Ecological Sciences & Engineering
Interdisciplinary Graduate Program
Purdue University
ESE Website

Graduate Student Handbook
Fall 2022

The purpose of this handbook is to describe the policies that are followed by the Ecological Sciences & Engineering Interdisciplinary Graduate Program (ESE-IGP) at Purdue University. In some cases, students will need to refer to guidelines and requirements of their major advisor's academic unit, which serves as ESE's associated academic department.

All graduate programs at Purdue are under the jurisdiction of the Graduate School. In this way certain standards are maintained across the University. These standards include: course credit, Plan of Study (POS) format, Advisory Committee structure, vacation policy, registration and residency requirement, and admissions. Under these general guidelines, each academic unit administers its graduate programs with specific criteria, requirements, and guidelines. The Ecological Sciences & Engineering Interdisciplinary Graduate Program is managed by a Governance Committee (comprised of ESE-IGP faculty members) that reviews the program and establishes guidelines and policies which are presented in this manual.

"If we acknowledge the value of protecting and promoting the natural environment, we can inspire lasting changes in attitudes that lead to sustaining our long-term health and the planet on which we depend."
(Linda S. Lee, Program Head)

Table of Contents

ESE-IGP Overview

Program Mission

The primary mission of the Ecological Sciences & Engineering Interdisciplinary Graduate Program (ESE-IGP) is to provide students with educational and research experiences that integrate engineering, science, ecological, and cultural/human dimension concepts to solve major environmental problems. Here, we define "science" as observation/monitoring of systems and elucidation of processes/phenomena at appropriate scales, while "engineering" is defined as the design of a system--based on scientific understanding— which mitigates a problem of interest. Fundamental discovery and understanding within the dynamic and complex processes that link human activity and ecological systems transcends disciplinary boundaries and requires a strong network of collaboration among biological, chemical, physical, health and soil scientists, mathematicians, and engineers. Thus, the associated academic departments provide the foundation for the discipline while the interdisciplinary graduate program promotes complementary integrating themes. This program also serves as a catalyst to promote collaborative interdisciplinary environmental and ecological research among Purdue University faculty members.

The ESE curriculum guidelines are designed to create a foundation where students develop the knowledge and tools necessary for sustainable management of natural resources and to reduce the "ecological footprint" of human society. As an ESE graduate student you will be exposed to large-scale ecological issues (e.g., global warming, loss of biodiversity, sustainable food production) and the scientific principles that help design solutions. The ESE program aims to train practitioners (consultants, policy makers, regulators, industry) at the MS level, and researchers and educators at the PhD level.

Students will typically have an office in their associated academic (degree-granting) department, normally that of their major faculty advisor. Applicants are strongly encouraged to begin communicating with our faculty early in the process. Review our faculty at the ESE Website: ESE Faculty

ESE-IGP Thematic Areas

Currently, ESE has the following 5 theme areas:

- *Earth Systems Interactions*
- *Human Impacts Biosphere Processes*
- *Managed Ecosystems*
- *Green Technology*
- *Sustainable Urban Environments*

Each theme is designed to cover multiple disciplines with integration of science and engineering concepts and address one or more of the environmental grand challenges (ESE Theme Areas). ESE students are encouraged to choose a primary theme for their graduate

studies that best aligns with their research or future goals. Each theme draws from several core course areas, with flexibility built in allowing the student and their committee to tailor their plan of study in relation to their specific focus area or unique area of research.

Earth Systems Interactions
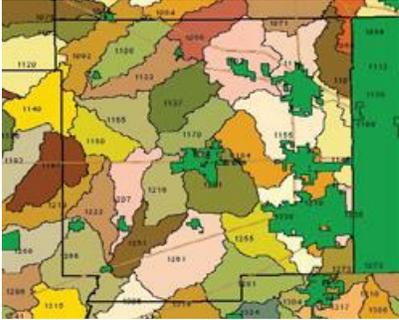
Observe the dynamics of earth systems interactions through climate, hydrologic, and land use systems study at landscape to global scales. Earth systems research often requires the use of spatially explicit data and capabilities such as remote sensing from space-based, airborne, or UAV platforms and geographic information systems combined with modeling in ways that address policy at relevant scales. Study of the earth system may involve historical analysis and forecasts of earth system interactions across years, decades or millennia via simulation models which may need to be implemented on supercomputers.

Human Impacts on Biosphere Processes

Both deliberate and inadvertent human practices have led to negative or unintended consequences on health and natural resources including water quality, quantity, and movement, soil health, air quality, and biodiversity. Biosphere studies involve geology, ecology, soils, atmospheric processes and climate, hydrological sciences, and biogeochemistry. Impacts of current concern include climate change, endocrine disruption, human health, and water wars.

Managed Ecosystems

Apply cross-disciplinary approaches to ecological and environmental assessment and management of complex ecosystems including agriculturally-dominant landscapes, forests, wetlands, conservation lands and refuges. The focus is on understanding process dynamics in open systems with spatio-temporal variation in the intrinsically coupled biological, physical, and social processes. Examples of current areas of importance are environmental and socio-economic consequences of intensive land use for bioenergy production, adaptation to climate change and its impacts on human and ecosystem health, carbon cycling and sequestration in terrestrial ecosystems, mitigation strategies for degraded wetlands, and ecological restoration of riverine and prairie systems within managed ecosystems

Sustainable Urban Environments

Design urban communities that provide a high quality life-style that meets the needs of more people with a reduced carbon and ecological footprint. Ecologically friendly and healthy urban environments require integration of innovative multi-functional energy efficient buildings, healthy personal and public transportation systems, appropriate accessible green space, integration of local food systems, and incorporation of the natural environment into interior and exterior living space. Sustainable urban ecosystems foster physical and mental well-being, individual economic prosperity, more efficient per capita consumption of water and energy, a higher return on public investment in municipal infrastructure and more opportunities for development of creative and ecologically responsible non-renewable materials cycling and natural resource utilization.

Green Technology

Innovate changes in daily life through material production, product/system design, and system realization to provide a healthy quality of life without compromising the ecosystem, human health, or the ability of future generations to meet their own needs. Approaches for greening technological systems include life cycle assessment, source reduction, resilience engineering, material flow analysis, and responsible decision making which can simultaneously promote economic development and environmental stewardship. Green technology challenges include new means of generating and evaluating energy and energy efficiency, environmentally friendly and energy-efficient buildings/building materials, chemical products and processes that reduce or eliminate use and generation of hazardous substances, energy efficient manufacturing processes, and green nanotechnology.

Cores Supporting the ESE-IGP Thematic Areas

There are 7 cores identified within ESE to support the thematic areas and facilitate the foundation needed to successfully address environmental sustainability. See ESE Core Course Areas

- Ecological & Biological Sciences
- Life Cycle Thinking in Sustainability
- Environmental Policy, Economics, Human Dimensions, & Institutional Analysis
- Biogeochemistry
- Hydrological Sciences
- Ecosystem Analysis Tools
- Professional Development Opportunities (not a required core)

Associated Academic Departments

The departments below are currently serving as ESE's associated academic departments including those listed below.

We welcome future departments to participate in the ESE-IGP. Contact Dr. Linda Lee (lslee@purdue.edu) to add an associated academic department. ESE students will partner with one of these departments, which is where their degree will be granted.

1. Aeronautics and Astronautics Engineering (AAE)
2. Agricultural & Biological Engineering (ABE)

3. Agricultural Economics (AGEC)
4. Agricultural Science Education and Communication (ASEC)
5. Agronomy (AGRY)
6. Anthropology (ANTR)
7. Biological Sciences (BIOL)
8. Botany & Plant Pathology (BTNY)
9. Civil Engineering (CIVL)
10. Curriculum & Instruction (EDCI)
11. Earth, Atmospheric and Planetary Sciences (EAPS)
12. Engineering Education (ENE)
13. Entomology Department (ENTM)
14. Environmental and Ecological Engineering (EEE)
15. Forestry & Natural Resources (FNR)
16. Health Sciences (HLS)
17. Horticulture (HORT)
18. Industrial Engineering (IE)
19. Political Sciences (POL)
20. Polytechnic Institute (TECH)
21. Public health (PUBH)

1. POLICIES RELATED TO THE ESE-IGP

1.1 General Admissions and Preparation

Application requirements and review criteria include:

- Graduate School Application
- Fee/Waiver
- GRE (recommended, not required for all)
- TOEFL
- 3 Letters of Recommendation
- Statement of Purpose
- CV Credentials
- Diversity Essay (Recommended)

TOEFL Minimums

The Graduate School accepts all valid TOEFL scores, including those earned through the Internet-based and paper-based tests. The minimum paper-based test score required for admission is 550. The minimum Internet-based test scores required for admission are the following: Writing 18, Speaking 18, Listening 14, Reading 19, and a Total 80. (Note that in addition to required minimum scores for writing, speaking, listening, and reading, the Graduate School also requires a minimum overall score that is higher than the minimums for the four area tests combined a total of 80 is required). Purdue English Proficiency Requirements.

The Graduate School also accepts International English Language Testing System (IELTS) scores. An overall band score of 6.5 is required for admission. For more information, visit the IELTS Website.

In order to be adequately prepared for the required core coursework all ESE-IGP applicants must have completed the following minimum requirements:

- One year of college-level calculus
- Two years of college-level science (chemistry, physics, and biology)
- A statistics course

Students lacking some of this preparation may be accepted for admission (on a provisional basis), but it is expected that deficiencies will be resolved by means of formal coursework or other arrangements agreed upon by the applicant and their graduate advisory committee.

Degrees

Students entering the ESE-IGP Graduate Program may seek a Master of Science (MS); Master of Science in Engineering (MSE), Master of Science in Ag and Biological Engineering (MSABE), Master of Science in Mechanical Engineering (MSME), Master of Science in Industrial Engineering (IE), Master of Science in Civil Engineering if the student has a B.S.E; or a Doctor of Philosophy (PhD) degree.

To qualify for an MSE, students must have a B.S. in engineering and utilize an engineering school as their home department. Students can apply to join the ESE program during each Fall semester.

Students enrolled in the ESE-IGP Program will be associated with and housed within an associated academic department, usually that of the major advisor, or co-major advisor. On an ESE student's transcript upon graduation, *Interdiscip Ecolog Sci & Engr* will be listed as their program and concentration, if the student also chooses to identify *Ecological Sciences & Engineering* under 'Concentration' on their Plan of Study (POS). The registrar (responsible for diplomas) and the POS generator, which are optimized for the undergraduate degree process, are set up logistically to handle ESE as a concentration although in reality ESE serves as an umbrella and not a 'concentration'. Some associated academic departments have what are considered true department-specific 'concentrations' approved by the Graduate School that a student may list as a second concentration. More than one 'concentration' may be listed on the transcript as long as the requirements have been met for each. The degree granting department shows up on ESE transcripts under major.

Counseling of students in the ESE-IGP is guided by the Program Head, but is the primary responsibility of the major advisor and co-advisor once chosen or assigned. The Program Head may also serve as a temporary advisor until a student has selected their major advisor and associated academic department. When the student submits his/her Plan of Study, it will need to be approved and signed by the ESE Graduate Program Specialist, the student's committee members, and the program head of the ESE-IGP. The ESE Graduate Program Specialist will send a PDF of the student's Plan of Study to the Graduate Contact for the student's degree granting department.

The ESE-IGP accepts students from a variety of undergraduate majors, including the natural sciences, engineering, humanities, and social sciences. Please note that students do not need to have an engineering background to enter the ESE-IGP, unless they are considering an MSE that focuses on engineering research. Graduates of the MS and MSE programs will have a solid scientific background and knowledge of public policy to effectively compete for positions in federal and state government, industry, and private-sector organizations, among others. The PhD program emphasizes interdisciplinary research, with unique projects supervised by faculty from more than one department. These students will develop the skills needed to make contributions to both research and teaching in their chosen field of study.

All students accepted into the ESE-IGP program will be encouraged to participate in various professional development activities. Several opportunities are listed on page 8, *Professional Development,* including serving on the ESE Annual Symposium planning committee. All ESE students are expected to serve at least once in some capacity on the planning and execution of the annual ESE Symposium.

1.2 Transfer Requests

A student who wants to transfer programs must fill out a Graduate School Form 17. In general, the process follows the form being initiated by the student, signed by the student, then signed by their current Graduate Department/Program Head (the program/department they are leaving), and then passed to the Head of the graduate program/department to which they want to transfer.

For students who want to transfer into ESE, the GS Form 17 must be initiated by the student, signed by the department they are leaving and then submitted to the ESE Graduate Program Specialist along with some additional documentation described below. The request is then reviewed by a subgroup of ESE faculty for the ESE Admissions Committee approval.

To Request a transfer into ESE, the documentation package must include:

- GS Form 17 with
  - Proposed Department: Ecological Sciences and Engineering
  - Department Code: IESE
- "Statement of Purpose" specific for why he/she wants to be part of the ESE program
- CV
- Copy of all transcripts

This entire package will be reviewed by ESE faculty and assessed by the same criteria as those who applied to the ESE program directly.

1.3 Minimum ESE Requirements

ESE Special Course Requirements

- **A minimum of 3 credits of the ESE Colloquium/Seminar Series** (two credits for fall and one credit for spring in sequence the first year). Incoming students must enroll in the seminar course their first and second semesters. Only under rare situations such as a course conflict may this sequence be altered. Students may take the **ESE Colloquium** for credit as often as they would like. However, after the first required 2-semester colloquium/seminar course sequence, a student may register for the **ESE Colloquium** as a **Peer-to-Peer mentor** under a different course section during which they will serve to facilitate discussion and development of ideas among the first year ESE students.

Non-thesis MS Requirements

- **Complete a special projects course (1-3 credits)** with a faculty member and coordinate with your faculty advisor (they may be one in the same). This special project may involve a variable title course, a pre-arranged internship or an 'integration-type' course that involves other students, possibly from another university.

ESE Core Requirements

All students must take the following courses during their degree program or have taken them in their previous degree program*:

- Biology 59500 (Ecology) 3 credits

- One course (2 to 3 credits) in the area of Environmental Policy, Economics, Human Dimensions, and/or Institutional Analysis

- GRAD 61200 (Responsible Conduct in Research) 1 credit or comparable course offered by student's degree granting department. *This course should be taken within the first year.*

- One course each from two of the following four ESE course cluster cores

  - *Life Cycle Thinking/Sustainable Design* Core
  - *Biogeochemistry*
  - *Hydrological Sciences*
  - *Ecosystem Analysis Tools*

Core clusters are updated periodically as additional courses meet requirements or new courses are developed. If you have identified a course that is not listed that may qualify, please submit a request via email to ese@purdue.edu stating how the course fits and include a copy of the course syllabus. The course will be reviewed for consideration regarding its addition to a particular core.

*Evaluation of courses not taken at Purdue: If a previous degree was not awarded by Purdue University, transcripts will be reviewed by the Program Head to identify if any previous courses (passed with a B minus (B-) or better) qualify to replace any of the required courses listed above.

Undergraduate Courses: Up to 6 credits taken at the 300 or 400 level in a department other than your associated academic department and completed with a B minus (B-) grade or better may be counted towards your graduate course credit requirements.

Professional Development

ESE students are required to complete at least one professional development activity. Possible professional development activities include:

Annual ESE Symposium

ESE students organize a Graduate Symposium around a topic of their choice, inviting all Purdue University students and faculty involved in environmental research. Symposium development includes fund raising, schedule organization, selecting/inviting Keynote speakers, and arranging a student poster competition or other student event.

Peer-to-Peer (P2P) Mentor

 In semesters after the first required year of the ESE Colloquium, a student may register for the ESE Colloquium as a P2P mentor during which they will work with the instructor to facilitate discussion and development of ideas among the first year ESE students.

External Proposal Submission

There are opportunities for students to author or co-author with their major professor a proposal to an external funding agency (e.g., NSF, USDA, DOE, DOD, NASA, WERF, etc.) including fellowship opportunities for domestic students through NSF and EPA STAR.

Teaching Certifications

Purdue University Center for Instructional Excellence (CIE Website) administers two levels of certification. The Graduate Teacher Certificate documents a graduate student's involvement in actual classroom teaching (minimum 2 semesters) and teacher development activities, including classroom visitations, videotaping, self-analysis, and consultative feedback. The Advanced Graduate Teacher Certificate is designed for select students who aspire to further advance their level of expertise and skills, and equips students to proceed successfully into the professoriate.

Summer or Semester Internship Opportunities

Interns for Indiana, (Interns for Indiana) funded by a major grant from the Lilly Endowment, is a specialized internship program available to ESE students that focuses on preparing and placing interns in startup companies in Indiana. Numerous other internships have been

developed through ESE faculty connections with communities, agencies and private companies.

InterCultural Learning

InterCultural Learning (ICL) at Purdue encompasses many programming elements coordinated by the Office of International Programs (Center for Intercultural Learning, Mentorship, Assessment and Research). These programs seeks to provide cultural, educational, service and social opportunities whereby international students will enhance their American educational experience and contribute to the globalization of Purdue and the greater community. Opportunities abound within ICL. Interested in making friends with an American family? Check out the International Friendship Program (IFP). Interested in sharing your culture with Americans, young and old alike? Be an Educational Exchange Program (EEP) volunteer. Would you like to make a difference in the community by doing volunteer work? If so, check out the Boiler Out! Volunteer Program. Want to educate others about your country at special times of the year? Participate in International Education Week with activities in the Greater Lafayette community. Want to explore Indiana and surrounding places of interest? Sign up for a GO Purdue! Trip. Are you ready to share a meal, discuss differing cultural perspectives and just "hang out" with new friends? Join in on a cultural event with Perspectives. The opportunities are endless to make your stay at Purdue a positive and life-changing adventure.

Krannert Mini-MBA

Offered since 1997, the Applied Management Principles (AMP) Program (Krannert Certificate Programs) is conducted annually. AMP is a 2-week, non-degree "mini-MBA" program that brings the world of business to graduate students, faculty, and industry participants. Program areas include: managerial accounting, human resource, finance, marketing, strategic management, and entrepreneurship.

Overview of Minimum Credit Hours*

Type of Degree	Required Credits
Master's Thesis	24 credits minimum in course work 6 credits minimum thesis research
Master's Non Thesis	32 credits minimum in course work
PhD	A total of 90 credits are required by the graduate school. The distribution between formal course credits and research credits varies across associated academic departments. In addition, up to 30 course and research credits from a previous Master's degree can be transferred upon review by the Program head to meet your PhD credit requirement and again varies across associated academic departments. Minimum 15 credits in thesis research (additional research credits may be taken)

* Note that in addition to specific ESE course requirements, there may be some specific course requirements imposed by the student's associated academic department (see next

section). Regardless, all these course credits fall within the minimum total course requirements.

Participating Department Requirements

1. *Gambaro Graduate Program of Aeronautics and Astronautics (AAE):*
   For more information: [Gambaro Graduate Program of Aeronautics and Astronautics](#)

2. *Agricultural and Biological Engineering (ABE):*
   For more information: [Agricultural and Biological Engineering Graduate Program](#)

3. *Agricultural Economics (AGEC):*
   For more information: [Agricultural Economics Graduate Program](#)

4. *Agricultural Science Education and Communication (ASEC):*
   For more information: [Agricultural Science Education and Communication Graduate Program](#)

5. *Agronomy (AGRY):*
   For more information: [Agronomy Graduate Program](#)

6. *Anthropology (ANTR):*
   For more information: [Anthropology Graduate Program](#)

7. *Biological Sciences (BIOL):*
   For more information: [Biological Sciences Graduate Program](#)

8. *Botany and Plant Pathology (BTNY):*
   For more information: [Botany and Plant Pathology Graduate Program](#)

9. *Lyles School of Civil Engineering (CIVL):*
   For more information: [Lyles School of Civil Engineering Graduate Program](#)

10. *Curriculum and Instruction (EDCI):*
    For more information: [Curriculum and Instruction Graduate Program](#)

11. *Earth, Atmospheric and Planetary Sciences (EAPS):*
    For more information: [Earth, Atmospheric and Planetary Sciences Graduate Program](#)

12. *Engineering Education (ENE):*
    For more information: [Engineering Education Graduate Program](#)

13. *Entomology (ENTM):*
    For more information: [Entomology Graduate Program](#)

14. Environmental and Ecological Engineering (EEE):
    For more information: [Environmental and Ecological Engineering (EEE)](#)

15. *Forestry and Natural Resources (FNR):*
    For more information: [Forestry and Natural Resources Graduate Program](#)

16. *Health Sciences (HHS):*
    For more information: [Health Sciences Graduate Program](#)

17. *Horticulture (HORT):*
    For more information: [Horticulture Graduate Program](#)

18. Industrial Engineering (IE):
    For more information: [Industrial Engineering](#)

19. *Political Science (POL):*
    For more information: [Political Science Graduate Program](#)

20. *Polytechnic Institute (TECH):*
    For more information: [Polytechnic Institute Graduate Studies](#)

21. *Public Health (PUBH):*
    For more information: [Public Health Graduate Program](#)

Minimum Cumulative Grade Index

Graduate students whose accumulative index drops below 3.0 will be notified in writing that they have one semester to re-establish a minimum 3.0 accumulative index. Should they fail to raise their accumulative index to 3.0 during the probationary semester, they will be dropped from the graduate program. However, students who feel that their case involves extenuating circumstances may appeal to their associated Departmental Graduate Committee and the ESE Program Head for an additional semester on probation. No further appeal will be allowed if their accumulative average has not reached 3.0 at the end of second probationary period. Students on assistantships will be continued on support for the first probationary semester only. Assistantships, if any, will be discontinued for students granted a second probationary semester with no assurance of renewed support even though they achieve the accumulative 3.0 index during the second probationary semester.

1.4 Summary of Timelines for Degree Programs in ESE

Summary of Timeline for MS Non-thesis Candidate

Year	Semester	Action
1	1	• Initial registration with help from your major (or temporary) advisor or ESE IGP Program Office – ESE Graduate Program Specialist (ese@purdue.edu)

Year	Semester	Action
		• Satisfy English proficiency (international students) before filing a POS • Ensure transcripts are on file for all your previous course work
1	2	• Select advisory committee • Meet with committee to determine the Plan of Study • File Plan of Study by the beginning or early in the second semester. Note this approved POS confirms that your course plans will meet any specific course requirements for both ESE and your associated academic department.
	ALL prior to Last	• Meet with advisor frequently • Second to last semester, ensure that course objectives have been or are highly likely to be met based on current progress and course offerings and that any incomplete grades will be resolved. • Confirm that the courses on your approved POS have not changed (e.g., course was not taught or your committee at some point decided a different course would be better and you never revised your POS accordingly). Submit a change request for any necessary edits.
	Last	• Work with ESE Graduate Program Specialist to register as a graduation candidate. • Complete a "capstone" or final project required for non-thesis students. This often is a short research paper or one semester project completed as part of a "special problems" course for credit.
Successful Completion of Your Degree		• Form 7 signed by all advisory committee members and ESE Program Head • **GS Exit Questionnaire** *(*available online in myPurdue) and ESE Exit Questionnaire provided by the ESE Graduate Program Specialist should be completed prior to graduation.

Summary of Timeline for MS Thesis and PhD Candidates

Year	Semester	Action
1	1	• Initial registration with help from your major (or temporary) advisor or ESE IGP Program Office – ESE Graduate Program Specialist (ese@purdue.edu) • Satisfy English proficiency (international students) before filing a POS • Ensure transcripts are on file for all your previous course work
1	2	• Select advisory committee and have first committee meeting • Initiate research plan draft • File Plan of Study before the end of the second semester. Note this approved POS confirms that your course plans will meet any specific course requirements for both ESE and your associated academic department.
	ALL semesters prior to the last semester	• Meet with Advisor frequently • Each semester, but not less than annually, meet with Advisory Committee and submit a signed committee meeting report • Confirm that the courses on your approved POS have not changed (e.g., course was not taught or your committee at some point decided a different course would be better and you never revised your POS accordingly). Submit a change request for any necessary edits.

Year	Semester	Action
1- 2	No later than 3rd semester	• An associated academic department (e.g., EAPS, AAE, and ME) may have what is referred to as a *qualifying exam*. This is different from, and in addition to, the Preliminary Exam outlined below. *Qualifying Exams* are administered by the student's Advisory Committee and covers general competency in the field (coursework) with an emphasis on knowledge that relates to your initial research area. Please refer to your department-specific handbooks for details.
2	3 or 4 ***PhD ONLY**	**Written & Oral Preliminary Examination** • Submit a proposal to your advisory committee at least 2 weeks but <u>preferably 4 weeks</u> before your intended examination date (See Appendix A for a suggested outline). • The proposal must be reviewed by your advisory committee according to the performance ratings outlined in the Proposal Rubric Evaluation. Copies of the signed rubric forms (one from each committee member present) must be submitted to the ESE Graduate Program Specialist. • Proceed with written and oral preliminary examinations, which consist of questions addressing your proposal, your theme area, and/or the broader area represented by ESE. Each committee member must provide questions. Responses to written preliminary exam questions will be evaluated by each committee member according to Written Preliminary Rubric Evaluation performance ratings. *Submitting your proposal to your committee <u>4 weeks in advance</u> allows time to get through each of your written questions and follow up with each committee member prior to your oral prelim exam, which will be extremely beneficial to you.* • Scheduling of exam (graduate school Form 8 found in myPurdue) must be done a minimum of 2 weeks before the dates of the exam. This applies for all oral examinations. • A minimum of 2 semesters not including summer are required between prelim and final exams • Written & oral preliminary examination – faculty will evaluate you according to the performance ratings outlined in the Oral Preliminary Rubric Evaluation. Signed rubric forms (one from each committee member present) must be submitted to the ESE Graduate Program Specialist (hard copy or electronic) who will submit copies to the graduate contact of your associated academic department.
	Last	• Committee meeting to determine if course and research objectives have been or will highly likely to be met prior to the end of the semester and incomplete grades resolved. • Ensure you have met both ESE & associated academic department requirements. • Work with the ESE Graduate Program Specialist to register as a graduation candidate. • Determine a date for your final exam. • Become familiar with the graduation deadlines. • First draft of your thesis must be submitted <u>to your major professor at least six weeks before your intended examination date</u> • Thesis draft must be submitted t<u>o the advisory committee at least two weeks before your intended examination date</u>

Year	Semester	Action
		• Thesis draft must be reviewed by your advisory committee according to the performance ratings outlined in the MS Thesis or Dissertation Rubric Evaluation. Copies of the signed rubric forms (one from each committee member present) must be submitted to the ESE Graduate Program Specialist and the Graduate Coordinator of your associated academic department. • Two weeks before the intended examination, submit an electronic form 8 and request an appointment for an examining committee date. • At this time students must submit an abstract for their seminar notice to the ESE Program Office (email: ese@purdue.edu). This will be circulated two weeks before your thesis seminar to ESE and associated academic departments.
Successful Completion of Your Degree		• Again confirm that the courses on your approved POS have not changed (e.g., course was not taught or your committee at some point decided a different course would be better or added a course based on your prelim performance, but you never revised your POS accordingly). • Pass your oral defense according to the MS Thesis or Dissertation Rubric Evaluation performance ratings. Signed rubric forms (one from each committee member) must be submitted to the ESE Graduate Program Specialist and the Graduate Coordinator of your associated academic department. • Prepare for thesis/dissertation deposit, which requires approval of your advisory committee members and ESE Program Head, and must be formatted according to graduate school guidelines. Graduate School Thesis Guidelines • Ph.D. and master's students are required to complete the Graduate School Exit Questionnaire (GSEQ). In addition to the GSEQ, Ph.D. candidates are required to complete the Survey of Earned Doctorates. These surveys will become available to complete during the semester the student registers as a candidate for graduation. The ESE Exit Questionnaire provided by the ESE Graduate Program Specialist should be completed prior to graduation.

1.5 Note Regarding Graduate School Forms and ESE Rubrics:

Students are responsible for downloading the appropriate forms at the ESE Web site 'Forms and Rubrics' page ESE Forms & Handbooks, completing, and submitting them on time to meet the graduate school deadlines (See Appendix B for forms). In most cases students will need both an electronic graduate school form, and an accompanying ESE Rubric Form. Our office will try to send out monthly email reminders regarding forms and deadlines; however, meeting deadlines are ultimately the student's responsibility. These deadlines are posted by the Graduate School well in advance: Graduate School Calendar.

1.6. Your Graduate Committee

A graduate students' graduate committee is instrumental in the success of a student towards completion of their degree in a timely manner and to their launch into their post-graduate career. Although faculty from across campus are usually willing to help students who come to them with inquiries, your graduate committee is committed to your success

and should be deemed a resource. They are also responsible for ensuring that your POS meets the requirements of the Graduate School, ESE, and your associated academic departments. Completion of a POS that has been pre-approved electronically by your committee members in advance of your graduating semester is required to graduate. In addition, successfully meeting stated research requirements is paramount to being able to complete your graduate degree. Therefore, identifying a research advisor before the end of your first semester and the remaining committee members before the end of your second semester will expedite your success. Also having regular meetings with your graduate committee no less than once a year; with individual committee members preferably at least once per semester; and with your advisor at least biweekly are all activities that will expedite and facilitate your success as a graduate student at Purdue. It is important that you follow the advice of your graduate advisor and your committee since doing so in a timely manner is part of maintaining adequate progress towards your degree objective. If at any time you have issues with what is being required, a graduate committee meeting is highly suggested. If further resolution is needed, you should meet with the ESE Program Head. In addition, the graduate school has an Office of Graduate Assistance (OGA) available to graduate students. OGA Website

Major Advisor & Co-Advisor

When admitted to Purdue, ESE-IGP graduate students either select a major advisor through previous communications with a faculty member or are assigned a temporary major advisor based on their primary area of interest or educational intent and post-graduation goals. For thesis students, a match in interests and funding availability often determines the best faculty advisor for the student. For non-thesis students, the assignment of an advisor often occurs during your first semester on campus to allow time for you to become familiar with faculty options. In addition to the student's interests, the faculty's research programs and expertise, the availability of research funds if a student desires to do thesis research, and the current load in a faculty research group are also considered in identifying the most appropriate major advisor. It is possible for students to change their major advisor during their first year of study if the research interest of the student develops in an area outside the interest or expertise of the faculty advisor and, where applicable, when research funds are available elsewhere. Although this is not the norm, ESE facilitates such transitions to optimize the success of both the student and the faculty advisor. New students are encouraged to become acquainted with other faculty. Selection of a co-advisor from outside of their primary major advisors academic unit is highly encouraged for all students, and particularly for PhD students. Faculty with courtesy or adjunct appointments and those who are members of the graduate faculties of Purdue may serve as advisory committee members.

If a student does not commit to a permanent advisor by the end of the second semester of enrollment, the student will be considered to be making inadequate progress towards their degree objective. This will result in a review by the ESE Program Head and the ESE Governance Committee and serve as grounds for termination of assistantship or fellowship funding.

1.7 Advisory Committee

Each student must select an advisory committee. An Advisory Committee consisting of a Chair or Co-Chairs and one to three other members of the graduate faculty is required. Note, Co-Chairs representing different disciplines is recommended, but not required.

A minimum of three faculty (includes Chair or Co-chairs) is required for MS or MSE committees. A minimum of four faculty (includes Chair or Co-chairs) is required for a PhD committee. All committees must include as part of their minimum at least one faculty member from the student's associated academic unit and at least one from outside the student's associated academic unit.

Non-Purdue faculty members and non-faculty with advanced degrees can be considered for special faculty status such that they may serve on our graduate committees if their credentials are deemed acceptable and anticipated benefit to the student warrants the request (see Request for committee members outside of Purdue Graduate Faculty below for additional information).

Your major advisor or co-advisors will help you identify additional faculty members that have expertise in the area of your research or in support of your professional interests. The Advisory Committee will assist the student in selection of courses to be included in the Plan of Study, and as needed during the course of graduate studies. The Advisory Committee must approve a student's Plan of Study, research project outline and/or proposal, and thesis/dissertation; therefore, the student is responsible for keeping them informed of his/her progress. Students should refer to their major advisor's academic unit requirements on progress for specific deadlines.

It is required that ESE students meet with their advisory committee by the end of their second semester. A committee meeting is encouraged to take place each semester thereafter, but not less than annually. For all committee meetings, a signed committee meeting report must be submitted to the ESE Graduate Program Specialist.

Request for committee members outside of Purdue Graduate Faculty
If an ESE student or the student's Advisor desires a non-Purdue graduate faculty member to participate on the student's committee, a special appointment to the graduate faculty may be requested by the student's associated academic department. Such an appointment is for an individual who does not meet the conditions required for regular appointment, yet who can contribute special expertise to the work of graduate students. Such a person may serve as a member or as a co-chair, but not as chair, on graduate student committees and they may teach graduate courses.

Nominations for special appointment to the Graduate Faculty must describe the special expertise that the nominee would bring to the graduate program and present the nominee's qualifications to contribute to the work and progress of graduate students. Contact the ESE Graduate Program Specialist for assistance with this process.

1.8 Plan of Study and Sample POS

Each graduate student admitted to a degree program must file a Plan of Study (POS). The POS includes a primary area and should list Interdisciplinary Ecological Sciences and Engineering as the Program: (coded as IESE). The POS should include the specific courses that the student is expected to complete and other requirements of the particular degree being sought. The POS does NOT need to include all courses the student may take. In fact, including more courses than necessary can result in those courses not being counted towards a subsequent degree (e.g., a 2nd MS degree or a PhD). The POS is not seen by anyone outside the university. The POS serves as the way for a student's degree to be audited to ensure they have met the minimum criteria of the degree. A student's POS GPA must be a 3.0 or higher to graduate. Research credits do not appear on the Plan of Study. The quantitative aspects of research registration are controlled by academic unit requirements and/or by residency requirements, registration limits, and thesis requirements.

In MyPurdue (myPurdue), the POS can be prepared and 'Saved', 'Submitted as a Draft', or 'Submitted as Final.' POSs in the saved mode can be viewed by the ESE Graduate Program Specialist and ESE Program Head, which they will do if the student emails them to do so. POSs submitted in the Draft mode initiates automatic alerts to the ESE Graduate Program Specialist and ESE Program Head, as well as to your committee members that there is a draft to review. This allows you to receive input before you submit it as final, which starts the electronic signature process. When a POS is submitted in the Final mode, it is automatically routed electronically for signatures starting with the ESE Graduate Program Specialist.

For MS students, a tentative Plan of Study (POS) (in draft or saved mode in MyPurdue) should be prepared and submitted before the second semester of graduate work, and the formal Plan of Study should be submitted before the end of the second semester. For PhD students, a tentative Plan of Study (POS) should be prepared before the end of the second semester of graduate work, and the formal Plan of Study should be submitted before the start of Year 2. All Plans of Study are submitted electronically to the Graduate School after approval is given by the student's graduate committee, department, and the head of the ESE-IGP.

Credits earned for graduate study at other universities may be applied toward an advanced degree at Purdue. Only credit hours associated with graduate courses and up to 6 credits of 300-400 level undergraduate courses for which grades of B minus (B-) or better were obtained will be eligible (not guaranteed) for transfer. Any additional conditions under which credit transfers may be made shall be determined by the various departments. The Graduate School will allow up to 30 credits from an MS degree to apply to a PhD Plan of Study; however, some associated academic departments further limit the number of transfer credits.

Effective for POSs filed after August 1, 2010, the Major Advisor requests the number of credits to apply to the current PhD program from a previous MS degree. The request is

made via a pop up box that will show up when the Major Advisor goes to sign a POS per the automated signature request system once a POS has been submitted. If approved by the Graduate School, it will show up on the POS as a single line for credits applied from a previous MS degree and where that was obtained. Courses to be applied will not be listed individually. PhD students should make a Word document showing the full course name and number of credits for each course from their MS degree being approved by their major professor **that may satisfy any of the ESE core course requirements**. Submit the word document to the ESE Graduate Program Specialist by email. The document will be uploaded under Supplemental Notes on the POS. This document is necessary to enable the ESE Graduate Program Specialist and Program Head to evaluate if the MS course credits being applied toward the PhD POS satisfy ESE core course requirements and so that your committee members can clearly see your academic background.

If you have "special problems" course(s) on your POS, make sure the full name of the special problem project is listed on your POS, otherwise it will be rejected by the Graduate School later and cause you to potentially miss a deadline.

Please see Appendix C for sample plans of study (POS) listed below*:

- *Track A: Non-Thesis MS*
- *Track B: MS Thesis*
- *Track C: PhD with MSE*
- *Track D: PhD with no Thesis*

Filing the Plan of Study

A Plan of Study should be filed as early as feasible (by the end of the second semester for MS and MSE students and before the start of year 2 for PhD students). A Plan of Study must be filed with the Graduate School before the student's final semester.

A Plan of Study for the PhD degree must be filed with the Graduate School prior to the submission of a request for the appointment of a preliminary examination committee.

POS Initiation and Signature Process

The student initiates the electronic Plan of Study (POS) via MyPurdue. Make sure the department listed is ESE-IGP, 'IESE' code, and degree granting department is your associated academic department. Also if you intend to target an MSE (only available to students who have received a BSE), make sure you select this option on the POS. If the option is not provided, contact the ESE office via email (ese@purdue.edu). When the student has a POS draft that is ready for review the student submits the electronic plan as a draft for their committee and ESE Graduate Program Specialist to review. Once review has taken place and changes are satisfied, the student submits the EPOS in final form. If further edits to a POS are needed after a POS is approved, the student can edit it by submitting a change request via myPurdue.

Additional information about, instructions, tips, and common errors and actual approved examples of previous ESE students' POSs are available for viewing on the program website at this address: [Plan of Study Examples & FAQ](#)

The signature process for the POS is as follows*:

1. The student's electronic submission of their EPOS serves as the student's signature approval.

2. ESE Graduate Program Specialist

3. Advisory committee members (all members receive email notification at the same time).

4. ESE-IGP Program Head

5. Student's associated academic department head (and in cases where your Chair is from a different academic department, an additional signature from that department will follow confirming that they approve of their faculty serving in this capacity)

6. The Graduate School authorization

7. Graduate School processor

Notification for the next responsible party to review and sign the EPOS is done automatically by email.

Note to departments: The student graduates with a degree from Purdue University. Interdisciplinary Ecological Sciences and Engineering is listed as the *Program* and a *Concentration* on the student's transcript.

1.9 Resident Study Requirements

Resident study is defined as study done under approved supervision. Residency requirements are intended to ensure that the candidate has ample opportunity for close association with other scholars in the intellectual environment of the University. The student should become well acquainted with those in the ESE-IGP and with the techniques and methods characteristic of their research field. Course credits obtained from a campus via televised instruction, video, computer, or other distance-based approaches shall be considered to have been obtained in residence at that campus.

MS/MSE Degrees

- At least one-half of the total credit hours used to satisfy degree requirements must be earned in residence on the Purdue campus where the degree is to be granted
- For thesis options, at least 30 total credit hours are required (at least 24 course credit hours and 6 research credits).
- For the non-thesis option, at least 32 total course credit hours are required, including a special projects course.

PhD Degree

- At least one-third of the total credit hours used to satisfy degree requirements must be earned (while registered for PhD study) in continuous residence on the Purdue campus where the degree is to be granted.
- At least 90 total credit hours (including research credit hours) are required.
- A master's degree from any accredited university is considered to contribute up to 30 credit hours toward satisfying this residency requirement.

In fulfilling resident study requirements, a maximum of 15 credit hours will be allowed from any one semester and 8 hours from a summer session (maximum registration is 18 credit hours for regular semesters and 9 credit hours for a summer session). If a student completes all the academic requirements but has insufficient residence credits, a letter of explanation from the major advisor and the Department head, should be forwarded to the Dean of the Graduate School, justifying the deficiency. If justification is sufficient, the Dean of the Graduate School may waive part of the residency requirement as an exception.

1.10 PhD Written and Oral Preliminary Examination Requirements

In order for a PhD student to become a PhD candidate they must pass written and oral preliminary examinations (also simply referred to *Prelims*). A minimum of two semesters are required between the prelim exam and the final exam. Exceptions to this rule may be reviewed and approved or denied by the Graduate School, but they are typically denied and may not even be considered at all in the future. These examinations are to determine if the student has an adequate understanding of his/her research problem, has a reasonable strategy for implementing the research project and has the necessary academic background and capability to be able to successfully conduct the research. If the report of the examining committee is unfavorable, the student may repeat the examination after the lapse of at least one semester if the examining committee so recommends. Should the preliminary examination be failed twice, the student may not be given a third examination, except on the recommendation of the examining committee and with *special approval* of the dean of the Graduate School.

Completion of prelims is highly recommended to be done prior to the end of a PhD student's second year of study in ESE to ensure a timely and successful completion of a PhD degree. Students who have not done their prelims before the end of their third year of study will be considered to be making inadequate progress towards their PhD degree objective. ESE students who complete a Master's degree on their way to a PhD should complete their preliminary examination before the end of the second year of their PhD. Both the written and oral examinations are administered by the student's major advisor, co-advisor, and preliminary examining or thesis advisory committee (varies across departments, but typically the examining committee is the same or nearly the same as the graduate student's advisory committee).

Students must have written a proposal that is critically reviewed by their advisory committee according to the performance ratings outlined in the Proposal Rubric Evaluation

(See Appendix A for a suggested outline). Copies of the signed rubric forms (one from each committee member present) must be submitted to the ESE Graduate Program Specialist and the graduate contact of the student's associated academic department. The student's proposal must be submitted to his/her advisory committee at least two weeks before the intended examination date. Students are expected to start working on their proposal no later than their second semester after starting in the ESE program, which will allow time for input and edits from their advisor(s) and advisory committee. An early start on your proposal will also facilitate clarification of ideas and collection of preliminary data that will aid in focusing your work and identifying challenges, thereby facilitating timely progress and completion of your PhD degree.

After submission of your final proposal draft to your advisory committee (who will be serving as your examining committee), each committee member is responsible for giving you **written preliminary exam questions** that address areas in your proposal, your theme area, and/or the broader area represented by ESE. Each committee member can decide if your question is open or closed book. Prior to your committee submitting questions, your major advisor(s) should suggest a maximum time limit (e.g., 1 to 2 working days) for each prelim so that your committee members can design their questions accordingly. The written exam should be comprehensive and **must** include subject matter other than the student's specific PhD research topic. Responses to the written preliminary exam questions will be evaluated by each committee member according to the performance ratings outlined in the Written Preliminary Rubric Evaluation (available for download on the ESE forms page: ESE Forms and Rubrics.

Oral preliminary examination must be scheduled using graduate school Form 8 (online in myPurdue) at least two weeks before the dates of the exam. Faculty will evaluate you according to the performance ratings outlined in the Oral Preliminary Rubric Evaluation. Signed rubric forms (one from each committee member present) must be submitted to the ESE Graduate Program Specialist and the graduate contact of your associated academic department. Forms and Rubrics are available for download on the ESE forms page: ESE Forms and Rubrics.

1.11 Other Requirements for Degrees

MS/MSE Degrees
Admission to candidacy for the master's degree is granted after approval of a Plan of Study by the student's advisory committee, ESE-IGP program Head, college Dean and by the Graduate School Dean.

Final examination requests via an electronic form 8 must be approved by the Department Head and received by the Graduate School at least two weeks before the examination date. A Plan of Study must be approved by the Graduate School before a final examination request can be filed.

PhD Degree

Admission to *candidacy* for the degree of Doctor of Philosophy takes place only after the student has passed the preliminary examination. The Plan of Study must be filed with the Graduate School before preliminary examination. A request for the preliminary examination via an electronic form 8 must be made at least two weeks prior to the proposed examination date.

After admission to candidacy, the candidate must devote at least two semesters to research before taking the final examination. Requests for the final examination must be made at least two weeks prior to the proposed examination date via an electronic form 8.

A final public defense of the thesis and dissertation research is required for completion of the graduate student requirements.

1.12 Continuing graduate study towards a PhD degree after a Master's Degree

Students enrolled in a Master's Degree within Ecological Sciences and Engineering Interdisciplinary Graduate Program, who would like to continue on for a Ph.D., are required to complete a Request for Continuation to PhD Form. The Continuation Form must be completed before the start of class of the semester that you plan to begin your PhD. Please find the form in Appendix E of the Handbook or on the ESE website. ESE Forms and Rubrics

The Continuation Form is routed to the M.S. major professor, and then to the Ph.D. major Professor. Finally the form is routed to the Office of Interdisciplinary Graduate Programs (OIGP). Once received by OIGP, the form is reunited with the applicant's M.S. application materials. This application package is routed to the Transfer and Continuation Review Committee (Chair of Admissions, Potential Major Professor, Program Head, and one other admissions committee member) for acceptance or denial into the Ph.D. program. If accepted, ESE notifies the Graduate School of the student's acceptance and matriculation to continue in a Ph.D. program.

1.13 Course Registration

The Plan of Study usually serves as a guide for selecting courses. ESE-IGP students work directly with their major advisor and co-advisor to register for courses. All graduate students at Purdue register themselves via the myPurdue online system myPurdue. ESE-IGP Students must register for the ESE required courses listed on page 8.

ESE Colloquium/Seminar

M.S. and Ph.D. students must complete two semesters of the ESE Colloquium/Seminar for credit (currently listed under GRAD 59000). ESE-IGP students are encouraged to participate in additional ESE seminar courses as pass/fail or audit status, and as mentors. Class attendance and participation in the ESE Colloquium is mandatory and required for graduation.

Registration for Research Credits

Work directly with your advisor and co-advisor regarding research credits. Research hours require a research registration form located on the Current ESE Students page under ESE Resources. Students may use ESE's form or their associated academic department's form. The ESE Graduate Research Registration Form can be emailed to the ESE Graduate Program Specialist (ese@purdue.edu) or taken to the Office of Interdisciplinary Graduate Programs in Young Hall, room B-40.

Registration and Billings

Graduate staff appointments as Graduate Teaching Assistants, Graduate Aides, Graduate Research Assistants, or Graduate Administrative/Professional Staff receive a tuition and fee remission each semester and summer session they are employed.

When registration is completed, fees and payments schedules will be posted on myPurdue. It is the student's responsibility to provide the correct mailing address to the Office of the Registrar, as well as the student's Associated Academic Department, and ESE-IGP program.

1.14 Grades

Only grades of C minus (C-) or better are acceptable in fulfilling Graduate School requirements on any Plan of Study and no more than six hours of C minus (C-) grades will be accepted toward graduation. The major advisor and the advisory committee may require performance better than C minus (C-) in certain courses. This requirement must, however, be stated in writing to the student and placed in the student's file at least one month before the student takes the course.

The ESE graduate student is expected to perform on a high academic level. All graduate degree candidates must have at least a 3.0/4.0 or better Grade Point Average to graduate. The GPA includes all required courses on the Plan of Study. The student's progress will be reviewed each semester by the student's advisor and advisory committee, as well as by the Graduate School and the ESE Governance Committee. Should the student fail to perform on a level satisfactory to the major advisor and the advisory committee or to the Dean of the Graduate School, he or she may be asked to discontinue graduate study at Purdue. The same scholastic requirements in effect during the regular University year apply to graduate study during the summer session and in work taken at the University's regional campuses.

In situations where a graduate student does not satisfactorily complete a graduate level course with the grade of C or better, the student may re-enroll in the course only once. The lower grade will not be considered in the graduation GPA. If a student receives a D or below in more than one course, the student could lose his/her academic unit graduate appointment. In the case of students with fellowships, the sponsor will be notified of the student's unsatisfactory academic performance. A student who falls below the guideline will be notified in writing, by the ESE Program Head and will have one semester in which to raise his/her GPA above 3.0. If the GPA falls below 3.0, the student's grade report will be marked as "low" by the Graduate School. The student must raise his/her GPA above 3.0 the

following semester or s/he may be asked to leave the graduate program. A GPA below 3.0 may result in the loss of the student's assistantship or fellowship.

If an ESE-IGP graduate student receives an incomplete in a course, they will have one year after the incomplete is given to complete that course. If that is not done, the Registrar automatically defaults the incomplete to an "F" (Failing) letter grade.

1.15 Thesis/Dissertation

The final product of most graduate research programs is a thesis or dissertation. This document represents the original scholarly work of the student. The student should prepare a detailed outline before beginning thesis preparation. This outline should be reviewed with the major advisor, co-advisor, and the Advisory Committee. The thesis/dissertation must be distributed to the Advisory Committee at least two weeks before the final exam is given.

The Graduate School requires a specific format for all graduate theses. Detailed information on formatting your thesis can be found on the Purdue Grad School Website: [Graduate School Thesis Guidelines](). Appointments may also be made online with the [Thesis and Dissertation Office](). Each student is responsible for completing and submitting their thesis as outlined by the Graduate School. A thesis is not to be typed by the academic unit clerical staff. All PhD theses are required to be submitted electronically to the Graduate School. A final copy of the thesis should be delivered to the Graduate School Thesis Library, major advisor and committee members.

1.16 Integrity in Research

Integrity in research is an essential part of Purdue University's intellectual and social structure, and adherence to its spirit and principles must be maintained. These principles include commitment to truth, objectivity, fairness, honesty, and free inquiry. Violations of the integrity policy may result in dismissal from the University.

Acts of academic misconduct could result in a review of the student's status in the ESE Program. Additional requirements may be imposed on the students involved in academic misconduct and termination from the program may be deemed suitable. The ESE Program Head and the Office of Interdisciplinary Graduate Programs will determine the appropriate course of action.

Serious violations of integrity in research are rare. However, those that do occur, strike at the very heart of scholarship and the concept of the University. Advances in scientific knowledge depend on reliable data and honestly reported conclusions. Advances in humanistic studies depend upon gathering and interpreting legitimate information in a manner that other scholars, in good faith, can judge and evaluate. Artists present portfolios and performances that reflect unique artistic statements and points of view. For the purposes of this document, the term research will be understood to include all these and all other scholarly activities conducted at the University (including its regional

campuses) or elsewhere if conducted under University auspices. In any academic institution, scholars, researchers, and artists have a special obligation to exemplify the best qualities and highest standards of personal and professional conduct.

The integrity of the research process must depend largely on self-regulation; it is the responsibility of all who engage in the search for knowledge. Advances are gleaned from rigorous application of scientific and scholarly methods in compliance with ethical codes rooted in intellectual honesty.

Advisors are now required to run a student's thesis or dissertation through iThenticate to ensure material has not been plagiarized. Chapters of your thesis or dissertation may be published in journals prior to depositing, but this should be clearly stated early within your thesis/dissertation (preferably in the first chapter highlighting the lay out of your thesis/dissertation). Also very highly collaborative work especially if it has been published and is being included in its entirety in the thesis/dissertation, it is important to state in the acknowledgements who contributed to what.

To minimize the incidence of academic dishonesty, major attention must be directed toward establishing the best possible research environment. To accomplish this goal, each researcher and academic unit has an obligation to participate in and focus attention on:

1. encouraging integrity in research;
2. discouraging the quest for success at the expense of integrity;
3. assigning credit and responsibility appropriately;
4. accepting responsibility for the integrity of students and staff involved in research;
5. conducting interpersonal relationships in a professional manner; and
6. establishing well-defined research protocols and maintaining careful records. See Executive Memorandum C-22 for additional information. Copies can be obtained in the Business Office.

1.17 Graduate Students' Right to Appeal

Graduate students, like all students officially enrolled at Purdue University, are subject to all University regulations. At the same time, their rights as individuals and as students are duly protected. Graduate students who feel that their rights have been violated by a disciplinary decision may seek redress through the Campus Appeals Board, according to procedures specified in Part 5, Section III, C and D of the handbook entitled *Regulations Governing Student Conduct, Disciplinary Proceedings, and Appeals*, which is issued annually. Graduate students who wish to appeal decisions concerning matters of academic standards may seek redress according to procedures specified in Part 5, Section III, E, 2, e, of *Regulations Governing Student Conduct, Disciplinary Proceedings, and Appeals* and to the procedures detailed in Graduate Council Document 91-C which have been established in accordance with the authority thereby delegated to the Graduate Council.

1.18 Nondiscrimination Policy Statement

Purdue Nondiscrimination Policy Statement

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life.

Purdue University views, evaluates, and treats all persons in any University related activity or circumstance in which they may be involved, solely as individuals on the basis of their own personal abilities, qualifications, and other relevant characteristics.

Purdue University prohibits discrimination against any member of the University community on the basis of race, religion, color, sex, age, national origin or ancestry, genetic information, marital status, parental status, sexual orientation, gender identity and expression, disability, or status as a veteran. The University will conduct its programs, services and activities consistent with applicable federal, state and local laws, regulations and orders and in conformance with the procedures and limitations as set forth in Purdue's Equal Opportunity, Equal Access and Affirmative Action policy which provides specific contractual rights and remedies. Additionally, the University promotes the full realization of equal employment opportunity for women, minorities, persons with disabilities and veterans through its affirmative action program.

Any question of interpretation regarding this Nondiscrimination Policy Statement shall be referred to the Vice President for Ethics and Compliance for final determination.

1.19 Professional Societies

Attendance at professional meetings and membership in professional societies is encouraged. In most cases, travel and lodging are the student's personal responsibility except when project funds are available for this purpose. Many professional and research associations have branches on the Purdue campus such as Sigma Xi and Alpha Epsilon. Students are expected to be active in professional societies while pursuing advanced degrees at Purdue University.

1.20 Travel Grants, Scholarships, and Funds

There are a number of grants and funds available that help defray the cost of travel to conferences, meetings, special workshops, etc. Please take advantage of these opportunities! There is additional information about these awards available on the Grants page with the Fellowship Office.

ESE-IGP Travel Funds

Our own program may be able to provide some funds or matching funds for graduate student travel to scholarly events. Contact the ESE Graduate Program Specialist (ese@purdue.edu) for more information.

Frederick N. Andrews Environmental Grant

Deadline: Normally in fall. Awarded by the Graduate School.

The Andrews Environmental Grant was established in honor of Dr. Frederick N. Andrews to support research focused on improving the global environment.

Award and Qualifications

The Andrews Environmental Grant is a $1500 award to be used toward travel relating to the improvement of the world environment. This is a one-time award. The recipient must be a degree-seeking student enrolled in a graduate program researching means of improving the world environment.

Blosser Environmental Travel Grant

Deadline: Normally in fall. Awarded by the Graduate School.

Award & Qualifications

The Blosser Environmental Grant is a $1500 award to be used towards travel relating to the improvement of the world environment. This is a one-time award. The Blosser Environmental Grant was established in honor of Dr. Russell O. Blosser to support graduate students majoring in an area of environmental sciences. Preference is given to students affiliated with the Chi Chapter of Kappa Sigma Fraternity. The recipient must be a degree-seeking student enrolled in a graduate program researching means of improving the world environment.

A.H. Ismail Interdisciplinary Doctoral Research Travel Award

Deadline: Normally in fall. Awarded by the Graduate School.

The A.H. Ismail Interdisciplinary Program Doctoral Research Travel Award competition provides funds to assist students in the presentation of their doctoral research at a national or international conference.

Award & Qualifications

The amount of the award will vary, dependent on the conference destination and travel expenses. Any student who will participate in a conference during the period from January 1, 2019 to December 31, 2019 is eligible. Students who have received this award in previous years may compete, but they will receive lower priority for receiving awards.

Purdue Graduate Student Government Travel Grants

Deadlines and more information is available on the web site: PGSG Travel Grants
The aim of the Purdue Graduate Student Government (PGSG) Travel Grant is to assist Purdue University graduate students in attending technical conferences which in turn will help to develop graduate students professionally and augment the overall quality of research at Purdue. Grants are distributed among graduate students on a competitive basis.

Because the number of applications varies each semester and the total budget for Travel Grants varies year to year, the number and amount of awards will not be determined until after all applications have been received.

D. Woods Thomas Memorial Fund to Support International Studies
Deadline: Normally in March. Award amount: Normally $1,000

This award is available to graduate students in any recognized post-baccalaureate program in any discipline or department in the College of Agriculture at Purdue University. The intent of the award is to help increase the capacity of young American scientists to contribute to international agricultural development. Therefore, only citizens are eligible for this award. Funds may be used to support research, study, or other scholarly activities in a developing country anywhere in the world, including travel expenses. The maximum individual award will be $1000, and recipients are asked to use their award within 12 months of receiving the funds. More information is available online: D Woods Thomas Memorial Fund

Sigma Xi Graduate Student Research Awards Competition
Deadline for Abstracts: Normally late January or Early February
Sigma Xi Awards

The Purdue University Chapter of Sigma Xi, the scientific research society, is conducting a Graduate Student Research Awards Competition in the format of a scientific poster session. There will be a first prize of $200, provided by Sigma Xi and The Graduate School, and recognition for other outstanding posters in each of the four research areas:

- o Physical Sciences
- o Life Sciences
- o Engineering
- o Behavioral and Social Sciences

Charles C. Chappelle Fellowship

Deadline: Typically in January prior to the start of the Fall semester of your graduate program.

The Charles C. Chappelle Fellowship provides a one-year fellowship to students **with undergraduate degrees from Purdue** for the furtherance of post-graduate research at Purdue University. Chappelle Fellows are selected on the basis of character, intellectual ability, and promise of degree attainment. The Chappelle Fellowship provides a stipend, Graduate School Fellow Scholarship, payment of most fees, and a medical insurance supplement. The Differential General Service Fee charged to students by specific schools or colleges (e.g., Krannert School of Management, College of Engineering, School of Pharmacy, and College of Technology) is not provided and is the responsibility of the fellow.

2. POLICIES RELATED TO GRADUATE EMPLOYMENT

2.1 Workloads of Students with Graduate Staff Appointments

Students should adhere to their major advisor's academic unit policies. However, most graduate students are supported by half-time assistantships at Purdue. Purdue, like many other major research universities, assumes that a half-time appointment constitutes a contract for 20 hours of service per week. If an assistant's duties are independent of the student's course work and research, the definition of the half-time work load is relatively straight forward: not more than 20 hours per week. Disputes between graduate assistants and major advisors should be discussed between the parties involved, and moderated by the Department Head if necessary. See the Purdue University Graduate Bulletin for additional information.

The graduate assistant assigned to 20 hours of service (Teaching Assistant or Graduate Administrative /Professional) per week should realize that any research relating to their degree is not included in the 20 hours. Your research must be done in addition to the 20 hours the half-time appointment involves. A half-time appointment is 20 hours a week and includes fee remission and medical insurance. A quarter-time appointment is 10 hours a week and only includes the fee remission.

For those students on ¾ or full time assistantships, the time guidelines delineated above will be modified to account for the reduced course load restrictions due to such appointments.

To be eligible to hold a graduate staff appointment during any session, an individual must be enrolled as a degree objective graduate student and be registered for the appropriate number of courses and research credits during the entire appointment period. Appointments shall be 25.00, 50.00, 75.00 or 100.00 CUL. Combination appointments are permissible. A research appointment determines the minimum research registration. A teaching appointment determines the maximum credit hour load of both research and course work.

Each school or department establishes graduate staff salaries within the limits established by Purdue University. Salaries of continuing appointees will be reviewed annually by the Graduate School or Department Head. Adjustments for merit or increased responsibilities may be made based on the recommendation of the major advisor. Raises are effective July 1st based on Purdue's Fiscal Year.

2.2 Vacation and Sick Leave Policy

Graduate student staff employed on a fiscal-year basis may be granted a maximum of twenty-two (22) working days of vacation per fiscal year. Vacation will be granted at the student's normal rate of pay. Vacation credits accrue on a monthly basis up to a maximum of twenty-two (22) working days. Vacation credits accrued in excess of 22 working days are forfeited. Vacation allowance is accrued from the date of employment, but may not be taken before the completion of three months of service. All graduate students, including

those employed in the Department, fellowship holders, and all others, **must receive approval from their major advisor, and complete a request for time off online via Success Factors that will be signed off on by your major advisor** one week prior to the time they plan to be on vacation or absent from the Department.

Graduate student staff terminating their employment with the University *may not* be paid for any unused vacation allowance, nor may their appointment be extended to cover any unused vacation.

Official holidays are announced annually by Purdue's president and provide for ten additional leave days. The holiday schedule is posted online [University Holiday Schedule](#)

Up to two weeks per year sick leave and 15 days per year military leave (with pay) may also be granted. The Department Head may approve requests for emergency leave because of death in the immediate family. All graduate students must complete a sick leave form upon returning to work for time missed due to illness.

2.3 Student Offices

ESE-IGP students will work with their major advisor to obtain office space, normally with the department of their major advisor or co-advisor.

3. ESE-IGP PROGRAM CONTACTS

3.1 ESE-IGP Program Office

Program Head

Dr. Linda S. Lee
Lilly Hall, B-480
Email: lslee@purdue.edu
Phone: 765-494-8612

ESE Graduate Program Specialist

Amy Ledman
Young Hall, Room B-40
Phone: 765-494-5865
Email: aledman@purdue.edu or ese@purdue.edu

Additional information is available via the website: [ESE Website](#)

3.2 Governance Committee

The Ecological Sciences & Engineering Interdisciplinary Graduate Program is managed by a

Governance Committee (represents ESE-IGP faculty members) reviews the program and establishes guidelines and policies or makes changes, which are presented in this manual.

3.3 Graduate School, Office of Interdisciplinary Graduate Programs

Christal Musser, Director of OIGP
Email: musser@purdue.edu
Office: Young Hall, Room B-40
Phone: 765-494-2102

3.4 Dean of Students

Schleman Hall, Room 207
475 Stadium Mall Drive
West Lafayette, IN 47907
Tel: (765) 494-1239; Fax: (765) 496-1550

3.5 Dean of Graduate School

Dr. Linda Mason, Dean
The Graduate School
Ernest C. Young Hall, Room 160
155 South Grant Street
West Lafayette, IN 47907-2108
Phone: (765) 494-2604; Fax: (765) 494-0136
Email: gradinfo@purdue.edu

APPENDICES

Appendix A: Suggested PhD Proposal Outline

Below is a suggested outline for PhD Proposals that are part of the Written and Oral Preliminary Exam Process. This proposal does not have to be lengthy, but sufficient enough to clearly portray and support your research ideas. Each proposal is unique and the extent of the supplemental material that may be included in your proposal as appendices will vary depending on the time between the initiation of some of your research and your prelim exam. ***Please discuss this approach with your major advisor(s) as you embark on writing your proposal. Plan to incorporate any additions or variations your advisor(s) may recommend to this suggested approach.***

- **Introduction/Background -** This section should provide enough information, and associated citations to the literature, that will set the stage for why your proposed work is important and needed. A synthesis of the literature, rather than a brief summary of each relevant piece of literature, is a key to brevity in this section. This provides your committee an opportunity to see how well you can synthesize the literature rather than just reporting back information. In most cases, this can be done well in a few pages (~3 to 6 single space pages). However, some advisors may also want a detailed literature review, which can be put in an appendix and later used with some updating for your dissertation.
- **Overall Goal of your Proposed Work (brief paragraph) -** This should flow nicely from the stage you set in your introduction/background section. To achieve your overall goal there should be a set of objectives/questions that come forward. You may choose to list them immediately after your goal as part of this section, e.g. to achieve this goal the following questions/objectives need to be addressed, etc.
- **Hypotheses, Approaches and Preliminary Results -** For each of the objectives/questions listed above, the items listed below should be clearly stated. For each objective/question, you should try to provide the information below within approximately one page or so with extended details provided through cited appendices.
    - A TESTABLE hypothesis and 1-3 sentences supporting why this hypothesis is significant or important. You may choose to include an alternate hypothesis here as well, if appropriate.
    - A brief description (brief paragraph) of the approach you plan to take that will allow you to test the hypothesis. Include associated citations if appropriate. If you have a detailed method worked out already, cite an appendix, e.g., see Appendix A for detailed method.
    - Briefly summarize results to date, if available at the time you are writing your proposal, related to testing this hypothesis or to the development of the approach to be used. A more detailed provision of results or a first draft of a manuscript should be cited as an appendix, e.g. see Appendix B for _____.
    - Potential Challenges – List here any challenges that may hinder your success in assessing this hypothesis and possible alternatives if you have some in mind.

- **Expected Impact -** Briefly summarize the expected impact of your work if successful.
- **References**
- **Appendices**

Appendix B: Rubric Evaluations for ESE MS and PhD's

Graduate School Forms and Rubrics maybe downloadable from the ESE Website:
http://www.purdue.edu/gradschool/ese/resources/forms.html
- Generic Cover Sheet for Each Set of Rubric Evaluations (Form GC-Cover)
- PhD Dissertation Research Proposal Rubric Evaluation (Form GC-3)
- Written & Oral Preliminary Examination/Proposal Presentation Rubric Evaluation (Form GC-4)
- MS Thesis & Defense Exam Rubric Evaluation (Form GC-7-MS)
- PhD Dissertation & Defense Exam Rubric Evaluation (Form GC-7-PhD)

Appendix C: Sample Plans of Study

Track A: Student 1 (BS in Anthropology; Goal - Non-profit Employment): Non-thesis MS Program 30 course credits + 2 credit Maymester course.

Basic ESE Requirements	Core 1 – Ecosystem Analysis Tools	Core 2 – Hydrological Sciences	Other
BIOL 585: Ecology (3 cr.)	AAE 590: SOS Modeling and Analysis (3 cr.)	CE 597: Transport in Nature (3 cr.)	ANTH 392: Environment and Culture (3 cr.)
POL 623: Environmental Politics and Public Policy (3 cr.)	FNR 598: Research Methods for Natural Resource Social Science (3 cr.)	EAS 591: Climate Change and Science and Policy (3 cr.)	FNR 572: Community Involvement Natural Resource Mgt. (2 cr.)
GRAD 612: Responsible Conduct of Research (1 cr.)			POL 590: Directed Reading (3 cr.)
GRAD 590: ESE Coll/Seminar I (1 cr.)			POL 623: Environmental Policy (3 cr.)
GRAD 590: ESE Coll/Seminar II (1 cr.)			
AGRY 598: Permaculture Intensive (2 cr. – Maymester)			
Professional Development: ESE Symposium Planning			

MyPurdue Plan of Study for Track A:

Graduate Plan of Study

Status	Submitted 11/01/2010	
Student	Student, Sally	ID # XXXXX
Student Email	sallystudent@purdue.edu	
Campus	West Lafayette (Main Campus)	PWL
Department	INT ECOLOGICAL SCI & ENGR	IESE

Degree Title	MASTER OF SCIENCE : NON-THESIS	MS
Degree Granting Dept	FORESTRY & NATRL RESOURCES	FNR
Program	Int Ecological Sci & Engr-MS	IESE-MS
Date Degree Expected	MAY 2011	
Concentration	Int Ecological Sciences and Engineering	
Research Area	NONE	

Items in purple are completed. / Items in green are incomplete. **Courses: ** Grades posted here are current as of the end of the semester in which they were taken. Late grade changes or title changes may not be reflected. If you see a discrepancy, contact the Graduate School.**

Area	Courses Title	Subj. Abbr.	Course No.	Credit Hours	Regis. Type	Grade	B or better	Transfer From	Date Completed To Be Completed
PRIMARY	SOS MODELING & ANALYSIS	AAE	59000	3	RE		-	-	May 2011
PRIMARY	ESE SEM/COLL: HUMAN IMPACTS II	CE	59700	1	RE		-	-	May 2011
PRIMARY	ECOLOGY	BIOL	58500	3	RE	A	-	-	Dec 2010
PRIMARY	TRANSPORT IN NATURE	CE	59700	3	RE	A	-	-	Dec 2010
PRIMARY	ESE SEMINAR/COLLOQUIUM	CE	59700	1	RE	A	-	-	Dec 2010
PRIMARY	RESP CONDUCT OF RESRCH	ENTM	61200	1	RE	A	-	-	May 2010
PRIMARY	COM INVOLV NAT RES MGT	FNR	57200	2	RE	A	-	-	Dec 2010
PRIMARY	RES METH NATL RES SOC SCIENTST	FNR	59800	3	RE	A	-	-	May 2010
PRIMARY	PERMACULTURE INTENSIVE	AGRY	59800	2	RE	A	-	-	Aug 2010
PRIMARY	DIRECTED READING	POL	59000	3	RE	A	-	-	Dec 2010
PRIMARY	ENVIRONMENTAL POL	POL	62300	3	RE	A-	-	-	May 2010
PRIMARY	ENVIRONMENTAL POLITICS	POL	62300	3	RE		-	-	May 2011
PRIMARY	CLIMATE CHANGE SCI & POLICY	EAS	59100	3	RE	A	-		Dec 2009
RELATED	ENVIRONMENT AND CULTURE	ANTH	32700	3	RE		-	-	May 2011

Purdue graduate course tallies:
Purdue POS GPA: 3.95
Purdue Primary Area Credit Hours : 31
Purdue Related Area Credit Hours : 3
Purdue Area Not Specified Credit Hours: 0
Advisory Committee Information and Approval Status

Level	Names of Advisory Committee Members	Faculty Identifier	Status	Department Code	Advisor in Area of
50	ELIZABETH C. MCNIE (CO-CHAIR)	C7548	APPROVED by Elizabeth C. McNie 11/01/2010 19:35:15	POL	
50	LINDA S. PROKOPY (CO-CHAIR)	C6063	APPROVED by Linda S. Prokopy 11/01/2010 13:19:10	FNR	
50	LINDA S. LEE	C4134	APPROVED by Linda S. Lee 11/01/2010 15:31:16	AGRY	

Additional Authorization

Level	Authorization	Required Signature	Status
70	Student	Sally Student	SUBMITTED 11/01/2010 12:42:37
60	Plan of Study Coordinator	Emily E. Bramson	APPROVED by Emily E. Bramson 11/01/2010 13:18:14
20	Graduate Program Authorization Ecological Sci & Engr	Linda S. Lee	APPROVED by Linda S. Lee 11/01/2010 21:41:42
20	Graduate Program Authorization Forestry & Natrl Resources	Robert Swihart	APPROVED by Robert Swihart 11/08/2010 09:04:34
20	Graduate Program Authorization Political Science	Eric N. Waltenburg	APPROVED by Eric N. Waltenburg 11/02/2010 10:20:51
10	Graduate School Authorization	Patricia A. Springer	APPROVED by Patricia A. Springer 12/03/2010 14:01:00
0	Processor	Anita Park	PROCESSED by Anita Park / Munazzah Rahman 12/08/2010 10:39:38

Track B: Student 2 (BS in Forestry; Goal - Federal Agency Employment): MS Program 24 course credits + 6 research credits, plus a thesis.

Basic ESE Requirements	Core 1 – Ecosystem Analysis Tools	Core 2 – Hydrological Sciences	Other
BIOL 585: Ecology (3 cr.)	STAT 598: Modern Applied Statistics (3 cr.)	CE 542: Hydrology (3 cr.)	Internship IN Department of Environmental Management
POL 623: Environmental Politics and Public Policy (3 cr.)	FNR 647: Quantitative Methods for Ecologists (3 cr.)	FNR 598Z: Aquatic Animal Health (3 cr.)	
GRAD 612: Responsible Conduct of Research (1 cr.)	EAS 513: Aerogeography and Remote Sensing (3 cr.)		
GRAD 590: ESE Coll/ Seminar I (1 cr.)			
GRAD 590: ESE Coll/ Seminar II (1 cr.)			
Professional Development: ESE Symposium Planning			
FNR 59800: Theory and App Nat Res Ext Prog (1			

Basic ESE Requirements	Core 1 – Ecosystem Analysis Tools	Core 2 – Hydrological Sciences	Other
cr.)			

MyPurdue Plan of Study for Track B:

Graduate Plan of Study

Status	**Submitted 11/01/2010**	
Student	Student, Joe	ID # XXXXX
Student Email	joestudent@purdue.edu	
Campus	West Lafayette (Main Campus)	PWL
Department	INT ECOLOGICAL SCI & ENGR	IESE
Degree Title	MASTER OF SCIENCE : NON-THESIS	MS
Degree Granting Dept	FORESTRY & NATRL RESOURCES	FNR
Program	Int Ecological Sci & Engr-MS	IESE-MS
Date Degree Expected	MAY 2011	
Concentration	Int Ecological Sciences and Engineering	
Research Area	NONE	

Items in purple are completed. / Items in green are incomplete. **Courses: ** Grades posted here are current as of the end of the semester in which they were taken. Late grade changes or title changes may not be reflected. If you see a discrepancy, contact the Graduate School.**

Area	Courses Title	Subj. Abbr.	Course No.	Credit Hours	Regis. Type	Grade	B or better	Transfer From	Date Completed To Be Completed
PRIMARY	MODERN APPLIED STATISTICS	STAT	59800	3	RE		-	-	May 2011
PRIMARY	ESE SEM/COLL: HUMAN IMPACTS II	CE	59700	1	RE		-	-	May 2011
PRIMARY	ECOLOGY	BIOL	58500	3	RE	A	-	-	Dec 2010
PRIMARY	QUANTITATIVE METHODS FOR ECOLOGISTS	FNR	64700	3	RE	A	-	-	Dec 2010
PRIMARY	ESE SEMINAR/COLLOQUIUM	CE	59700	1	RE	A	-	-	Dec 2010
PRIMARY	RESP CONDUCT OF RESRCH	ENTM	61200	1	RE	A	-	-	May 2010
PRIMARY	AEROGEOGRAPHY AND REMOTE SENSING	EAS	51300	3	RE	A	-	-	Dec 2010
PRIMARY	AQUATIC ANIMAL HEALTH	FNR	59800	3	RE	A	-	-	May 2010
PRIMARY	HYDROLOGY	CE	54200	3	RE	A	-	-	Aug 2010
PRIMARY	DIRECTED READING	POL	59000	3	RE	A	-	-	Dec 2010
PRIMARY	ENVIRONMENTAL POL	POL	62300	3	RE	A-	-	-	May 2010

Area	Courses Title	Subj. Abbr.	Course No.	Credit Hours	Regis. Type	Grade	B or better	Transfer From	Date Completed To Be Completed
PRIMARY	ENVIRONMENTAL POLITICS	POL	62300	3	RE		-	-	May 2011
PRIMARY	CLIMATE CHANGE SCI & POLICY	EAS	59100	3	RE	A	-		Dec 2009
RELATED	ENVIRONMENT AND CULTURE	ANTH	32700	3	RE		-	-	May 2011
RELATED	Theory and App Nat Res Ext Prog	FNR	59800	1	RE				May 2011

Purdue graduate course tallies:
Purdue POS GPA: 3.95
Purdue Primary Area Credit Hours : 31
Purdue Related Area Credit Hours : 3
Purdue Area Not Specified Credit Hours: 0

Advisory Committee Information and Approval Status

Level	Names of Advisory Committee Members	Faculty Identifier	Status	Department Code	Advisor in Area of
50	ELIZABETH C. MCNIE (CO-CHAIR)	C7548	APPROVED by Elizabeth C. McNie 11/01/2010 19:35:15	POL	
50	LINDA S. PROKOPY (CO-CHAIR)	C6063	APPROVED by Linda S. Prokopy 11/01/2010 13:19:10	FNR	
50	LINDA S. LEE	C4134	APPROVED by Linda S. Lee 11/01/2010 15:31:16	AGRY	

Additional Authorization

Level	Authorization	Required Signature	Status
70	Student	Joe Student	SUBMITTED 11/01/2010 12:42:37
60	Plan of Study Coordinator	Emily E. Bramson	APPROVED by Emily E. Bramson 11/01/2010 13:18:14
20	Graduate Program Authorization Ecological Sci & Engr	Linda S. Lee	APPROVED by Linda S. Lee 11/01/2010 21:41:42
20	Graduate Program Authorization Forestry & Natrl Resources	Robert Swihart	APPROVED by Robert Swihart 11/08/2010 09:04:34
20	Graduate Program Authorization Political Science	Eric N. Waltenburg	APPROVED by Eric N. Waltenburg 11/02/2010 10:20:51
10	Graduate School Authorization	Patricia A. Springer	APPROVED by Patricia A. Springer 12/03/2010 14:01:00

Level	Authorization	Required Signature	Status
0	Processor	Anita Park	PROCESSED by Anita Park / Munazzah Rahman 12/08/2010 10:39:38

Track C: Student 3 (BS and MSE in Civil Eng.; Goal - Industry Employment): PhD 17 course credits transferred from MS + 25 course credits + 48 research credits; 90 total required) + dissertation

Basic ESE Requirements	Core 1 – Life Cycle Thinking	Core 2 – Ecosystem Analysis Tools	Core 3 - Biogeochemistry	Other
BIOL 585: Ecology (3 cr.)	ME 597Z: Sustainable Design/Life Cycle Assessment (3 cr.)	ABE 591: Instrumentation and Data Acquisition (3 cr.)	AGRY 580: Soil Microbiology (3 cr.)	ENTR 501: Technology Realization (1 cr.)
GRAD 612: Responsible Conduct of Research (1 cr.)	CE 597D: Global Sustainable Engineering (3 cr.)	ABE 691: Environmental Data Handling (3 cr.)	EAS 581B: Terrestrial Biogeochemistry (3 cr.)	Mini-MBA Program
GRAD 590: ESE Coll/Seminar I (1 cr.)				
GRAD 590: ESE Coll/Seminar II (1 cr.)				
Professional Development: ESE Symposium Planning				

MyPurdue Plan of Study for Track C:

Graduate Plan of Study

Status	Submitted 08/17/2010	
Student	Student, Sue	ID # XXXXX
Student Email	sstudent@purdue.edu	
Campus	West Lafayette (Main Campus)	PWL
Department	INT ECOLOGICAL SCI & ENGR	IESE
Degree Title	MASTER OF SCIENCE IN ENGINEERING : THESIS	MSE
Degree Granting Dept	AGRICULTURAL & BIOLOGICAL ENGR	ABE
Program	Int Ecological Sci & Engr-MSE	IESE-MSENG
Date Degree Expected	AUG 2011	
Concentration	INT ECOLOGICAL SCIENCES AND ENGINEERING	000
Research Area	QUANTITATIVE APPROACHES TO DETERMINING YIELD GAPS IN AGRO-ECOSYSTEMS	

Items in purple are completed. / Items in green are incomplete. **Courses: ** Grades posted here are current as of the end of the semester in which they were taken. Late grade changes or title changes may not be reflected. If you see a discrepancy, contact the Graduate School.**

Area	Courses Title	Subj. Abbr.	Course No.	Credit Hours	Regis. Type	Grade	B or better	Transfer From	Date Completed To Be Completed
PRIMARY	ECOHYDROLOGY	ABE	59100	3	RE		-	-	Dec 2010
PRIMARY	BENEFIT-COST ANALYSIS	AGEC	60800	2	RE	B+	-	-	May 2010
PRIMARY	SOIL CHEMISTRY	AGRY	54000	3	RE		-	-	May 2011
PRIMARY	GENERAL BIOCHEMISTRY I	BCHM	56100	3	RE	B	-	-	Dec 2009
PRIMARY	GEN BIOCHEMISTRY II	BCHM	56200	3	RE	A	-	-	May 2010
PRIMARY	ECOLOGY	BIOL	58500	3	RE	A	-	-	Dec 2009
PRIMARY	ESE SEMINAR/COLLOQUIUM	CE	59700	1	RE	A+	-	-	Dec 2009
PRIMARY	ESE SEM/COLL: HUMAN IMPACTS II	CE	59700	1	RE	A	-	-	May 2010
PRIMARY	RESP CONDUCT OF RESRCH	ENTM	61200	1	RE	A	-	-	May 2010
PRIMARY	APPL REGR ANALYSIS	STAT	51200	3	RE	A	-	-	Dec 2009
PRIMARY	DESIGN OF EXPERIMENT	STAT	51400	3	RE	A	-	-	May 2010

Purdue graduate course tallies:
Purdue POS GPA: 3.78
Purdue Primary Area Credit Hours : 26
Purdue Related Area Credit Hours : 0
Purdue Area Not Specified Credit Hours: 0

Advisory Committee Information and Approval Status

Level	Names of Advisory Committee Members	Faculty Identifier	Status	Department Code	Advisor in Area of
50	INDRAJEET CHAUBEY (CO-CHAIR)	C6924	APPROVED by Indrajeet Chaubey 08/27/2010 16:51:45	ABE	
50	SYLVIE M. BROUDER (CO-CHAIR)	C4605	APPROVED by Sylvie M. Brouder 08/24/2010 10:17:50	AGRY	
50	JEFFREY J. VOLENEC	C2569	APPROVED by Jeffrey J. Volenec 09/02/2010 08:33:46	AGRY	
50	SCOTT MURRELL	C7882	APPROVED by Scott Murrell / Brent T. Ladd 08/24/2010 08:47:48	AGRY	

Additional Authorization

Level	Authorization	Required Signature	Status
70	Student	Sue Student	SUBMITTED 08/17/2010 10:39:42
60	Plan of Study Coordinator	Brent T. Ladd	APPROVED by Brent T. Ladd 08/23/2010 13:51:27
20	Graduate Program Authorization Agronomy	Herbert W. Ohm	APPROVED by Herbert W. Ohm 09/02/2010 08:42:17

Level	Authorization	Required Signature	Status
20	Graduate Program Authorization Ecological Sci & Engr	Linda S. Lee	APPROVED by Linda S. Lee 09/02/2010 10:03:49
20	Graduate Program Authorization Agricultural & Biological Engr	Bernard A. Engel	APPROVED by Bernard A. Engel 09/02/2010 09:20:57
10	Graduate School Authorization	Patricia A. Springer	APPROVED by Patricia A. Springer 10/01/2010 09:18:45
0	Processor	Anita Park	PROCESSED by Anita Park 10/01/2010 13:13:04

Track D: Student 4 (BS in Soil Science, no MS; Goal - Academia): PhD 42 course credits +48 research credits; 90 total required) + dissertation

Basic ESE Requirements	Core 1 – Hydrological Sciences	Core 2 – Ecosystem Analysis Tools	Core 3 - Life Cycle Thinking	Other
BIOL 585: Ecology (3 cr.)	CE 597: Water Resources Sustainability (3 cr.)	AGEC 608: Benefit-Cost Analysis (2 cr.)	ME 597Z: Sustainable Design/Life Cycle Assessment (3 cr.)	AGRY 649: Molecular Microbial Ecology (3 cr.)
GRAD 612: Responsible Conduct of Research (1 cr.)	EAS 591: Climate Change Science and Policy (3 cr.)	STAT 511: Statistical Methods (3 cr.)		ABE 591: Engineering Approach to Systems Biology (3 cr.)
GRAD 590: ESE Coll/Seminar I (1 cr.)		STAT 514: Design of an Experiment (3 cr.)		CETA-Graduate Teaching Certificate
GRAD 590: ESE Coll/Seminar II (1 cr.)		CE 597: ESE Seminar Decision Analysis Tools (1 cr.)		
AGRY 598: Permaculture Intensive (2 cr. – Maymester)				

MyPurdue Plan of Study for Track D:

Graduate Plan of Study

Status   Submitted 12/31/2009

Student	Student, John	ID # XXXXX
Student Email	johnstudent@purdue.edu	
Campus	West Lafayette (Main Campus)	PWL
Department	INT ECOLOGICAL SCI & ENGR	IESE
Degree Title	DOCTOR OF PHILOSOPHY	PHD
Degree Granting Dept	AGRICULTURAL & BIOLOGICAL ENGR	ABE
Program	Int Ecological Sci & Engr-PHD	IESE-PHD

Date Degree Expected   MAY 2012
Concentration   INT ECOLOGICAL SCI & ENGR   000
Research Area   RENEWABLE ENERGY AND AGRICULTURAL ENGINEERING

Items in purple are completed. / Items in green are incomplete. **Courses: ** Grades posted here are current as of the end of the semester in which they were taken. Late grade changes or title changes may not be reflected. If you see a discrepancy, contact the Graduate School.**

Area	Courses Title	Subj. Abbr.	Course No.	Credit Hours	Regis. Type	Grade	B or better	M.A. M.S.	Transfer From	Date Completed To Be Completed
PRIMARY	ENGR APPRCH SYST BIOL	ABE	59100	3	RE	A	YES	-	-	Dec 2008
PRIMARY	PERMACULTURE INTENSIVE	AGRY	59800	2	RE	A	YES	-	-	Aug 2009
PRIMARY	ECOLOGY	BIOL	58500	3	RE	A	YES	-	-	Dec 2008
PRIMARY	LANDUSE SUSTAINABILITY II	CE	59700	1	RE	A	YES	-	-	May 2009
PRIMARY	SUST, RESIL HUMAN IMPACT	CE	59700	1	RE	A+	-	-	-	Dec 2009
PRIMARY	WATER RESOURCES SUSTAINABILITY	CE	59700	3	RE	A	YES	-	-	May 2009
PRIMARY	ESE SEM:DEC ANLY TOOLS	CE	59700	1	RE	A+	YES	-	-	Dec 2008
PRIMARY	CLIMATE CHANGE SCI & POLICY	EAS	59100	3	RE	A-	YES	-	-	Dec 2009
PRIMARY	RESP CONDUCT OF RESRCH	ENTM	61200	1	RE	A	YES	-	-	Dec 2008
PRIMARY	SUSTAINBL DSGN & MANUFAC	ME	59700	3	RE	A+	-	-	-	Dec 2009
PRIMARY	DESIGN OF EXPERIMENT	STAT	51400	3	RE	A	-	-	-	May 2009
RELATED	BENEFIT-COST ANALYSIS	AGEC	60800	2	RE	B+	-	-	-	May 2009
RELATED	MOLEC MICROBIAL ECOL	AGRY	64900	3	RE	A-	YES	-	-	Dec 2008
RELATED	STATISTICAL METHODS	STAT	51100	3	RE	A	YES	-	-	Dec 2008

Purdue graduate course tallies:
Purdue POS GPA: 3.9
Purdue Primary Area Credit Hours : 24
Purdue Related Area Credit Hours : 8
Purdue Area Not Specified Credit Hours: 0
Total Master's Credits Allowed on this PhD Plan:

Advisory Committee Information and Approval Status

Level	Names of Advisory Committee Members	Faculty Identifier	Status	Department Code	Advisor in Area of
50	NATHAN S. MOSIER (CHAIR)	C5949	APPROVED by Nathan S. Mosier 01/04/2010 13:18:52	ABE	
50	FU ZHAO	C7014	APPROVED by Fu Zhao 01/04/2010 09:58:47	MECH	
50	INDRAJEET CHAUBEY	C6924	APPROVED by Indrajeet Chaubey 01/08/2010 12:40:28	ABE	
50	SYLVIE M. BROUDER	C4605	APPROVED by Sylvie M. Brouder 01/05/2010 14:22:31	AGRY	

Additional Authorization

Level	Authorization	Required Signature	Status
70	Student	John Student	SUBMITTED 12/31/2009 22:56:41
60	Plan of Study Coordinator	Brent T. Ladd	APPROVED by Brent T. Ladd 01/04/2010 09:46:02
20	Graduate Program Authorization Ecological Sci & Engr	Linda S. Lee	APPROVED by Linda S. Lee 01/08/2010 15:04:20
20	Faculty and/or Degree Authorization Agricultural & Biological Engr	Bernard A. Engel	APPROVED by Bernard A. Engel 01/08/2010 13:51:34
10	Graduate School Authorization	Patricia A. Springer	APPROVED by Patricia A. Springer 03/26/2010 10:11:47
0	Processor	Anita Park	PROCESSED by Anita Park 03/26/2010 10:40:55

Appendix D: Summary of Adequate Progress Toward Degree Objective

Summary of Adequate Progress Toward Degree Objective Includes:
- Identification and acquired commitment of a faculty advisor by the end of the second semester of enrollment
- Timely filing of your POS: The POS, which requires approval by all graduate committee members, should be filed as soon as possible. For an MS student, this should occur early in the second semester, but no later than the start of the third semester (e.g. if you started in Fall, as is the typical start date, then your third semester is considered the summer semester of the subsequent year). For a PhD student, this should occur before the start of your second year, but no later than the end of your fourth semester (e.g. if you started in Fall, as is the typical start date, then your fourth semester is considered the Fall semester of the subsequent year).
- Coursework: Maintain ≥ 3.0 in your course work
- Research: Maintain satisfactory progress in research (S grades)
- Timely and successful prelims: PhD students who have not done their prelims before the end of their third year of study will be considered to be making inadequate progress towards their PhD degree objective.

- Graduate Committee: Attending regular meetings with your graduate committee, graduate committee members, and advisor, as well as following the guidance of your graduate committee
- Maintain academic honesty and integrity

Appendix E: Request for Continuation to Ph.D. Form
- Available at [Forms and Rubrics](#), Request for Continuation to PhD.

Appendix F: Research Registration Form
- On the [Current ESE Students](#) page, under ESE Resources is the Research Registration Form required to register for research each semester.