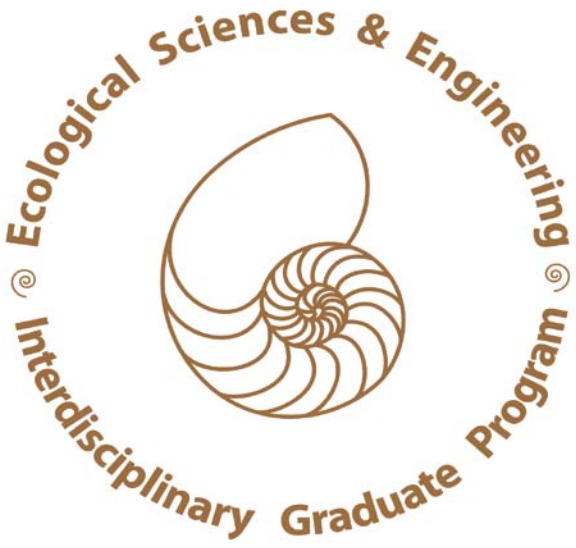

Graduate Student Handbook

November 2011
Ecological Sciences & Engineering Interdisciplinary Graduate Program
Purdue University

<http://www.purdue.edu/DP/ese>

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 as well as 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 an Executive Committee (represents 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)

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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 and science concepts to solve major environmental problems using an ecological approach. 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. Thus, the discipline departments provide the foundation while the new 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.

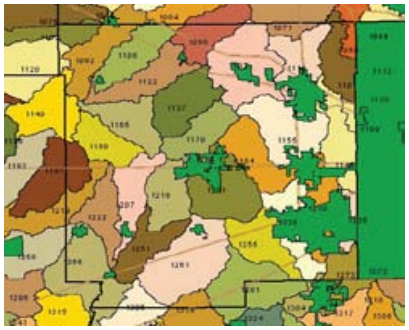
The ESE curriculum guidelines are designed to create a foundation where students develop the knowledge and tools necessary for sustainable management of natural resources and to reduce the "ecological footprint" of human society. As an ESE graduate student you will be exposed to large-scale ecological 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.

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. Students have an office in their associated academic 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 http://www.purdue.edu/DP/ese

ESE-IGP Thematic Areas

Currently, ESE has 5 theme areas: *Earth Systems Interactions, Human Impacts on Biosphere Processes, Managed Ecosystems, Green Technology,* and *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 (http://www.purdue.edu/dp/ese/grandchallenges.html).

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 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

Assess human activity on natural ecosystem health and resources including water quality, quantity, and movement, soil health, air quality, and biodiversity. Both deliberate and inadvertent human practices have led to smog, ozone thinning, acid rain, habitat destruction, loss of biodiversity, invasive species, water quality impairment and water wars, the energy crisis, and resource depletion, which have threatened our long-term health and the planet on which we depend. 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 and process development that provide a healthy quality of life without compromising the ecosystem, human health, or the ability of future generations to meet their own needs. Green technology includes life cycle analysis, source reduction, resilience engineering, and responsible decision making which can simultaneously promote economic development within the context of environmental stewardship. Compelling issues in green technology include new means of generating and evaluating energy and energy efficiency, environmentally friendly and energy efficient building materials, chemical products and processes that reduce or eliminate use and generation of hazardous substances, 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 http://www.purdue.edu/dp/ese/curriculum.html

- Ecological & Biological Sciences
- Life Cycle Thinking in Sustainability
- Environmental Policy, Economics, & Institutional Analysis
- Biogeochemistry
- Hydrological Sciences
- Ecosystem Analysis Tools
- Professional Development Opportunities

Participating Departments

Several departments are currently or will soon be serving as one of 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).

1. Agricultural & Biological Engineering (ABE)
2. Agronomy Department (AGRY)
3. Agricultural Economics Department (AGEC) ¶
4. Biology Department (BIOL)*
5. Botany & Plant Pathology Department (BTNY)*
6. College of Technology (TECH)
7. School of Civil Engineering (CIVL)
8. Earth & Atmospheric Sciences Department (EAS)
9. Entomology Department (ENTM)*
10. Forestry & Natural Resources Department (FNR)
11. Engineering Education (ENE)
12. School of Health Science (HLS)¶

** Partnership currently in process; ¶ Partnership planned*

1. POLICIES RELATED TO THE ESE-IGP

1.1 General Admissions and Preparation

Application requirements* and review criteria include scores from the Graduate Record Exam (Old GRE Score Scale: Verbal + Quantitative combined 1200 and Analytical writing score of 4.0. New GRE Score Scale (Exam taken August 2011 and after): Verbal + Quantitative combined 300 and Analytical writing score of 4.0) and TOEFL exam for international applicants (see below), academic record (GPA of > 3.3/4.0 scale), work experience, and three letters of recommendation.

* Exceptions may be considered on a case by case basis.

TOEFL Minimums The Graduate School accepts all valid TOEFL scores, including those earned through the Internet-based test, paper-based test, and computer-based test. The minimum paper-based test score required for admission is 550. The Graduate School's minimum computer-based test score required for admission is 213. The minimum Internet-based test scores required for admission are the following: Writing 18, Speaking 18, Listening 14, Reading 19, and a Total 77. 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 (Total of 77 is required). http://www.gradschool.purdue.edu/admissions/

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 www.ielts.org .
The Graduate School also accepts the Pearson Test of English (PTE) Academic scores. An overall score of 58 is required for admission. For more information, visit http://www.pearsonpte.com.

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

Students entering the ESE-IGP Graduate Program may seek Master of Science (MS), Master of Science in Engineering (MSE) if they have a B.S.E, or Doctor of Philosophy (PhD) degrees. Students enrolled in the ESE-IGP Program will be associated with and housed with a participating academic unit, usually that of the major advisor, or co-major advisor. On an ESE student's transcript upon graduation, *Ecological Sciences & Engineering* will be listed at the top as their Program. If the student also chooses to identify *Ecological Sciences & Engineering* under 'Concentration' on their plan of study (POS), then '*Ecological Sciences & Engineering*' will also be listed at the bottom of their transcript. Note that while in reality the ESE serves as an umbrella rather than a 'concentration', it is the way the registrar (responsible for diplomas) and the POS generator are set up logistically, which stems from the undergraduate degree process. Some associated academic departments have what are considered true department-specific 'concentrations' approved by the Graduate School that a student may prefer to list, but in most cases, ESE students choose '*Ecological Sciences & Engineering*'.

Counseling 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. The student initiates his/her plan of study to be approved and signed by the student's committee members, major professor's department head, and the head of the ESE-IGP.

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 below under *Professional Development* including serving on the ESE Annual Symposium planning committees. 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 Grad School Form 17. In general the form is initiated by the student, signed by the student, then signed by their current Grad Program Head (the program/department they are leaving), and then passed to the Head of the graduate program to which they want to transfer.

For students who want to transfer into the ESE, after the form has been initiated by the student and signed by the department they are leaving (which does not need the additional written statement), the form should be submitted to the ESE Program Head along with some additional documentation described below and must be reviewed by a subgroup of ESE faculty for approval.

Documentation to submit ESE Program Head requesting a transfer into ESE:

- GS Form 17 (List as follows):
  Proposed Department: Ecological Sciences and Engineering (ESE) IGP
  Department Code: ECOG
- "Statement of Purpose" specific for why he/she wants to be part of the ESE program
- CV
- Copy of transcripts (not official, just a copy from work before Purdue and whatever was at Purdue can be just downloaded into a PDF from MyPurdue).

This entire package will be reviewed by ESE faculty and assessed by the same criteria as those who applied to the ESE program directly. See the ESE minimum requirements listed below for acceptance into the ESE Program. You are also highly encouraged to set up a meeting with the ESE Program Head prior to beginning this process. Email a request for an appointment to the ESE Program Head and include a general reason why they are considering the transfer request.

1.3 Minimum ESE Requirements

All students must take:

- **minimum of 2 credits of the ESE Colloquium/Seminar Series** (one credit each for fall and spring and preferentially in sequence the first year). Incoming students must enroll in the seminar course their first and second semesters. The course abbreviation may vary between years depending on the lead instructor(s) and will often be co-listed with more than one other department including GRAD for grad school. Also note that students may take the **ESE Colloquium** for credit as often as they would like. In semesters after the first required year, a student may register for the **ESE Colloquium** as a Peer-to-Peer mentor during which they will serve to facilitate discussion and development of ideas among the first year ESE students.

  Recommended for all students but only required of all Non-thesis MS:

  - **2-credit integrating Maymester course or Summer Internship experience—**recommended during the first Maymester or summer opportunity and preferentially immediately following the 2-semester ESE Colloquium/Seminar Series. An exception to this requirement may be considered upon petition from student with the major advisor's approval to the ESE Program Head.

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

- Biology 58500 (Ecology, offered only in the fall) 3 credits OR an alternate course with pre-approval of the ESE Program Head. Ecology should be taken in the first semester. This course also meets the minimum requirement for the Ecological & Biological Sciences Core.

- One course (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 - *Should be taken within the first year.*

- One course each from two of the four of the following ESE cores
    - *Life Cycle Thinking/Sustainable Design* Core
    - *Biogeochemistry*
    - *Hydrological Sciences*
    - *Ecosystem Analysis Tools*

Note that 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 grade or better may be counted towards your graduate course credit requirements.

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

Professional Development

At least one professional development activity is required. The following is a list of possible professional development activities:

- *Annual ESE-IGP 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.
- *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 (http://www.cie.purdue.edu/) 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 experience and skills, and equips students to proceed successfully into the professoriate.

- *Summer or Semester Internship Opportunities: Interns for Indiana,* (http://discoverypark.itap.purdue.edu/learningcenter/ifi/) funded by a major grant from the Lilly Endowment, is a specialized internship program available to ESE students with focus 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.
- *Cultural Experience Opportunities:* Many opportunities exist for international experience through established connections with several institutions. For example, the Department of Forestry and Natural Resources has an on-going relationship in tropical forestry and agroforestry with the Tropical Agricultural Research and Higher Education Center (CATIE) in Costa Rica. Students can also engage in the PU-Moi University, Kenya partnership in a multitude of interdisciplinary efforts. Likewise, a four-week international educational program in natural resources is offered annually through a partnership of PU with the Swedish University of Agricultural Sciences and North Carolina State University. Also, students can travel to Native American communities throughout North America to work on restoration projects through the PU Sloan Foundation Program. PU's Global Engineering program also offers opportunities for students to participate in global design team projects through the world.
- *Maymester Capstone Opportunities:* Each summer one or more opportunities exist for students to take a faculty-led, 2-credit Capstone Experience. Capstone courses are formed around a science/social challenge; solution development and implementation involves hands-on field experiences intended to spark community-led transformation to system sustainability.
- *Krannert Mini-MBA*: Offered since 1997, the Applied Management Principles (AMP) Program is conducted annually and is available to at least 2 ESE graduate students each summer through an ESE-sponsorship (application required). 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.
- *Environmental Entrepreneurship Idea-to-Product (EE-I2P®) Competition*: This EE-I2P® Competition encourages and empowers students to develop ideas into commercial products or services for the betterment of society and the environment. Student teams develop a service, process, or product that addresses an environmental sustainability issue. This competition is currently on hold since the 2009 competition due to a funding and staff shortage, but we hope to see it offered again in the near future.

Overview of Minimum Credit Hours on Plan of Study (POS)*

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 is 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 credits from a previous Master's degree can be transferred upon review by the Program head to meet your PhD credit requirement. 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). However, all these course credits fall within the minimum total course requirements.**

Participating Department Requirements

Agricultural and Biological Engineering (ABE):
A tentative POS should be drawn up in advance of registration for the first session of graduate work, and the formal POS should be submitted as soon as possible to the ABE Graduate Committee. All POSs are to be submitted electronically to the Graduate School after approval is given by the ABE Graduate Committee.

A POS for the MS degree must be approved by the student's Advisory Committee then submitted to the ABE Graduate Committee for approval, before filing the electronic version. It must be received by the Graduate Secretary three (3) weeks before it is due to the Graduate School. It must be filed with the Graduate School prior to the first day of the academic session of graduation. Students not meeting this deadline may be asked to register for "Degree Only" for the following session to receive the degree.

The POS for a PhD must be filed by the end of the student's first year in the PhD program to meet Departmental requirements. It must be filed with the Graduate School prior to the submission of a request for the appointment of a preliminary examination committee. For more information: https://engineering.purdue.edu/ABE/Academics/Grad/GradManual.pdf/

Agronomy (AGRY):
A POS must be filed before the end of the second semester of graduate work for both MS and PhD degrees. For more information:
http://www.ag.purdue.edu/agry/GraduateProgram/handbook/Academics.pdf

Agricultural Economics Department (AGEC):
The department requires new students to draft a tentative POS early in the first semester. The Graduate Chairperson, members of the Graduate Committee, and other counselors assist the student in developing this tentative POS, which may subsequently be revised by the student and his advisory committee. It is departmental policy that all graduate students prepare and file the formal POS as early as possible in their program. Preparation of the PhD POS should include designation of courses for the proposed specialty areas.
For more information: http://www.agecon.purdue.edu/pdf/agecgradmanual.pdf

Biology Department (BIOL):
For MS students, the POS should be submitted as soon as possible but no later than the end of the fall semester of the student's first year. For PhD students, the POS should be submitted as soon

as possible after forming the Advisory Committee, but submitted as a draft no later than February 15th of the second year. The final PhD POS must be submitted no later than March 1st of the second year, and at least five weeks before the request to take the preliminary examination is submitted. For more information:
http://www.bio.purdue.edu/Academic/graduate/masters/MS_Manual.pdf (MS) or
http://www.bio.purdue.edu/Academic/graduate/phd/Forms/PhD_Manual.pdf (PhD)

Botany & Plant Pathology Department (BTNY):
A formal POS should be created as early as feasible in the student's career because it guides his or her academic degree progress. MS students must file their POS by the end of their second semester of enrollment. PhD students must file their POS by the end of their third semester of enrollment, including time spent on rotation. If these deadlines are not met, the student will not be allowed to register for the next semester of courses. For more information:
http://www.ag.purdue.edu/btny/Documents/GraduateManual.pdf

College of Technology (TECH):
A draft POS must be submitted by the end of the first semester of study, and a final POS must be submitted by the end of the second semester of study. For more information:
http://www.tech.purdue.edu/Graduate/grad_downloads/COT_MS_Graduate_Handbook_Aug_2010_v1_2.pdf (MS) or
http://www.tech.purdue.edu/Graduate/grad_downloads/COT_PhD_Graduate_Handbook_Aug_2010_v1_0.pdf (PhD)

School of Civil Engineering (CIVL):
The POS shall be submitted by the end of the second semester of graduate study for MS students and by the end of the third semester for PhD students. MS students wishing to complete their degree in two semesters should plan to submit their POS by the end of their first semester. For more information:
https://engineering.purdue.edu/CE/Academics/Graduate/Current/

Earth & Atmospheric Sciences Department (EAS):
For MS students, a POS must be prepared by the student and submitted for approval prior to the end of the second (2nd) semester in residence. For PhD students, a POS must be prepared by the student and submitted for approval prior to the end of the fourth semester in residence. For more information: http://www.purdue.edu/eas/students/graduate/

Entomology Department (ENTM):
The plan of study must be submitted to the Department Head for approval during the second semester following their arrival. For more information:
http://www.ag.purdue.edu/entm/Pages/GradStudentHandbook.aspx

Forestry & Natural Resources Department (FNR):
For more information: http://www.ag.purdue.edu/fnr/Documents/grad/fnrgradpolicies.pdf

Engineering Education (ENE):
TBA

School of Health Science (HLS):
TBA

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 improve 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 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 – Christal Musser (musser@purdue.edu) • Satisfy English proficiency (foreign students) before filing a POS
1	2	• Select advisory committee • Meet with committee to determine the appropriate POS • File POS by the beginning or early in the second semester. Note this approved POS confirms that your course plans will meet any specific course requirements of both ESE your associated academic department. • Ensure transcripts on file for all previous course work
	ALL prior to Last	• Meet with Advisor frequently • Second to last semester, ensure that course objectives have been or will 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).
	Last	• Submit Form 23, checking 'Yes' for 'Candidate' to indicate intent to graduate. Make sure ECOG is listed under major (code for the ESE-IGP). • Some departments may have 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 • **Exit Questionnaire** *(*available online in myPurdue or in paper form) 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 – Christal Musser (musser@purdue.edu) • Satisfy English proficiency (foreign students) before filing a POS
1	2	• Select advisory committee and have first committee meeting

		• Initiate research plan draft • File POS before the end of the second semester. Note this approved POS confirms that your course plans will meet any specific course requirements of both ESE your associated academic department. • Ensure transcripts on file for all previous course work
	ALL semesters prior to the last semester	• Meet with Advisor frequently • Each semester, 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).
1- 2	No later than 3rd semester	• An associated academic department (e.g., EAS) may have what is referred to as a *qualifying exam* (which is different and in addition to the Prelim 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 initial research area. Please refer to department-specific handbooks for details.
2	2 ***PhD ONLY**	**Written & Oral Preliminary Examination** • Submit proposal to your advisory committee at least 2 weeks but preferably 4 weeks before intended examination date (See Appendix A for a suggested outline). • 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 Program Head and graduate secretary of your associated academic department. • 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 4 weeks in advance 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) 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 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 Program Head (hard copy or electronic) who will submit copies to the graduate secretary 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 • Submit Form 23 to indicate intent to graduate (early in the semester if possible). Checking 'Yes' for Candidate, and make sure Major code is

		ECOG for designating the ESE-IGP. • First draft of thesis must be submitted to major professor at least six weeks before intended examination date • Thesis draft must be submitted to the advisory committee at least two weeks before intended examination date • 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 Program Head and the graduate secretary of your associated academic department. Two weeks before the intended examination, 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: to musser@purdue.edu). This will be circulated two weeks before your thesis seminar to the 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 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 Program Head and the graduate secretary of your associated academic department. • Prepare for thesis deposit thesis, which requires approval of MS advisory committee members and ESE Program Head, and formatted according to the graduate school http://www.gradschool.purdue.edu/thesis.cfm • **Exit Questionnaires** *(Master's and Doctoral)* available online in myPurdue or in paper form, and **Survey of Earned Doctorates** *(Doctoral only- available on the Purdue Thesis Office Website)* must be completed before your thesis final deposit appointment. A hard copy of certificate of completion needs to be brought with you to your deposit appointment.

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 (http://www.purdue.edu/dp/ese/forMSphp), completing, and submitting them on time to meet the graduate school deadlines (See Appendix B for forms). In most cases students will need both a graduate school form, and an accompanying ESE Rubric Form. A semester tracking and progress web survey will be emailed to students at the beginning of each semester with reminders regarding deadlines and forMS In addition, students will receive a monthly email reminder regarding forms and deadlines. The Graduate School Deadlines are shown online: http://www.gradschool.purdue.edu/calendar/calendar.cfm?type=Deadlines and linked from the Current Student page in the ESE Web site.

1.6 Major Advisor & Co-Advisor

When admitted to Purdue, ESE-IGP graduate students are usually assigned a major advisor based on their primary area of interest or educational intent and post-graduation goals in the case of a non-thesis student. 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 when the research interest of the student develops in an area outside the interest of expertise of the faulty advisor and, where applicable, 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 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.

1.7 Advisory Committee

Each student must select an advisory committee. An Advisory Committee consisting of a major advisor or co-advisors and one to three other members of the graduate faculty is required. Note, co-advisors representing different disciplines is recommended, but not required. A minimum of one other faculty member, preferably from another academic unit is required for MS or MSE committees. For a PhD committee, two additional faculty members are needed with at least one being from outside the student's academic unit.

The major advisor or co-advisors will help identify one to three additional faculty members that have expertise in the area of research or professional interest. The Advisory Committee will assist the student on 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.

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 Head of 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 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.

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 Ecological Sciences and Engineering as the Field

of Study (FOS) code: (coded as ECOG). It is to include the specific courses that the student is expected to complete and other requirements of the particular degree being sought. 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 (http://mypurdue.purdue.edu), 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 Program Coordinator and 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 Program Coordinator and Head as well as 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 Program Coordinator.

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 400 level undergraduate courses for which grades of B or better were obtained will be eligible 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; however, some associated academic departments further limit the number of transfer credits.

Starting with POSs filed after August 1, 2010, it will be the Major Advisor that requests the number of credits to apply to the current PhD program from a previous MS degree. This is a recent change and details are still vague. This request is supposedly 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 Program Coordinator or Program Head by email. The document will be uploaded under Supplemental Notes on the POS. This is necessary to enable the POS coordinator and Program Head to evaluate if the MS course credits being applied toward the PhD POS satisfy ESE core course requirements and so your committee members can clearly see your academic background.

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

Sample Plans of Study
Track A: Non-Thesis MS
Track B: MS Thesis
Track C: PhD with MSE
Track D: PhD with no Thesis

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 in Research (1 cr.)			POL 590: Directed Reading (3 cr.)
CE 597: ESE Seminar 1 (1 cr.)			POL 623: Environmental Policy (3 cr.)
CE 597: ESE Seminar 2 (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	ECOLOGICAL SCI & ENGR	ECOG
Degree Title	MASTER OF SCIENCE : NON-THESIS	MS
Degree Granting Dept	FORESTRY & NATRL RESOURCES	FNR
Program	Ecological Sci & Engr-MS	ECOLOG-MS
Date Degree Expected	MAY 2011	
Concentration	NONE	
Research Area	NONE	

Items in purple are completed. / Items in green are incomplete. **Courses: ** Grades posted here are as of the end of the semester that 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 Hour	Regis. Typ	Grade	B or better	Transfer From	Date Completed

				s	e				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 IN 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 in Research (1 cr.)	EAS 513: Aerogeography and Remote Sensing (3 cr.)		
CE 597: ESE Seminar 1 (1 cr.)			
CE 597: ESE Seminar 2 (1 cr.)			
Professional Development: ESE Symposium Planning			

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	ECOLOGICAL SCI & ENGR	ECOG
Degree Title	MASTER OF SCIENCE : NON-THESIS	MS
Degree Granting Dept	FORESTRY & NATRL RESOURCES	FNR
Program	Ecological Sci & Engr-MS	ECOLOG-MS
Date Degree Expected	MAY 2011	
Concentration	NONE	
Research Area	NONE	

Items in purple are completed. / Items in green are incomplete. **Courses: ** Grades posted here are as of the end of the semester that 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 IN 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
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	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
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 in 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
CE 597: ESE Seminar 1 (1 cr.)				
CE 597: ESE Seminar 2 (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	issa0@purdue.edu	
Campus	West Lafayette (Main Campus)	PWL
Department	ECOLOGICAL SCI & ENGR	ECOG
Degree Title	MASTER OF SCIENCE IN ENGINEERING : THESIS	MSE

Degree Granting Dept	AGRICULTURAL & BIOLOGICAL ENGR	ABE
Program	Ecological Sci & Engr-MSE	ECOLOG-MSENG
Date Degree Expected	AUG 2011	
Concentration	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 as of the end of the semester that 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 IN 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
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 32 course credits +58 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 in 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.)
CE 597: ESE Seminar 1 (1 cr.)		STAT 514: Design of an Experiment (3 cr.)		CETA-Graduate Teaching Certificate
CE 597: ESE Seminar 2 (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	ECOLOGICAL SCI & ENGR	ECOG

Degree Title	DOCTOR OF PHILOSOPHY	PHD
Degree Granting Dept	AGRICULTURAL & BIOLOGICAL ENGR	ABE
Program	Ecological Sci & Engr-PHD	ECOLOG-PHD
Date Degree Expected	MAY 2012	
Concentration	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 as of the end of the semester that 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 IN 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

Filing the Plan of Study

A Plan of Study should be filed as early as feasible (by early the second semester for MS and MSE students and before the start of year 2 for PhD students).

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.

EPOS Initiation and Signature Process

The student initiates the Electronic Plan of Study (EPOS) via MyPurdue. Make sure the department is ESE-IGP, 'ECOG' code, and degree granting department is your affiliated department home. Also if you intend to target an MSE (only available to students who have received BSE), make sure you select this option. If the option is not provided, contact the ESE office via email (musser@purdue.edu). At the time the form is ready for review the student submits the electronic plan as a draft for their committee and ESE-IGP POS coordinator review. Once review has taken place and changes are satisfied, the student submits the EPOS in final form. Further edits to a POS are done through "Request Changes" via MyPurdue and only after the approval process of the originally filed POS is complete.

Additional information about common errors and actual approved examples of previous ESE student POS' are available for viewing on the program Web site at this address: http://www.purdue.edu/dp/ese/POS.php

The signature process for POS is as follows*:
1. The student's electronic submission of their EPOS serves as the student's signature approval.
2. ESE plan of study coordinator.
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
5. The Graduate School authorization
6. Graduate School processor

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

Note to departments: The student graduates with a degree from Purdue University, and Ecological Sciences and Engineering is listed as 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 via televised instruction, video, computer or other distance-based approaches from a campus shall be considered to have been obtained in residence on 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 which include up to 6 research credit hours are required.
- For the non-thesis option, at least 32 total course credit hours are required.

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 (which includes research credit hours) are required.
- A master's degree from any accredited university is considered to contribute 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*). 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 Graduate Council.

Prelims must be completed prior to the end of a PhD student's second year of study in ESE. 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 Program Head and the graduate secretary of your associated academic department. Your proposal must be submitted to your advisory committee at least two weeks before 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, which will facilitate 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 pre 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: http://www.purdue.edu/dp/ese/forMSphp)

Oral preliminary examination must be scheduled using graduate school Form 8 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 Program Head and the graduate secretary of your associated academic department. Forms and Rubrics available for

download on the ESE forms page: http://www.purdue.edu/dp/ese/forMSphp

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 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. Request for the preliminary examination must be made at least two weeks prior to examination date.

After admission to candidacy, the candidate must devote at least two semesters to research before taking the final examination. Request for the final examination must be made at least two weeks prior to examination date.

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

1.12 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 https://mypurdue.purdue.edu. ESE-IGP Students must register for the following courses.

Graduate Seminar

MS and PhD students must complete two semesters of the ESE Colloquium for credit (current listed under CE 59700-25). 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 Form 23 to be signed by your major professor and entered into the Banner system by your affiliated departmental graduate office, or your major professor can contact, Christal Musser, musser@purdue.edu, in the ESE Program Office and directly approve the appropriate research credit hours. If needed, the student can also bring the completed form 23 to the ESE Program Office.

Registration and Billings

For each semester, after the student has completed the course request form, the student's Department Business Administrator will complete the primary staff classification and certify that the student has a financial assistantship from the Department, and therefore is eligible for a waiver of tuition and most fees. Non-thesis students may not be eligible.

The course request can then be taken to the student's Department Graduate Student Services Secretary to be entered. Registrations can also be forwarded by campus mail, if the student pre-registers two months before the start of the next semester, to the Registrar's Office in Hovde Hall.

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 Department, and ESE-IGP program.

1.13 Grade Index

Only grades of C or better are acceptable in fulfilling Graduate School requirements on any Plan of Study and no more than six hours of "C" grades will be accepted toward graduation. The major advisor and the advisory committee may require performance better than "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-IGP graduate student is expected to perform on a high academic level. All graduate degree candidates must have 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 co-advisor, as well as the Graduate School and the Department. 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 Department 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 their GPA above 3.0 the following semester or will 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 semester and 12 weeks into the second semester to complete that course. If that is not done, the Registrar automatically makes the grade a failure ("F" letter grade).

1.14 Thesis

The final product of most graduate research programs is a thesis. 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 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 at the Purdue Grad School Website: http://www.gradschool.purdue.edu/thesis.cfm . Each student is responsible for completing and submitting their thesis as outlined by the Grad 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 Grad School. A final copy of the thesis should be delivered to the Graduate School Thesis Library, ESE Program Office, major advisor and committee members. An electronic PDF file copy of all MS or PhD theses should be submitted to the ESE Program office.

1.15 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 integrity may result in dismissal from the University.

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 which other scholars, in good faith, can judge and evaluate. Artists present portfolios and performances, which reflect unique artistic statements and points of view. For the purposes of this document, the term research will be understood to include all of 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 that 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.

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,
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.

1.16 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 *University Regulations*, 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 *University Regulations* 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.

1.17 Nondiscrimination Policy Statement

Purdue University is committed to the development and nurturing of a racially, socially, and religiously diverse community. The University believes that cultural variety stimulates creativity, promotes exchange of ideas, and enriches life.

Purdue University is committed to maintaining a community that recognizes 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/her own potential. The University also accepts the responsibility of serving as a positive example and helping to prepare men and women who will make lasting contributions to society.

It is the policy of Purdue University that all persons are to be viewed, evaluated, and treated, in any University-related activity or circumstance in which they may be involved, solely as individuals on the basis of their personal abilities, qualifications, and other characteristics relevant to the situation.

No qualified person will be denied admission or employment, nor will any student be subjected to discriminatory treatment or be excluded from participation in any educational program or activity because of race, religion, color, sex, age, national origin, handicap, or status as a disabled or Vietnam era veteran.

Questions and concerns regarding University policy and practice or protection afforded individuals against discrimination should be directed to:

Students and Prospective Students: Dean of Students, Schleman Hall of Student Services, 49-41239

Handicapped Students or Prospective Students: Assistant Dean of Students, Schleman Hall of Student Services, 49-41245 Employees and Prospective Employees: Affirmative Action Officer, Freehafer Hall 49-47254

1.18 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 in cases where project funds are available for this purpose. Many professional and research associations have branches on campus such as Sigma Xi and Alpha Epsilon. Students are expected to be active in professional societies while pursuing advanced degrees at Purdue University.

1.19 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 avail yourself of these opportunities! These awards have additional information available on the graduate school funding web site: http://www.gradschool.purdue.edu/funding/

ESE-IGP Travel Funds

Our own program may be able to provide funds or matching funds for graduate student travel to scholarly events. Contact the Program Head for information. Linda S. Lee, lslee@purdue.edu

Frederick N. Andrews Environmental Grant

Deadline: Normally in October. Awarded by the Graduate School
http://www.gradschool.purdue.edu/funding/
The Andrews Environmental Grant was established in honor of Dr. Frederick N. Andrews to support research focused on improving the world 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 October. Awarded by the Graduate School.
http://www.gradschool.purdue.edu/funding/

- ***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 student 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 October. Awarded by the Graduate School
http://www.gradschool.purdue.edu/funding/
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, 2010 to December 31, 2010 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
Deadline: Normally in Spring semester. Award: Normally $200
More information available on the web site: http://web.ics.purdue.edu/~pgsg/projects/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 Grant varies year to year, the number and amount of awards will not determined until after all applications have been received. Grants are typically about $200 and are awarded to 20-40% of applicants. A few exceptional applications may receive slightly larger award amounts if funds are available. This year, $12,200 was awarded in grants.

D. Woods Thomas Memorial Fund to Support International Studies
Deadline: Normally in February. 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:
  http://www.ag.purdue.edu/ipia/Pages/woodsthomas.aspx

Sigma Xi Graduate Student Research Awards Competition
Deadline for Abstracts: Normally late January or Early February
http://www.purdue.edu/research/sigmaxi/gsrpa.shtml
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:
  - Physical Sciences
  - Life Sciences
  - Engineering
  - Behavioral and Social Sciences

Charles C. Chappelle Fellowship
Deadline: Typically in January prior to the start of the Fall semester of your graduate program.
http://www.gradschool.purdue.edu/funding/

- 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 credit (see Tables on next page), during the entire appointment period. Appointments should be on a ¼, ½, ¾, or full-time basis only. Combination appointments are permissible. The 0062G appointment determines the minimum research registration. A 0002G or 0003G appointment determines the maximum credit hour load of both research and course work.

Registration for all other students should reflect the amount of expected research activity with 15 to 18 credit hours representing a full-time, 40-h work week. Maximum academic loads and residence credits for the 8 week summer session are one-half that of

the regular semester.

Each school establishes graduate staff salaries appropriate for their departments 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.

Guidelines for Maximum Course Plus Research Registration:

Appointment Level	**0.25 FTE**	**0.5 FTE**	**0.75 FTE**	**1.0 FTE**
Graduate Lecturer Graduate Teaching Assistant Graduate Administrative/Professional	15 hrs	12 hrs	9 hrs	6 hrs

Guidelines for Minimum Research Registration:

Appointment Level	**0.25 FTE**	**0.5 FTE**	**0.75 FTE**	**1.0 FTE**
Graduate Research Assistant	3 hrs	6 hrs	9 hrs	12 hrs

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 file a completed Request for Absence Form 33, signed by the major advisor,** with the Assistant to the Department Head, 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 http://www.purdue.edu/hr/Benefits/holidays.html

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

Current and Admitted Students
ESE Program Office
Christal Musser
Phone: 765-494-2102
Email: musser@purdue.edu

Program Head
Dr. Linda S. Lee
Lilly Hall, 3-363
Email: lslee@purdue.edu
Phone: 765-494-8612
Fax: 765-496-2926

Program Coordinator
Christal Musser
Hansen, 114
Phone: 765-494-2102
Email: musser@purdue.edu

Graduate Student Contact
Lindsey Payne, ESE Student
YONG Hall, 738
Email: paynel@purdue.edu

Additional information is available via the Web site: http://www.purdue.edu/dp/ese

3.2 Executive Committee

A listing of current executive committee members will be posted on the ESE Website

3.3 Graduate School IGP Office

Colleen Gabauer, Director
Email: cgabauer@purdue.edu
Office: 168 YONG
Office Phone: +1 765 49-41061
Fax: 765-494-0906

3.4 Dean of Students

Tony Hawkins, Dean
Schleman Hall, Room 207
475 Stadium Mall Drive
West Lafayette, IN 47907
Tel: (765) 494-1747; Fax: (765) 496-1550

3.5 Dean of Graduate School

Mark J. Smith, Dean
The Graduate School
Ernest C. Young Hall, Room 160
302 Wood Street

West Lafayette, IN 47907-2108
Phone: (765) 494-0245; 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 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 suggest to this suggested approach.***

- **Introduction/Background -** This section should provide enough information and associated citations to the literature that sets 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 paramount is a key to brevity of 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).
- **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 a 1-3 sentences supporting why this hypothesis. 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.
    - Results to date, if available at the time of writing your proposal, related to testing this hypothesis or development of the approach to be used can be briefly summarized here. A more detailed provision of results or a first draft of a manuscript should be cited to an appendix, e.g., see Appendix B for ____.

    - Potential Challenges – list here any challenges that may hinder your success in achieving 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 Download of Rubrics from the ESE Website: http://www.purdue.edu/dp/ese/forMSphp

- 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)
- MS Non-thesis Rubric (Form GC – X – MS-Non-thesis…forthcoming)
- PhD Dissertation & Defense Exam Rubric Evaluation (Form GC-7-PhD)