in one of three categories; Teaching Associates (GTA), Research Associates (GRA), or Administrative Associates (GAA) according to the duties assigned. The advisor and student work together to determine which appointment is most appropriate given student's future goals. Please see [Section 11](#) of the Graduate School Handbook.

ESGP will match one academic year (2 consecutive semesters) of GA funding to supplement student's advisor's funding offer. We will work with student's advisor to create a funding plan for the student during the admission process. Student's funding type (GRA, GTA, GAA) will be determined in consultation with advisor and student to determine which appointment is most appropriate given student's future goals).

ESGP's semesters of support are for Autumn and Spring semesters only and include a monthly stipend (amount determined by the university), and tuition waiver. This support is conditional upon:

- The availability of funds
- Good academic standing of the student
- A signed funding plan by the student's advisor. Funding plans should be finalized before the final admission of the student. In order to qualify for ESGP funding of GA support, the advisor must guarantee support for the student receiving the GA support for at least 2 years (for Ph.D. students) or 1 year (for M.S. students) additional to the 1-year GA support by the ESGP. Fellowship awards (such as Fay, University Fellowships, or OARDC) are additional to and not in lieu of other ESGP GTA/GAA/GRA and advisor commitments.

The appointment of a GA may be terminated if:

- a. Student is no longer enrolled the university or is not enrolled for fulltime credit hours during the semester of appointment.
- b. Student completes the graduate program before the appointment expires,
- c. Student's performance or progress is determined to be unsatisfactory, or
- d. There are insufficient funds to fund the position.

Under extraordinary circumstances, a GA appointment may be terminated early (i.e. before the end of the appointment period). Because such terminations can have serious consequences for the GA—loss of income, loss of medical benefits, loss of fee authorization support—the Graduate School wants to ensure that such actions are taken only after careful consideration and appropriate notice. GA appointments may be terminated prior to the end of the appointment period only with the written approval of the Graduate School.

Summer Fee Authorization. Graduate students holding a 50 percent or greater GA appointment for autumn and spring semesters are entitled to a full fee authorization during the immediately following summer term without being on appointment. Students holding a 25 percent GA appointment for two consecutive semesters are entitled to a summer fee authorization at half the full fee authorization rate. MS students and predoctoral students using the summer fee authorization must be registered for at least four hours of credit. Post-candidacy doctoral candidates must register for at least three hours of credit. A graduate student who elects not to enroll during the summer may not defer the use of the summer fee authorization. Students on a summer fee authorization may hold a 25 percent or less GA appointment. Fellows, Trainees, or non-GA appointments for one or both semesters are not eligible for the summer term fee authorization. Student Associate titles are not meant to be used as a substitute for GA appointments during the summer term.

9. Academic Standards

The ESGP Graduate Studies Committee establishes and enforces rules, procedures, and practices consistent with high quality graduate programs. Within those rules, procedures, and practices, the GSC

- a. Determines program specific policies on time limits for completing degree requirements consistent with Graduate School rules
- b. Reviews students' academic performance
- c. Determines reasonable progress and recommends action

Please see [Section 5.0](#) of the Graduate School Handbook.

10. Petitions

10.1 Petitions

A student may petition for a modification to any rule, procedure, or guideline in the EGGP handbook by first submitting a written petition to the GSC. Such a petition should contain a letter of support from the advisor.

PLEASE NOTE THAT COURSE SUBSTITUTION PETITIONS MUST BE APPROVED BEFORE STUDENT TAKES THE COURSE BEING REQUESTED AS A SUBSTITUTION.

11. Research Misconduct by a Graduate Student

Allegations of research misconduct by a graduate student must be referred to the Office of Research Compliance (ORC). Please see Section C.2 of the Graduate School Handbook.

12. Office of Disability Services

Students with any disabilities who may require special assistance are encouraged to contact:

[The Office for Disability Services](#)

Room 98 Baker Hall
113 W. 12th Avenue
Columbus, OH 43210

This office coordinates physical and academic support services and accommodations for individuals who have special needs as a result of a permanent or temporary disability. Individuals eligible for service include, but are not limited to, those with mobility, hearing, visual, speech, or learning disabilities.

12 Non-Discrimination Notice

The Ohio State University is committed to building and maintaining a community to reflect human diversity and to improve opportunities for all. The university is committed to equal opportunity, affirmative action, and eliminating discrimination and harassment. This commitment is both a moral imperative consistent with an intellectual community that celebrates individual differences and diversity, as well as a matter of law. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy, race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its education program or activity, which includes employment

Appendix I - Core Courses

This list may grow in size. Any faculty member who would like to request a course be added to the ESGP core course list is asked to submit a current course outline to the ESGP office for consideration by The Graduate Studies Committee. Students may also suggest courses as long as they have informed the instructor of their intention and it meets with the instructor's approval. The student also must submit a course outline to the ESGP office for consideration by The Graduate Studies Committee. Those submitting requests should also state in their request how the course meets the requirements as listed under each core area.

For a complete and updated list of approved core courses, please follow the link below:
esgp.osu.edu/current-students/courses

Appendix II: ESGP Student Annual Review Form M.S. & Ph.D.

The annual completion of this Graduate Student Annual Review is mandatory for **all graduate students** in ESGP. It is designed to serve as an opportunity for the student, advisor(s), and the Graduate Studies Committee to review the student's progress, establish a set of realistic goals for the following year, and indicate any areas of weakness that need to be addressed. The evaluation is intended to be a consultative and interactive process to assist in shaping each year's program of study to best meet the student's needs and to ensure timely progress through the program. Students and faculty advisors should discuss all issues relevant to student progress, including achieving program milestones, conference and publication activity, developing professional networks in the field, and funding plans for the coming year. While this progress report focuses on activity over the prior year and plans for the coming year, students and faculty should also consider longer- term plans, including funding in future years, completing the program, and moving on to the first job placement. **The information provided in the student report will be used by the Graduate Studies Committee to evaluate the extent to which a student is making reasonable progress and should be recommended for funding, as established in the student handbook, and to create the annual report for the program.**

INSTRUCTIONS:

- (1) Please complete this Annual Review **electronically** and update your CV.
- (2) Email your completed review, updated CV, advising report, and the Advisor Evaluation form to your advisor(s) at your earliest convenience.
- (3)** Please meet with your advisor(s) to discuss this report and obtain their comments and signature(s) on the advisor evaluation page. **The deadline for all materials is April 1.**
- (4) After your meeting, ask your advisor(s) to send you an electronic version of the completed advisor evaluation.
- (5) At that point you will have 4 documents to submit via email to Kelly Malone at malone.381@osu.edu. Save these 4 documents using the specific naming conventions below:
 - Annual Review saved as: *lastname_rev_2019.pdf*
 - Current CV saved as: *lastname_CV_2019.dpdf*
 - Advising Report saved as: *lastname_advrep_2019.pdf*
 - Advisor evaluation saved as: *lastname_advisor_eval_20189pdf*

Thank you for your time and participation in this important review process!

STUDENT NAME: _____ email (dot number) _____

Advisor Name: _____

Advisor's Home Department: _____

Co-Advisor Name (if applicable): _____

Semester & year entered program: _____

At which level did you **enter the program**? MS PhD What is your GPA? _____

(report your cumulative grade point average for all Ohio State graduate course work)

What is your program track (general study vs. specialization)? _____

Which semesters were you enrolled in seminar (ENVSCI 7899)? Dates of Seminar Presentations (m/d/yy)

ESGP Seminar 1	<input type="text"/>	Entrance	<input type="text"/>
ESGP Seminar 2	<input type="text"/>	Exit	<input type="text"/>
ESGP Seminar 3	<input type="text"/>		

Category	Department & Number / Course Name	Credit	Semester	Year	Grade
Specialization Requirements (if applicable)	1				
	2				
	3				
Biological Science Core Requirements	1 <input type="text"/> <input type="text"/>				
	2 <input type="text"/> <input type="text"/>				
Physical Science Core Requirements	1 <input type="text"/> <input type="text"/>				
	2 <input type="text"/> <input type="text"/>				
Social Science Core Requirements	1 <input type="text"/> <input type="text"/>				
	2 <input type="text"/> <input type="text"/>				

Completion Dates:

If applicable, indicate the semester and year for successful completion of the applicable academic milestones below. If you have not completed them but have them scheduled, please indicate the semester and year. If you do not have them scheduled but have an idea when you will complete them, please indicate the estimated semester and year. Select N/A if not applicable:

(MS only) Thesis proposal	Semester -	Year -	N/A	
(MS only) Thesis defense	Semester -	Year -	N/A	
(PhD only) Candidacy exams	Semester -	Year -	N/A	
(PhD only) Dissertation proposal	Semester -	Year -	N/A	
(PhD) Dissertation proposal	Semester -	Year -	N/A	
(PhD) Dissertation defense	Semester -	Year -	N/A	
Plan of Study Submitted	Semester -	Year -	N/A	

Funding History:

Please note your funding source, position, and course # (if TA or instructor) for each semester in the program to date (including this semester) in the table below.

<u>Year</u>	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
1			
2			
3			
4			
5			
6			
7			

Professional Activities:

For the period Summer to Spring, please indicate if you have accomplished any of the categories in the rows below. Please include the total number as well as list the specific items.

Category	Total Number	List Specific Items
Presentations at professional conferences		
Articles under review at peer-reviewed journals (including conditional acceptances)		
Articles published or forthcoming in peer-reviewed journals		
Book chapters under review or published		
Grants or fellowships applied for (specify OSU or outside)		
Grants or fellowships awarded (specify OSU or outside)		
Other (Paper awards, books under contract or published, etc.)		

Student narrative of progress to date:

If you are **currently at the MS level**, please describe your progress in each of the following areas:

1. Progress made in forming your thesis committee (indicate committee members):
2. Progress in developing a thesis topic (e.g., initial stages, approved by advisor, etc.):
3. Progress in writing and defending your thesis:
4. Other research/professional activities (i.e. field work, papers) in the past year:

If you are **currently at the Ph.D. level**, please describe your progress in each of the following areas:

1. (Optional) Progress made in preparing your MS thesis for publication:
2. Progress on candidacy exams (topics selected, committee formed, reading list approved, etc.)
3. Progress made on your dissertation proposal (e.g., idea discussed with advisor, draft prepared, committee formed, committee-approved proposal, etc.):
4. Progress made on your dissertation:
5. Progress made on other research papers/publications:

For all students:

Please list your academic **goals** for the coming year developed in consultation with your advisor:

Please note here any additional information that should be considered in evaluating your performance and progress (optional):

Environmental Science Graduate Program: Advisor Evaluation Form

Name of Student: _____

Name of Advisor: _____

Name of Co-Advisor (if applicable): _____

I (we) evaluate this student's 2018-2019 academic year progress in relation to ESGP expectations of reasonable progress (see ESGP handbook) as:

- Above expectations
- Meeting expectations
- Below expectations (Please explain below)

Comments:

Student signature

Date

Advisor signature

Date

Co-Advisor signature (if applicable)

Date

Appendix III – Travel Support for Student Presentations at Professional Meetings

Part of becoming a research scientist is learning how to share work with peers.

Presentations at professional meeting are one way for ESGP graduate students to learn how to present their work.

ESGP has budgeted funds to assist students presenting papers or posters at professional meetings. ESGP students are entitled to up to \$500 in travel support per fiscal year (July 1-June 30). The request must be submitted in advance of the meeting. The University requires the on-line travel request for travel to be approved before the trip begins. This is done in the ESGP Office. If another unit is taking responsibility for doing the travel request that information should be noted on the cover letter. Must submit to the ESGP Graduate Program Coordinator, Kelly Malone at malone.381@osu.edu:

- Cover letter detailing the trip, other travel funds, current research and presentation information. Letter must list any funds coming from another source of funding. Travel to be approved by ESGP Director.
- Copy of acceptance letter, student must be presenting an abstract, paper, a poster, or be doing an oral presentation. Funds are not available for attending meetings or conferences without participation.
- Official OSU Pre-Trip Worksheet Form copies are available on ESGP website Resources page - please complete and bring to ESGP
- Copy of Conference home page giving basic information and dates, can be web link or photocopy of web home page of conference.
- Citation of conference presentation

After the trip, turn in all original, itemized receipts and the conference program showing your presentation to the ESGP Administrative Associate. These items and your signature on the reimbursement form (which will be routed to you by e-mail) are needed to complete the reimbursement process. Also, if a personal credit card is used to pay for a hotel stay, for example, the balance due on the hotel receipt must be zero. If not, we also must have a copy of the credit card bill showing the expense was paid.

For more information on OSU Travel Policies go to <https://busfin.osu.edu/buy-schedule-travel/travel> or contact Kelly Malone at malone.381@osu.edu.