

Graduate Handbook

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Using this Handbook

All students in the Environmental Science and Policy Program (ESPP) are accepted into ESPP following admission to a primary PhD or Master's program at MSU. This PhD or Master's program, not ESPP, is the student's primary graduate program. Therefore, the ESPP Handbook serves as a supplement to the Graduate Handbook for each student's primary graduate program.

This document focuses primarily on the requirements, expectations, and other guidelines that are specific to ESPP. In some cases, these may be similar or identical to those for primary programs. In other cases, the requirements, expectations, and guidelines for ESPP may extend beyond those that pertain to the student's primary program.

All ESPP students must therefore be cognizant of the dual requirements, expectations, and guidelines pertaining to both ESPP and their primary program. In addition to consulting the relevant Graduate Handbooks, every ESPP student should work closely with their advisor, guidance committee, and department staff to ensure that they are satisfying all relevant requirements, expectations, and guidelines.

This Handbook provides the most recent policies and procedures (at the time of publication) that guide a student's graduate program expectations, requirements, rights, and responsibilities. They derive from a combination of Michigan State University, MSU Graduate School, College of Social Sciences, and ESPP policies and practices. If there are any discrepancies in policies, the University policies override all inconsistent provisions.

ESPP students should familiarize themselves with this Handbook and use it as a resource for questions related to specific policies, timelines, and procedures.

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INTRODUCTION AND OVERVIEW

GOALS OF ESPP

The Environmental Science and Policy Program (ESPP) was established in 2003 to:

- Build graduate education programs that are innovative, interdisciplinary, and campus wide;
- Facilitate interdisciplinary environmental research at MSU and, in particular, to link MSU research with national and global research priorities; and
- Make MSU's areas of excellence better connected with and more visible in national and global efforts.

THE NATURE OF OUR WORK

The Environmental Science and Policy Program (ESPP) spans traditional disciplinary boundaries to facilitate environmental research and education at MSU. As such, it enables a learning environment for creative interdisciplinary science. We work together with colleges and departments in a collaborative manner to promote innovative interdisciplinary approaches to solving environmental problems. ESPP brings together faculty and students from across campus to advance the knowledge of environmental science and policy and to address pressing environmental challenges at a variety of scales. In so doing, we recognize and value diversity, inclusion, and engagement.

ESPP STRUCTURE AND ORGANIZATION

ESPP is structured to be flexible and inclusive. Our programs and events are open to all MSU faculty and students. Although the administrative home is the College of Social Science, ESPP integrates faculty, graduate students, and resources from all schools, programs, and departments across MSU.

A relatively small staff administers and implements ESPP programs. As a graduate student, you will interact with many of the ESPP staff. Below we provide a brief summary of ESPP's personnel, focusing on how each supports our graduate students:

- Director, Lifeng Luo. The Director of ESPP is our chief administrator. The Director is responsible
 for the overall operation of ESPP, including long-range program planning and budgetary
 matters.
- Assistant Director, Sean Lawrie. The Assistant Director primarily focuses on ESPP's research
 activities. However, the Assistant Director also assists with the student fellowship review
 process, event planning, and communications.
- **Graduate Program Director (GPD), Joe Hamm.** The Graduate Program Director oversees the dual major, specialization, and certificate programs. The ESPP GPD is responsible for recruitment, retention, and reporting to ensure the attainment of ESPP's educational goals.

- Chief Financial Officer (CFO), Tina Bird. ESPP's Chief Financial Officer (CFO) administers the program's budget. The CFO processes fellowships and funding for students.
- Graduate Program Secretary, Tina Bird. The Graduate Program Secretary assists the GPD and is
 responsible for the Graduate Program operations in the ESPP office. Communications, Diane
 Huhn. ESPP's communications staff, which are shared with other units in the College of Social
 Science, maintain the ESPP website and social media accounts, prepare press releases, and
 develop other ESPP communications with a variety of internal and external audiences.

In addition to the ESPP staff, students also interact with ESPP committees and faculty:

- Faculty Advisory Council (FAC). The ESPP Faculty Advisory Council consists of nine faculty
 members elected by ESPP faculty to two-year terms on a rotating basis. The ESPP Director may
 also appoint members to ensure balance in background, gender, and minority representation.
 The FAC provides guidance to the Director regarding all of ESPP's programs.
- Graduate Program Council (GPC). The ESPP Graduate Program Council consists of six ESPP faculty selected by election from the ESPP faculty or appointed by the Director. The Graduate Program Council guides ESPP's academic program, reviews admission applications, approves alternative capstone project proposals and final projects, and reviews applications for travel funding, doctoral recruitment and summer fellowships.
- Student Leadership Council (SLC) The ESPP Student Leadership Council consists of up to five ESPP students who are appointed by the Director, and the SLC oversees student activities at ESPP such as the annual Fall Student Research Symposium, the distinguished alumni speaker series, and other student gathering and cohort building activities. The SLC also serves as an additional channel for gathering student feedback on all aspects of ESPP, including research, teaching, outreach, student funding, networking, etc.
- ESPP Faculty. MSU tenure-stream and fixed-term faculty with an active interest in the areas of
 environmental science and policy can apply to become ESPP affiliated faculty. There are also
 several faculty who have appointments directly within ESPP. ESPP affiliated and appointed
 faculty may supervise students and serve as major professor (advisor) on the student's guidance
 committee. In addition, ESPP faculty serve on ESPP committees, attend ESPP faculty meetings,
 and participate in other ESPP activities.

RESPONSIBILTIES

ESPP's responsibilities to its graduate students include:

- Creating explicit expectations and transparent policies that are consistent with MSU policies (e.g., maintaining an updated, online Graduate Handbook that follows the Graduate School Handbook Template and academic unit requirements for degree completion)
- Enabling graduate students to make timely progress in their degree programs by ensuring that required courses and examinations are scheduled in a timely manner

- Creating opportunities for networking and expanding career and professional development (e.g., organizing speaker series, colloquia, and other formal and informal events)
- Creating opportunities for graduate students to become familiar with the various forms of scholarship in the field
- Sharing responsibility with guidance committees and faculty advisors for fostering the
 professional and career development of graduate students (e.g., providing venues for honing
 professional writing and presentation skills, grants writing, publishing)
- Ensuring that regular progress checks are provided for students (including annual written evaluations)
- Providing education in research ethics and integrity
- Recognizing and rewarding excellence in mentoring, and identifying opportunities for professional development so that faculty can improve their mentoring skills and abilities
- Connecting faculty to a broader community of support by sharing information about MSU and Graduate School resources that can support them in mentoring graduate students

OVERVIEW OF ESPP ACADEMIC PROGRAMS

In the 21st century, environmental professionals need both expertise in their own discipline and the

ability to work across disciplines. The concept of the "T-shaped graduate" applies this idea to education, where students gain both depth and breadth of knowledge (Figure 1). Disciplinary depth, the pillar of the T, provides command of a specific discipline and the meticulous skills required to conduct sound science. Interdisciplinary breadth, the crossbar of the T, provides skills and conceptual frameworks that allow communication and collaboration across disciplines. Together, these develop professionals who deeply understand the context of their research and can work effectively in multidisciplinary teams.

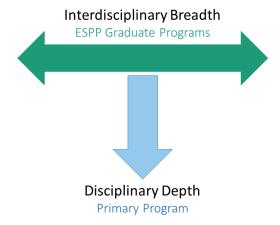


Figure 1. ESPP provides interdisciplinary training that complements and expands a student's primary discipline.

ESPP currently offers three graduate programs:

- Environmental Science and Policy Dual Major Doctoral Degree Program
- Graduate Specialization in Environmental Policy
- Graduate Certificate in Environmental and Social Systems Modeling

OPPORTUNITIES FOR STUDENT INVOLVEMENT IN ESPP

ESPP students are a vital component of the ESPP community. We encourage students to participate in ESPP governance and all ESPP committees include a student representative. ESPP regularly issues calls

for students to serve on its committees. Students are welcome—and encouraged—to contact the Graduate Program Director, Assistant Director or Directorwith questions regarding committee service, to provide feedback on ESPP programs, or to share ideas about improving student engagement.

ESPP plans all of its events with fostering our student community in mind and we engage our students beyond audience membership. Our major events include:

- **ESPP Student Colloquium Series**. Students organize either a panel discussion featuring experts on a topic of their choice or a mini-symposium (marathon) with fellow ESPP students. For Dual Major Doctoral Degree Program students, these presentations fulfill their requirement to present their research to the ESPP community.
- **Student Research Symposium**. This annual event is organized for and by ESPP students. Featured speakers often include those who not only cover an interesting research topic, but who can provide insights to students about future career options, how to succeed as a scientist/academic, or other professional development topics.
- ESPP Distinguished Lecture Series. ESPP requires that the schedule for Distinguished Lectures
 include time for the lecturer, a leader in environmental science and/or policy, to meet with ESPP
 students.
- Fate of the Earth Symposium. Students assist in planning the event and take part in leading workshops.

ADMISSION PROCEDURES

APPLICATION DEADLINES AND ELIGIBILITY

ESPP's programs are open to graduate students from any PhD or Master's program at MSU. However, they are not stand-alone programs; students must first be admitted to and enrolled in a primary graduate program at MSU. ESPP reviews applications twice per year:

Fall Semester: October 15Spring Semester: February 1

For prospective MSU students interested in ESPP programs, applicants should first contact the PhD or Master's program or department of their choice for specific details and requirements for admission. This first contact with the primary department is crucial to avoid delays in the application process. Generally, applicants for fall semester should have all of their application materials submitted by mid-December to be in the best position to compete for departmental assistantships and various University, College, and Department fellowships. Students should refer to the primary program for current instructions and deadlines for admission. Once a student has applied to a primary program, they may apply to ESPP. Admission to ESPP will be contingent upon enrolling in a graduate program at MSU.

Graduate students may also apply to ESPP after they have enrolled in an MSU program. Applicants should be in good academic standing and be able to document that they are making satisfactory progress toward their primary degree. PhD students interested in the ESPP Dual Major Doctoral Degree

Program must apply to ESPP and complete a Memorandum of Understanding (described below) within the first four semesters of their time at MSU.

APPLICATION MATERIALS

Application forms for all ESPP graduate programs are posted on the **ESPP website**.

ENVIRONMENTAL SCIENCE AND POLICY DUAL MAJOR DOCTORAL DEGREE PROGRAM

The Environmental Science and Policy Dual Major Doctoral Degree Program is open to PhD students at MSU. Students are eligible to apply either as incoming students or within the first four semesters of their time at MSU.

Applications should include the following materials:

- All applicants:
 - A complete, signed application form.
 - A brief (no longer than one page) cover letter requesting admission to the ESP Dual Major Doctoral Degree Program and describing your professional interest in environmental science and policy.
 - Your Curriculum Vitae.
- Prospective students (if you are in the process of applying to a doctoral program at MSU):
 - Ask the doctoral program to which you are applying to forward a copy of your application package to ESPP.
- Current MSU students (if you are already enrolled in a doctoral program at MSU):
 - Ask your major advisor to send a letter to ESPP indicating that you are in good standing and that the advisor supports your application.

Students should submit their application to ESPP (espp@msu.edu) in a single email, preferably with all completed documents combined into a single pdf file, and include "Application to ESP Dual Major" in the subject line of the email.

GRADUATE SPECIALIZATION IN ENVIRONMENTAL POLICY

The Graduate Specialization in Environmental Policy is open to Master's students at MSU. Applications should include the following materials:

- A complete, signed application form.
- A brief (no longer than one page) cover letter requesting admission to the Specialization and describing your professional interest in environmental policy.
- Your Curriculum Vitae.
- A letter of support from your major professor indicating that you are in good standing and that your advisor supports your application.

Students should submit their application to ESPP (espp@msu.edu) in a single email, preferably with all completed documents combined into a single pdf file, and include "Application to Environmental Policy Specialization" in the subject line of the email.

GRADUATE CERTIFICATE IN ENVIRONMENTAL AND SOCIAL SYSTEMS MODELING

The Graduate Certificate in Environmental and Social Systems Modeling is open to all graduate students at MSU. Furthermore, students can apply for the certificate at any time prior to receiving their primary degree (either Masters or PhD). Students apply to the program by completing a form and submitting their application to ESPP (espp@msu.edu) with "Application to Modeling Certificate" in the subject line of the email.

REVIEW AND EVALUATION PROCESS

Applications for the Environmental Science and Policy Dual Major Doctoral Degree Program and the Graduate Specialization in Environmental Policy are reviewed by the Graduate Program Council (GPC). The GPC ensures students meet all requirements and demonstrate the likelihood to succeed in the program. The GPC makes recommendations on admission to the ESPP GPD and Director, who make the final admission decision. Review of applications begins after the October and February deadlines and students are typically notified of a decision within 4 weeks.

Applications for the Graduate Certificate in Environmental and Social Systems Modeling are reviewed by the program faculty. These faculty members designed the certificate and teach many of the required courses. In reviewing applications, they ensure students meet all requirements and demonstrate the likelihood to succeed in the program. The faculty make recommendations on admission to the ESPP GPD and Director, who make the final admission decision. Review of applications begins after the October and February deadlines and students are typically notified of a decision within 4 weeks.

ESPP uses the following criteria to assess applicants:

- Applicant is enrolled in or applying to a graduate program at MSU;
- Applicant has excellent academic record;
- Applicant is committed to interdisciplinary research <u>beyond</u> their primary major;
- Applicant is currently in good academic standing and making progress toward degree;
- Applicant has demonstrated interest in environmental science and policy and is likely to complete the program; and
- Applicant has experience in a relevant field that demonstrates aptitude for success.

ENVIRONMENTAL SCIENCE AND POLICY DUAL MAJOR DOCTORAL DEGREE PROGRAM

PROGRAM DESCRIPTION

The Environmental Science and Policy Dual Major Doctoral Degree Program is ESPP's flagship program. The Dual Major Program provides students with knowledge about the diverse disciplines brought to bear on contemporary environmental problems. The program is designed to provide an understanding of how various disciplines conceptualize environmental issues and how scientific information can be utilized in environmental policy and decision-making. The key features of the Dual Major Program are the focus on interdisciplinary education and the integration of the student's primary discipline with environmental science and policy. The educational objectives of the Dual Major Program are to:

- Develop interdisciplinary knowledge and skills across natural science, engineering, and social science disciplines related to the environment to enable collaboration with researchers and practitioners from multiple disciplines to address environmental challenges;
- Gain knowledge and experience with science-based environmental policies, including how scientific knowledge can contribute to practical policies and how interdisciplinary collaboration can improve the effectiveness of policies; and
- Gain practical experience in interdisciplinary collaboration and communicating scientific research to multiple audiences, including scientific communities and the public.

The Dual Major Degree Program is designed to emphasize the interdisciplinary nature of environmental science and policy, and it allows its students considerable flexibility in choosing individual areas of study. Each student's course of study is planned with their particular interests, capabilities and professional goals in mind. Students are expected to complete the ESPP core requirements in addition to the requirements of their primary majors, and to attend ESPP Research Colloquia series throughout each semester in which they are in residence at MSU. Students are also encouraged to interact and share ideas with one another outside of formal ESPP events.

PROGRAM REQUIREMENTS

Students in the Dual Major Program must complete the requirements of their primary major and ESPP. For the ESP component of the dual major, students are required to:

- 1. Complete all of the following courses with a minimum grade-point average of 3.0 with no more than one course's grade below 3.0 in courses used in fulfillment of the requirements for the dual major (12 credits):
 - a. ESP 800 Principles of Environmental Science and Policy (3 credits)
 - b. ESP 801 Physical, Chemical and Biological Processes of the Environment or one of the following (3 credits):
 - i. CSUS 836: Modeling Natural Resource Systems
 - ii. ENE 801: Dynamics of Environmental Systems
 - c. ESP 802 Human Systems and Environment or one of the following (3 credits):
 - i. AFRE 829 Economics of Environmental Resources
 - ii. CSUS 820 Social-Ecological Resilience

- iii. CSUS 824: Sustainable Development
- iv. SOC 865: Environmental Sociology
- v. SOC 869: Community and Conservation
- d. ESP 804 Environmental Applications and Analysis or one of the following(3 credits):
 - i. FW 868: Water Policy and Management
- 2. Complete 24 credits in Doctoral Dissertation Research (course number 999) from the student's primary major.
- 3. Pass a comprehensive examination, defined by the requirements of the student's primary major, that will include a written examination in which the student demonstrates a knowledge of environmental science and policy as determined by the guidance committee.
- 4. Submit a dissertation that, in the judgment of the student's guidance committee, represents the integration of environmental science and policy and the student's primary major.
- 5. Present their research to the ESPP community at an ESPP Research Colloquium.

Figure 2 summarizes the ESPP Dual Major Doctoral Degree Program requirements and provides a typical timeline for completion. It also highlights an important deadline for all Dual Major Program students—approval of your dual major by the Graduate School—which is discussed below in the Dual Major Degree Request section. A checklist with key deadlines and tips is also provided in the Resources section of this Handbook.

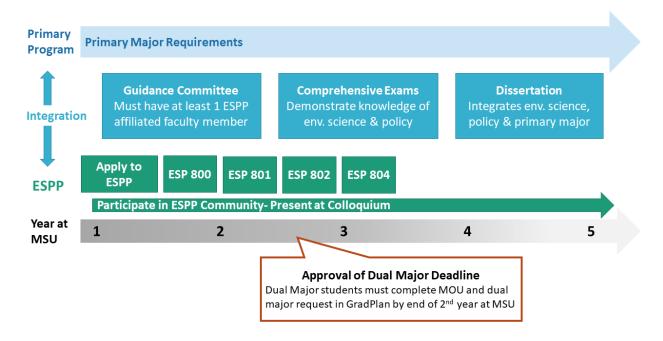


Figure 2. Overview of the ESP Dual Major Doctoral Degree Program with recommended timeline for completing requirements.

The goal of the ESPP capstone experience (ESP 804) is to give students an integrative experience of interdisciplinary environmental science and policy research that builds on their knowledge from previous courses and helps solidify the networks and community the students have created with others both in and beyond ESPP. Students may also propose an alternative capstone project to fulfil this final requirement of the Dual Major Program. These projects are completed as a special section of ESP 804. Before beginning such a project, the team of students must submit a proposal to the GPD and receive approval from the ESPP GPC. To be approved, proposals must include the following elements:

- Intellectual merit and scholarly contribution of the alternative capstone experience;
- Demonstration of interdisciplinarity of the project;
- Evidence of relevant policy question(s) to be explored and their connections to interdisciplinary science;
- Proof of collaboration, ideally with others of different disciplines from the ESPP community, but at the least with others outside of the student's primary discipline;
- A plan for publishing the final product, whether it be a white paper, report or other publication;
- A substantial direct contribution to the project by each student in the team.

All capstone proposals and final capstone projects will be reviewed by the GPC. The GPC makes recommendations to the ESPP GPD, who makes the final decision. Proposals should be submitted by March 15, with the plan that approved projects will be conducted the following Fall semester. The ESPP GPD will communicate decisions to students via email and set up a special section of ESP 804 for the following Fall semester for approved projects. Students will be expected to enroll in that special section of ESP 804 to complete their projects.

DUAL MAJOR DEGREE REQUEST

Once students are admitted to the program by ESPP, they must have their dual major approved by their primary program, ESPP, the Associate Deans for Graduate Studies in the participating colleges, and the Dean of the Graduate School. All Dual Major Program students should familiarize themselves with the University policy regarding dual major doctoral degrees. The relevant portion of this policy states:

"Michigan State University offers doctoral students the exceptional opportunity to work in conjunction with faculty mentors to develop a dual major doctoral program. Such a program will reflect the required courses and standards for both of the departments with a single dissertation. All dual major doctoral degrees must be approved by the Dean of the Graduate School. A request for the dual major degree must be submitted via GradPlan within one semester following its development and within the first two years of the student's enrollment at Michigan State University.

- The intent to receive the degree in two areas must be outlined in the guidance committee report.
- The Ph.D. Degree Plan must reflect the required standards for both departments.

- The integrated course work must be satisfactory to both departments.
- The comprehensive examination must be passed to the satisfaction of both departments.
- A guidance committee including members from both departments must be satisfied that the dissertation represents a contribution meeting the usual standards in both areas.
- There must be a single dissertation that represents an integration of the disciplinary areas.
- Responsible Conduct of Research requirements will be as defined and approved by the guidance committee in accordance with the University RCR requirements."

To complete this requirement, students complete a formal Memorandum of Understanding (MOU) and request the dual major via Campus Solutions. The MOU and GradPlan outline how the student will meet the requirements of both ESPP and their primary major. The information contained in the MOU and Campus Solutions should be identical. Because dual majors require integration of two areas of study, the dual major request should be made early in a student's doctoral program. All Dual Major Program students must complete their dual major request by the end of their second year (4th semester) at MSU. An annotated MOU instructions for requesting a dual major in GradPlan are provided in the Resources section of this Handbook.

PRESENTATION REQUIREMENT: STUDENT RESEARCH COLLOQUIUM

All ESPP students are expected to regularly attend the ESPP Colloquia Series each semester, attending at least two events per semester when in residence on campus. The student-organized colloquium series provides ESPP students a venue to gain practical knowledge and experience organizing interdisciplinary scholastic activities, communicating their science, networking, and learning from experts within and outside the ESPP community.

Dual Major Program students are required to present during this colloquium series as part of the dual major program. There are two acceptable formats: a panel discussion or a marathon. For the panel discussion, a Dual Major Program student first identifies a broader research area that encompasses his or her research, and then invites one or more other speakers who are experts in this area to serve on a discussion panel. The panelists could be fellow students, faculty members such as the student's advisors or committee members, or other researchers. A typical colloquium will include a 15-minute presentation by the student followed by 5 minutes of questions and answers for the student, and then a 30-40 minute panel discussion moderated by the student. For a marathon, multiple students work with the planning committee to plan a series of student presentations, discussions, and/or workshops. Each student should prepare a 15-minute presentation. Alternative formats can be discussed with the colloquium committee and the ESPP ADA.

For students who opt for a panel discussion, the student organizer will be responsible for:

- Scheduling a date at or before the start of the semester with the colloquium committee;
- Preparing a 15 min. presentation
- Inviting and organizing the panelists; and

Preparing questions to lead the panel discussion.

For students who opt for a marathon, the student organizer will be responsible for:

- Scheduling a date at or before the start of the semester with the colloquium committee;
- Preparing a 15 min. presentation; and
- Working with the committee and other students participating in the marathon to prepare appropriate material for workshops and/or discussions.

The number of student-organized colloquia will vary each semester to accommodate Dual Major Program students so they can meet their presentation requirement. Questions about organizing a colloquium should be directed to the ESPP GPD.

SELECTION OF DISSERTATION ADVISOR

The choice of the major professor, who will mentor a student and help guide their research, is one of the most important decisions that a graduate student will make. The process behind this choice, as well as its timing, depends on many factors and varies among the graduate programs at MSU. Many students begin graduate school already knowing who they intend to work with, whereas in some graduate programs, students are admitted at-large and then undertake a series of rotations in their first year to experience different research projects and potential advisors. Owing to these differences, prospective and current graduate students in ESPP are urged to consult the Handbook for their primary department, and to discuss this issue with the Graduate Program Director for their primary department.

For any ESPP graduate students who have not yet chosen a major professor, their primary graduate programs are responsible for providing appropriate advising, supervision, and mentoring. A student's primary program is also responsible for approving the choice of major professor. Guidelines for Graduate Student Advising and Mentoring Relationships can be found on the Graduate School website at https://grad.msu.edu/sites/default/files/content/researchintegrity/guidelines.pdf.

Each program may also establish additional guidelines and expectations for successful advising and mentoring that are specifically relevant to the disciplines represented in that graduate program. ESPP students are encouraged to consult all of these materials and discuss them with their major professor.

Regardless of the student's primary program, there are some general issues to consider in choosing a major professor. These include identifying a faculty member with similar research interests to the student. Also, the student should consider the facilities that the professor has to support the research, including equipment, laboratory space, and office space. Another important factor for some students is whether the major professor can provide financial support in the form of research assistantships, or whether the student is expected to serve as a teaching assistant, or to provide his or her own financial support during the graduate program. Even when the professor offers a research assistantship, students should be aware that research funding to the professor may have a limited time frame, and so the duration of any assistantship should be discussed, as well as the expectations of the professor for the

student and his or her research activities. Finally, a graduate student should consider his or her personal compatibility with the potential major professor. An understanding between the student and the major professor about their individual and mutual expectations will help to promote the development of the student's academic and scientific potential.

Most graduate students have the same major professor throughout their degree program, but some programs utilize multiple advisors. Students should also understand that it is sometimes possible to change to another major professor during their doctoral program. Such a shift might be desirable, for example, if the student determines that his or her research interests are much more closely aligned with another faculty member than with those of the current major professor. A change may sometimes also be appropriate if a student and faculty member find that their styles of discussion and mentoring are not mutually compatible. Any such change must involve discussions with the Graduate Program Director in the student's primary program, and a change should be pursued as early as possible in the graduate student's training program.

FORMATION OF GUIDANCE COMMITTEE

Dual Major Program students must have at least one ESPP faculty member on their guidance committee. The ESPP program is a multidisciplinary program, and it encourages its students to form guidance committees that offer a diversity of perspectives, with faculty members chosen from multiple departments. Lists of <u>affiliated</u> and <u>appointed</u> ESPP faculty members are available on the ESPP website; both are eligible to serve as the ESPP member of a student's guidance committee.

The procedures and expected timeline for formation of the guidance committee for an ESPP graduate student are set by the student's primary program. Each program also sets out the requirements and expectations with respect to the frequency and reporting of student meetings with the guidance committee, the role of the committee in exams, and so on. Every ESPP student is encouraged to consult the Graduate Handbook for their primary program on these matters. In general, it is good practice that the committee be formed as early as feasible in the student's career, and that the student meets with their committee on an annual basis at a minimum.

For university-wide rules about planning and forming doctoral guidance committees, please consult https://reg.msu.edu/AcademicPrograms/Text.aspx?Section=111#s394.

DISSERTATION DEFENSE AND FINAL ORAL EXAMINATION

Dual Major Program students submit a dissertation that, in the judgment of the student's guidance committee, represents the integration of environmental science and policy and the student's primary major. Following successful completion of the dissertation defense, the student's major professor should confirm the student met this requirement by sending confirmation to the ESPP GPD.

The Ph.D. dissertation must be prepared in accordance with the specifications described in the Graduate School Guide to the Preparation of Master's Thesis and Doctoral Dissertations, which is available from

the MSU Graduate School at https://grad.msu.edu/etd. This guide should be consulted during preparation of the dissertation. The Graduate School also provides a package of material including a Ph.D. checklist, an application for graduation, and information on distribution of the dissertation, microfilming fee, and copyrighting.

Each ESPP student should consult their primary program about the requirements and expectations for submitting drafts of the student's dissertation to the major professor and the guidance committee. Graduate students will benefit by writing portions of their dissertation along the way, as parts of their research are completed, rather than leaving all writing to the end. These written components should be shared with the major professor, then discussed and revised as needed. Most major professors will want to read, and will suggest one or more rounds of revision to the various chapters of a dissertation, prior to their distribution to the guidance committee as a whole. The student must allow ample time for review of the dissertation by the major professor and guidance committee prior to the final oral presentation and examination.

For dissertations, the final oral defense/examination must consist of two parts. The first is a presentation that must be open to faculty members and members of the public without a vote. Only dissertation committee members may attend the second part, which is the examination portion of the defense per the primary program's guidelines. For additional information on the final oral examination see https://reg.msu.edu/AcademicPrograms/Print.aspx?Section=401.

The requirements and expectations for the public presentation of research and final exam are set by the student's primary program, consistent with requirements of the MSU Graduate School. All ESPP students should submit an announcement to ESPP (espp@msu.edu) giving the time, location, title of their dissertation presentation, primary program, major professor, and guidance committee members at least one week prior to its scheduled time. ESPP faculty and graduate students are encouraged to attend the public portion of the student's dissertations defense.

Graduate students must be registered for at least one credit during the semester in which the final examination is taken. Students should consult the <u>Academic Calendar</u> for relevant deadlines the semester before graduation is anticipated.

In keeping with MSU's public mission, the University requires that theses, dissertations and abstracts will become public after the conferral of the degree; embargoes can only be pursued for a limited period (see 1 below). Results that are subject to restrictions for dissemination by funding agencies (see 2 below) cannot be part of any document submitted as a thesis or dissertation to the Graduate School.

1. Hold/embargo on publication of documents submitted to ProQuest:

Students submitting a thesis/dissertation to ProQuest can request a hold/embargo of publication by ProQuest by contacting the Graduate School at msueds.approval@grd.msu.edu. In response to the request, the Graduate School will send the student a form to be completed and returned to the Graduate School prior to submission of the document to ProQuest. The form needs to be signed by the student's major professor and by the Associate Dean of the student's primary college. The request for the hold/embargo may be for six months, one year, or two

years. Requests for a period longer than six months must include a written justification for the length of the hold/embargo.

Graduate students' participating in University Research Organization (URO; https://uro.egr.msu.edu/):

Graduate students involved in a URO project will receive both written documentation and a verbal explanation of any limitations or implications to their current or future academic progress prior to participating on the project. Students engaging in work for a URO project undergo a 2-step approval process before hiring: A consultation with a representative of the URO's office to explain the restrictions on the project, and an interview with the Graduate School Dean or Dean's designee to discuss the relationship, if any, between their work as graduate students and their participation in the project. Students must be informed that results that are subject to restrictions for dissemination cannot be part of any document submitted as a thesis or dissertation. As part of their degree program, all graduate students must have research options to ensure the generation of appropriate results to fulfill the degree requirements, and to have data for professional development activities that are integral to their graduate education (e.g., presentations at conferences and research seminars).

TIME LIMITS

It is vital that students make progress toward their degree. Students should follow the timeline and deadlines of their primary major as outlined in the Graduate Handbook for their primary program. All graduate students are subject to the following University time limits:

- The time limit for completion of the requirements for the master's degree is six years from the date of enrollment in the student's first course in the Master's degree program.
- The PhD Comprehensive Examination must be taken within five years of initial acceptance to the program, and will expire after three years if there has been no progress toward the degree;
- All remaining requirements for the Ph.D. degree must be completed within eight years, from the time when a student begins the first class at MSU that appears on the GradPlan.

ENVIRONMENTAL POLICY SPECIALIZATION

PROGRAM DESCRIPTION

The Graduate Specialization in Environmental Policy provides students with foundational skills and knowledge in environmental law, economics, and policy and an opportunity to gain substantive expertise in the fundamental aspects of environmental policy. This program is open to Master's students enrolled in an MSU graduate program.

REQUIREMENTS

Students in the program are required to:

- 1. Complete both of the following courses:
 - a. AFRE 829 Economics of Environmental Resources
 - b. PPL 807 Public Policy
- 2. Complete 3 credits of additional course work that focus on policy that meets the interests of the student. The course must be approved by the student's academic advisor for the specialization.
- 3. Complete an examination consisting of a paper on the environmental policy aspects of a problem selected by the student and approved by the advisor for the specialization.

The ESPP GPD serves as the advisor for the specialization for ESPP. Students should work with their major professor and guidance committee to identify the additional course that focuses on policy that meets the interests of the student. Once a course has been identified, the student should complete the Specialization course form and submit it to the ESPP GPD for approval. For the examination, students should work under the guidance of the ESPP GPD and their major professor on a paper on the environmental policy aspects of a problem selected by the student. Once the paper is complete, students should submit a copy of the paper and completion form to the ESPP GPD for approval. All forms are available on the ESPP website.

GRADUATE CERTIFICATE IN ENVIRONMENTAL & SOCIAL SYSTEMS MODELING

PROGRAM DESCRIPTION

Because students are often unaware of the diversity of modeling theories and tools available and how to utilize them to address environmental issues, a core group of faculty in ESPP established the Graduate Certificate in Environmental and Social Systems Modeling in 2015. The certificate program focuses on modeling techniques for addressing socio-environmental issues in complex systems and is open to all MSU graduate students. This module of courses exposes students to how to apply cutting-edge modeling theories and techniques. The program objective is to build a solid foundation in the theory of models and complex systems and provide hands-on experience with model design, development, and evaluation geared toward specific research topics across disciplines. The coursework culminates in an interdisciplinary team-taught capstone seminar focusing on case-based group research that addresses a selected practical policy problem using an ensemble of appropriate modeling tools.

REQUIREMENTS

Students in this program are required to complete 9 credits from the following:

- 1. Both of the following courses (3 credits)
 - a. ESP 850: Introduction to Environmental and Social Systems Modeling (1 credit)
 - b. ESP 890: Modeling Environmental and Social Systems (2 credits)
- 2. Two of the following courses (6 credits)
 - a. CSUS 836: Modeling Natural Resource Systems

- b. ENE 801: Dynamics of Environmental Systems
- c. GEO 869: Agent-Based Modeling
- d. SOC 883: Multi-Equation Quantitative Models

Following completion of the Certificate requirements, students should submit a completion form to the ESPP GPD. Forms are available on the ESPP website.

DEPARTMENTAL POLICIES

ACADEMIC PERFORMANCE

All students must meet performance guidelines of their primary program and the University. A 3.00 cumulative grade-point average for all courses counting toward the graduate degree is the minimum University standard. Dual Major Program students must maintain a minimum grade-point average of 3.0, with no more than one course grade below 3.0 in courses used in fulfillment of the requirements for the dual major degree.

All students should receive an annual performance evaluation following the procedures of the student's primary program and University guidelines. The purpose of the annual review is for the student and their major advisor to assess the student's progress, make plans for the upcoming year, discuss ways to facilitate the student's success, and provide an opportunity for the student to request additional help, if needed. The faculty advisor and the graduate student will complete the appropriate portions of an annual progress report form, such as those available from the Graduate School (see https://grad.msu.edu/annual-evaluation-forms), which is typically reported to the primary major Graduate Program Director/Coordinator. Students should check the Graduate Handbook in their primary program for procedures and guidelines regarding annual reviews.

For students in the Dual Major Program, ESPP will provide a brief summary of student's progress relevant to their ESPP requirements to inform the annual review. These summaries will be sent to the student and major professor each Fall and added to the student's record in ESPP.

Students have the right to access their ESPP records through a request to the ESPP GPD. All ESPP student records are maintained in accordance with the University policy on <u>Access to Student</u> <u>Information</u>.

STUDENT CONDUCT AND CONFLICT RESOLUTION

The University has developed support programs and policies to assist students and faculty with issues of conflict. If irresolvable disagreements arise between the student, major professor, and/or guidance committee, the initial task of conflict resolution rests with the primary program of the student and major professor. If disagreements arise between the student and ESPP, the grievance procedures of the College of Social Sciences will be followed because it serves as the lead college for ESPP. Students should explore all options and grievance procedures in the primary program or ESPP prior to initiating College

and University grievance procedures. The student may also contact the Office of the University Ombudsperson. The Office of the University Ombudsperson offers a confidential place to discuss both academic and nonacademic concerns including administrative issues, workplace issues, or any concern that may relate to Michigan State University students. They also interpret and explain university policies and procedures.

The following procedures and resources are available to assist students when conflicts arise:

- College of Social Science Procedures & Codes
- College of Social Science Undergraduate and Graduate Student Academic Hearing Procedures
- Office of the University Ombudsperson
- Dean of Students Office Conflict Resolution
- Spartan Life Student Rights and Responsibilities
- **Graduate Student Rights & Responsibilities**
- MSU Counseling & Psychiatric Services

INTEGRITY AND SAFETY IN RESEARCH AND CREATIVE ACTIVITIES

MSU is committed to creating an environment that promotes ethical conduct and integrity in research and creative activities. All members of the ESPP community share responsibility to ensure that misconduct or fraud in research and creative activity is dealt with effectively and that MSU's high standards for scholarly integrity are preserved. Key principles of integrity in research and creative activity embody a range of practices that include:

- Honesty in proposing, performing, and reporting research;
- Recognition of prior work;
- Confidentiality in peer review;
- Disclosure of potential conflicts of interest;
- Compliance with institutional and sponsor requirements;
- Protection of human subjects and humane care of animals in the conduct of research;
- Collegiality in scholarly interactions and sharing of resources; and
- Adherence to fair and open relationships between senior scholars and their coworkers.

Dishonesty in academics or unethical conduct in presentation of research are grounds for dismissal of a graduate student from the University. Such determinations will be made by a student's primary program following procedures of the Department, College, and University. Specific judicial procedures to which a graduate student has access will be those defined by his or her primary program. General MSU policies on Graduate Students Rights and Responsibilities, including procedures for adjudication of cases involving these rights and responsibilities, are available at http://splife.studentlife.msu.edu/graduate-student-rights-and-responsibilities.

ESPP students and faculty are encouraged to think deeply and carefully about ethical issues that are relevant to the scientific research, mentoring, and communication in which they are engaged. Students should review and abide by the following University policies regarding integrity and safety in research

and creative activities:

- Responsible Conduct of Research training requirements
- Protection of Human Subjects
- Humane Care of Research Animals
- Environmental Health and Safety Training
- MSU's Guidelines on Authorship
- Research Data Best Practices
- MSU's Procedures Concerning Allegations of Misconduct in Research and Creative Activities
- Integrity of Scholarship and Grades

Additional resources are also available at:

- MSU Research Integrity Officer
- The Graduate School Research Integrity Resources
- Office of the University Ombudsperson Academic Integrity Resources

WORK RELATED POLICIES

ESPP students with assistantships should follow the policies and procedures of their primary programs for work-related policies and graduate assistantships. All students should review and abide by the following University policies:

- Anti-Discrimination Policy
- Relationship Violence and Sexual Misconduct Policy (RVSM)
- MSU's Institutional Data Policy
- General Student Regulations
- Student Rights and Responsibilities (SRR)
- Graduate Student Rights and Responsibilities (GSRR)
- Code of Teaching Responsibility
- Guidelines for Advising and Mentoring Graduate Students (.pdf)

RESOURCES

ESPP KEY CONTACTS

ESPP Staff	Role	Email	Phone	Office
Lifeng Luo	Interim Director	lluo@msu.edu	(517) 353-8736	274 Giltner Hall
Sean Lawrie	Assistant Director	lawriese@msu.edu	(517) 432-8832	274 Giltner Hall
Joseph Hamm	Graduate Program Director	jhamm@msu.edu		518 Baker Hall
Tina Bird	Fiscal Officer and Graduate Program Secretary	lacinat@msu.edu	(517) 353-2265	274 Giltner Hall
Diane Huhn	Communications Manager	huhndian@msu.edu	(517) 355-4649	Geography (TBD)
ESPP Office	General contact for ESPP	espp@msu.edu	(517) 432-8296	274 Giltner Hall

If you have a question about	Contact	At this email
Applying to ESPP	Joseph Hamm	jhamm@msu.edu
ESPP graduate program requirements	Joseph Hamm	jhamm@msu.edu
Dual Major MOU and/or GradPlan	Joseph Hamm	jhamm@msu.edu
Funding available to ESPP students	ESPP general email	espp@msu.edu
Scheduling a colloquium	ESPP general email	espp@msu.edu
Processing fellowship funds or accounting-related questions	Tina Bird	lacinat@msu.edu
Updating information on the website	ESPP general email	espp@msu.edu
Access to the student listserv	ESPP general email	espp@msu.edu
Publishing information on ESPP social media channels	ESPP general email	espp@msu.edu
Providing feedback about ESPP	Any ESPP staff member. You may also Advisory Council or Graduate Program	contact faculty serving on the Faculty Council

Not sure who to contact? Send your message to espp@msu.edu. Multiple ESPP staff members check this account.

ESP COURSE DESCRIPTIONS

ESP COURSES REQUIRED FOR THE DUAL MAJOR DOCTORAL DEGREE PROGRAM

ESP 800 Principles of Environmental Science and Policy (3 credits)

Spring of every year

This team-taught course provides a broad overview of scholarship areas and key research questions in the intersection of environmental science and policy. It explores the core concepts and research methods of multiple disciplines involved in policy-relevant environmental research with readings and presentations from scholars from MSU and visiting institutions. Students will learn basic concepts of interdisciplinary research, and develop a basic understanding of typical research methods and analytical techniques that will facilitate effective communication with members of different disciplines. A series of interdisciplinary MSU research teams visit the course over the semester to discuss their research and address topics related to facilitating interdisciplinary teamwork and translation of science into policy.

ESP 801 Physical, Chemical and Biological Processes of the Environment (3 credits)

Fall of every year

ESP 801 "Physical, Chemical, and Biological Processes of the Environment" provides students who have disciplinary training in social sciences with a broad overview of environmental science from the perspective of natural sciences and engineering. ESP 801 includes four modules: Environmental Geosciences, Biology/Ecology, Environmental Chemistry, and Environmental Engineering. As a counterpart course to ESP 801, ESP 802 is also structured in a modular fashion but focuses on social aspects of environmental problems. ESP 801 and ESP 802 build a foundation for an integrative experience in the capstone ESP 804 course where students, having taken ESP 801 or ESP 802 or both of these classes, work on team-based projects that span the social/natural science spectrum. The curriculum design reflects ESPP's objective of providing an interdisciplinary preparation to a cohort of students from diverse backgrounds pursuing an interest in environmental science and policy.

ESP 802 Human Systems and Environment (3 credits)

Spring of every year

ESP 802 "Human Systems and the Environment" provides students who have disciplinary training in natural sciences with a broad overview of environmental policy from the perspective of the social sciences. ESP 802 includes four modules: Sociology, Economics, Anthropology, and Geography. As a counterpart course to ESP 802, ESP 801 will also be structured in a modular fashion but will focus on natural science aspects of environmental problems. ESP 801 and ESP 802 will build a foundation for an integrative experience in the capstone ESP 804 course where students, having taken ESP 801 or ESP 802, work on team-based projects that span the social/natural science spectrum. The curriculum design reflects ESPP's objective of providing an interdisciplinary preparation to a cohort of students from diverse background pursuing an interest in environmental science and policy.

ESP 804 Environmental Applications and Analysis (3 credits)

Fall of every year

This course provides the opportunity to apply knowledge learned in previous ESP courses. Global, regional and local environmental issues will be presented and explored. Class projects will be identified from these

issues. Students will be assigned projects and will use a systems approach to identify and solve environmental problems associated with the assigned issues. This course is designed for graduate students with ecology, biology, physical, or social science backgrounds seeking an interdisciplinary, environmental science approach to problem solving.

OTHER ESP COURSES

ESP 803 Human and Ecological Health Assessment and Management (3 credits)

Fall of every year

Concepts and techniques used to evaluate human and ecological health impacts from anthropogenic activities. Policy formulation and management strategies to mitigate health effects.

ESP 850 Introduction to Environmental and Social Systems Modeling (1 credit)

Fall of every year (Note: ESPP plans to offer every other year in the near future)

Theoretical background of diverse modeling problems in complex environmental systems. Diverse modeling approaches to most appropriate modeling tools in a variety of contexts.

ESP 890 Modeling Environmental and Social Systems (2 credits)

Fall of every year (Note: ESPP plans to offer every other year in the near future)

Modeling project of real-world environmental problems. Theories and methodologies from previous modeling courses to practical policy problems. Applied project with a variety of modeling tools and a trans-disciplinary synthesis. Model development, implementation, and evaluation in student groups.

ESP CROSS-LISTED COURSES

ESPP has partnered with several departments to offer the following cross-listed courses. Each of the below courses is administered by the lead department, not ESPP. Please note that the lead department determines whether the course will be offered as scheduled. Contact the lead department (listed first) if you have questions about the course.

CJ/ESP 845 Environmental Risk Perception and Decision-Making (3 credits)

Spring of odd years

Theoretical underpinnings of individual decision-making and risk perception processes. Case studies of the interplay of risk perception and decision-making in an environmental and or criminological context.

CJ/ESP 846 Corporate Environmental Crime and Risk (3 credits)

Spring of even years

Theoretical accounts and multiple interventions relevant to corporate environmental crime and risk. Use of "Smart Regulation" principles to design interventions to match specific problems.

CJ/ESP 847 Global Risks, Conservation, and Criminology (3 credits)

Fall of every year

Theories, actors, characteristics and legal instruments associated with risk, conservation, and criminology related to globalization. Current case studies in criminological conservation.

CSUS/ESP 836 Modeling Natural Resource Systems (3 credits)

Spring of every year

System dynamics modeling in human-environment systems. Sustainability applications, including renewable and non-renewable resource use, greenhouse gas emissions and climate change, pollutants and limits to growth.

GEO/ESP 869 Agent-Based Modeling (3 credits)

Spring of every year

Theoretical concepts related to simulating dynamic geographic phenomena in the intersection between human and natural systems. Innovative agent-based methodology applied to complex social-environmental systems. Hands-on experience of agent-based modeling, with special emphasis on modeling human decision-making and its impact on the natural environment.

SOC/ESP 883 Multi-Equation Quantitative Models (3 credits)

Spring of every year

Quantitative methodology: multilevel modeling; structural equation modeling. Applications in sociology and environment.

UNIVERSITY RESOURCES

POLICIES AND PROCEDURES

The Graduate School- Policies & Procedures: https://grad.msu.edu/policies-and-procedures

The Graduate School has compiled important MSU documents relating to graduate students, mentoring, research, and teaching.

Graduate Student Rights and Responsibilities: https://grad.msu.edu/sites/default/files/content/gsrr/GSRR.pdf

The GSRR specifically addresses student conduct, academic pursuits, keeping of records, and publications. It describes procedures for formulating regulations governing student conduct and for providing due process in the adjudication of student disciplinary cases. It also defines channels and procedures for student complaints and grievances.

MSU Academic Programs: https://reg.msu.edu/AcademicPrograms/

Academic Programs is the listing of MSU academic programs, policies and related information.

Guidelines for Graduate Mentoring and Advising: https://grad.msu.edu/msu-guidelines-graduate-student-mentoring-advising

Guidelines assisting students and advisors in effective mentorship and advising.

Spartan Life OnLine: http://splife.studentlife.msu.edu/

Spartan Life provides valuable and important information for your engagement at Michigan State University. This handbook and resource guide compiles much of the essential information you will need to optimize your Spartan experience. This site provides online versions of the *Michigan State University Student Rights and Responsibilities* and *Graduate Student Rights and Responsibilities*.

University Policy on Relationship Violence & Sexual Misconduct: https://hr.msu.edu/policies-procedures/university-wide/RVSM policy.html

The Policy on Relationship Violence and Sexual Misconduct, or RVSM, prohibits University community members from engaging in relationship violence, stalking, and sexual misconduct. The RVSM also describes the process for reporting violations of the policy, outlines the process used to investigate and adjudicate alleged violations of policy, and identifies resources available to members of the University community who experience relationship violence, stalking, or sexual misconduct.

Anti-Discrimination Policy: https://hr.msu.edu/policies-procedures/university-wide/ADP policy.html

The Anti-Discrimination Policy (ADP) outlines the types of prohibited discrimination and harassment at MSU. Under the ADP, University community members are prohibited from engaging in acts which discriminate against or harass any University community member on the basis of age, color, gender, gender identity, disability status, height, marital status, national origin, political persuasion, race, religion, sexual orientation, veteran status, or weight.

University Policy About Dissemination of Graduate Students' Research.

In keeping with MSU's public mission, the University requires that theses, dissertations and abstracts will become public after the conferral of the degree; embargoes can only be pursued for a limited period (see [1] below). Results that are subject to restrictions for dissemination by funding agencies (see [2] below) cannot be part of any document submitted as a thesis or dissertation to the Graduate School.

[1] Hold/embargo on publication of documents submitted to ProQuest:

Students submitting a thesis/dissertation to ProQuest now can request a hold/embargo of publication by ProQuest by contacting the Graduate School at msuetds.approval@grd.msu.edu. In response to the request, the Graduate School will send directly to the student a form that needs to be completed and turned to the Graduate School prior to submission of the document to ProQuest. The form needs to be signed by the student's major professor and by the Associate Dean of the student's college. The request for the hold/embargo may be for six months, one year or two years. Requests for a period longer than six months must include a written justification for the length of the hold/embargo.

[2] Graduate students' participating in University Research Organization (URO; https://uro.egr.msu.edu/):

Graduate students involved in a URO project will receive both written documentation and a verbal explanation of any limitations or implications to their current or future academic progress prior to participating on the project. Students engaging in work for a URO project undergo a 2-step approval process before hiring: a consultation with a representative of the URO's office to explain the restrictions on the project, and an interview with the Graduate School Dean or Dean's designee to discuss the relationship, if any, between their work as graduate students and their participation in the project. Students must be informed that results that are subject to restrictions for dissemination cannot be part of any document submitted as a thesis or dissertation. As part of their degree program, all graduate students must have research options to ensure the generation of appropriate results to fulfill the degree requirements, and to have data for professional development activities that are integral to their graduate education (e.g., presentations at conferences and research seminars).

KEY UNIVERSITY-LEVEL UNITS

The Graduate School: https://grad.msu.edu/

The Graduate School's mission is to serve as an advocate for graduate education to the university and beyond and to enhance the quality of graduate education at MSU in all its diverse dimensions.

Office of the Ombudsperson: https://ombud.msu.edu/

The Office of the University Ombudsperson offers a confidential place to discuss both academic and nonacademic concerns including, administrative issues, workplace issues, or any concern that may relate to Michigan State University students. They also interpret and explain university policies and procedures. Here, you can speak freely because the Office of the University Ombudsperson offers an environment where you can talk with a confidential and impartial resource about a complaint, conflict or problem.

Office of Institutional Equity: https://oie.msu.edu/index.html

The Office of Institutional Equity (OIE) reviews concerns related to discrimination and harassment based on age, color, gender, gender identity, disability status, height, marital status, national origin, political persuasion, race, religion, sexual orientation, veteran status, and weight under the University's Anti-Discrimination Policy (ADP) and Policy on Relationship Violence and Sexual Misconduct (RVSM).

Office for International Students and Scholars: https://oiss.isp.msu.edu/

The Office for International Students and Scholars (OISS) provides support to Michigan State University's international students, scholars and families.

HEALTH & WELLNESS RESOURCES

Counseling & Psychiatric Services (CAPS): https://caps.msu.edu/, (517) 355-8270

CAPS is the place on campus for students seeking help for a wide range of concerns, including depression, anxiety, stress management, homesickness, adjustment or acculturation, relationships, gender identity and sexual orientation (LBGTQ) concerns, substance abuse, trauma, eating or body image concerns, and other personal mental health concerns. CAPS upholds the best professional practices in protecting student confidentiality and privacy with policies that are in accordance with the various ethical and professional principles and standards set forth by organizations and bodies which oversee our multidisciplinary practices.

MSU Health Services: https://olin.msu.edu/, (517) 884-6546

Health Services and related support services include primary care, allergy/immunizations, sports medicine, massage therapy, laboratory, and physical therapy. Pharmacy and radiology services are also available on campus. The Olin Health Center building is the primary health care facility for MSU students.

Student Affairs & Services Health, Welfare, Safety: http://studentaffairs.msu.edu/health-wellness-safety/index.html

Student health and well-being is central to academic success. Michigan State University provides information and services to help students develop and maintain good physical, psychological, and emotional health.

MSU Travel Clinic: http://travelclinic.msu.edu/

The Travel Clinic promotes safe and healthy travel by providing counseling to travelers about appropriate vaccines and preventive medication.

DUAL MAJOR CHECKLIST

Requirement	Deadline for Approval or Completion	Recommended Submission or Completion Date	Materials Needed	Who to Contact with Questions
Application to ESPP	End of 2 nd year at MSU	1 st or 2 nd semester at MSU	ESPP Application form Letter requesting admission and describing professional interest in environmental science and policy Current MSU students: Letter from your advisor indicating you are in good standing and that they support your application Students applying to MSU: Ask the doctoral program to which you are applying to forward to the Environmental Science and Policy Program a copy of your application package.	ESPP Graduate Program Director (GPD)
Approval of dual major*	End of 2 nd year at MSU	2 nd or 3 rd semester at MSU	ESPP Dual Major Memorandum of Understanding form GradPlan dual major request	Primary program GPD or
Colloquium presentation	Before graduation	Before dissertation defense	No forms required. Work with ESPP to plan presentation.	Graduate Secretary (GS) ESPP GPD
Comprehensive exams	Within 5 years from the time the first class used to fulfill the	Determined by primary major	Advisor should email ESPP GPD with confirmation student met ESPP requirements and integrated both majors	ESPP GPD
	degree requirements for doctoral program of study is taken		Send Record of Comprehensive Examination form to College of Social Science (CSS)	Primary program GPD/GS
Dissertation	Within 8 years from the time the first class used to fulfill the degree requirements for doctoral program	Determined by primary major	Advisor should email ESPP GPD with confirmation student met ESPP requirements Send Record of Dissertation and Oral Examination Requirements for Doctoral Degree Candidate form to CSS	ESPP GPD Primary program GPD/GS
	of study is taken		Dissertation approval form	Primary program GPD/GS
Graduation	Apply for graduation on the 1 st week of the seme complete your degree re	ster you expect to	Graduation application form Documentation in GradPlan and student records that all program and university requirements have been met	Primary program GPD/GS ESPP and primary program GPD/GS

^{*}Note: If any changes are made to a student's GradPlan after the initial request is approved, the MOU should also be updated to reflect the new information.

Tips for Completing the Dual Major MOU

- Students should submit their MOU and GradPlan as early as possible in their PhD program. Students, these forms take time to route through the MSU system for approvals so don't wait until the end of your 4th semester!
- Use the MOU template available from ESPP.
- When filling out the MOU and GradPlan, be sure to:
 - o Keep the information in the MOU and GradPlan focused on the requirements for each major.
 - o Do not include any courses that do not count toward the PhD degree.
 - Provide a brief description of topics for comprehensive exams and the dissertation.
 - o Ensure the information in the MOU is identical to the information in GradPlan.
- Routing and approval process:
 - Students start the process by completing the MOU and GradPlan. Students should work with their primary program Graduate Program Director (GPD) to
 initiate routing through the MSU system; the student does not send materials through the system.
 - The typical routing order for the MOU is:
 - MOU for students outside the College of Social Science: advisor → primary program GPD → ESPP GPD → Primary College Associate Dean for Graduate Studies → College of Social Science Associate Dean for Graduate Studies → Graduate School Dean
 - MOU for students in the College of Social Science: advisor → primary program GPD → ESPP GPD → College of Social Science Associate Dean for Graduate Studies → Graduate School Dean
 - The MOU and GradPlan should route so that they both reach each step in the approval process at the same time. GPDs should include the GradPlan routing slip ID number in the email when sending the MOU to the next level for approval.
- If the student needs to change any information on the MOU or GradPlan during their Ph. D. program, they will need to update both. Remember, the MOU and GradPlan should contain identical information.
- If questions arise, students should contact the Graduate Program Directors in their primary department and ESPP. In some situations, the Colleges may need to respond to issues; however, they or the GPDs will initiate communication when that is necessary.

ESPP Dual Major Requirements

- Include at least one faculty member on your advisory committee who is an ESPP appointed or affiliated faculty member
- Complete all of the following courses with a minimum grade-point average of 3.0 with no more than one course's grade below 3.0 in courses used in fulfillment of the requirements for the dual major (12 credits): ESP 800, ESP 801, ESP 802, and ESP 804.
- Complete 24 credits in Doctoral Dissertation Research (course number 999) from the student's departmental major.
- Present your research to the ESPP community at an ESPP research colloquium.
- Pass a comprehensive examination that will be defined by the requirements of the student's major department and that will include a written examination in which the student demonstrates a knowledge of environmental science and policy as determined by the guidance committee.
- Submit a dissertation that, in the judgment of the student's guidance committee, represents the integration of environmental science and policy and the student's departmental major.

Hover your cursor over any fillable portion of the form to display a tip for filling in that box.

MEMORANDUM OF UNDERSTANDING REQUEST FOR ESP DUAL MAJOR PhD DEGREE

Fisheries and Wildlife AND

AND ESPP

Primary Department Name

DATE:	06/29/2020	Note the date: Our example student, Sparty, started MSU in 2019 and is submitting the dual
STUDENT NAME:	Sparty	major request well before the 2 year deadline.
PRIMARY MAJOR:	Fisheries and Wildlife	Be like Sparty!
PRIMARY COLLEGE:	Agriculture and Natural	Resources

GUIDANCE COMMITTEE MEMBERSHIP:

Last Name, First Name	Department Affiliation	Committee Role (Major Advisor, Committee Member	ESPP Affiliated Faculty Member (Y / N / Unknown)
Julie Green	Fisheries and Wildlife	Major Advisor	Yes
Marcus White	Fisheries and Wildlife	Committee member	No
Tessa Spartan	Earth and Environmental Sciences	Committee member	No
Rudy Cedar	Community Sustainability	Committee member	Yes
			Unknown
Be su	re to list the correct depa	rtment, role, and	Unknown

APPROVALS:

NAME SIGNATURE DATE

ESPP affiliation for your committee members.

Julie Green

Major Advisor

Mary Bremigan

Primary Major: Graduate Program Directo

Erin Dreelin

ESPP, Graduate Program Coordinator

Kelly Millenbah

Associate Dean for Graduate Studies, Prim

Your MOU should route along with your GradPlan for each of these approvals. This process starts with you or your advisor sending the MOU to the Graduate Program Director (GPD) in your primary program. Your primary GPD will review it and send it on to the next step in the approval process. If you have questions about routing your MOU, contact your GPD or the ESPP GPD.

Anna Maria Santiago

Associate Dean for Graduate Studies, College of Social Sciences

Thomas Jeitschko

Dean, Graduate School

Type in the number of credits required for your primary major; credits required for ESPP and 999 are already included. The form will calculate the total based on your input. Note that the number of primary major courses will vary depending on your primary major requirements; Sparty comes from a department with few course requirements, so he entered 6.

COURSES:

Total number of credit hours required for the dual major degree:

6 primary major courses + 12 ESP major courses + 24 999 credits = 42 Total credits

Primary Courses (Add more rows as needed)

Course Name	Course Code & Number	Credits	Semester Taken or Planned
Principles and Practices of Fisheries and Wildlife	FW 894	2	Fall 2019
Practice of FW Outreach and Engagement	FW 895	2	Spring 2020
Applied Bayesian Inference using Monte Carlo Methods for Quantitative Biologists	FW 849	3	Fall 2020
		-	

List the courses for your primary major here. Focus on requirements and only the courses that count toward your PhD. Don't include courses that count towards a Master's degree or are below 400 level. In our example, Sparty might take additional courses while at MSU but because they aren't required for the PhD, they are not listed here.

The courses listed here and below for ESPP should be identical to the courses listed in GradPlan. Be sure your MOU and GradPlan match!

* do not include 999

ESPP Courses (Add more rows as needed)

Course Name	Course Code & Number	Credits	Semester Taken or Planned
Principles of Environmental Science and Policy	ESP 800	3	Spring 2019
Physical, Chemical, and Biological Processes of the Environment	ESP 801	3	Fall 2020
Human Systems and Environment	ESP 802	3	Spring 2020
Environmental Applications and Analysis	ESP 804	3	Fall 2021

List the courses for your ESP dual major here. This list should add up to 12 credits and be drawn from the list of approved courses for the ESP dual major. Make sure the courses here and above match your list in GradPlan.

COMPREHENSIVE EXAMS:

Exam	Date Taken or Planned	
Written	Spring 202	1
Oral	Spring 202	1

List either an exact date, if known, or the semester and year you plan to take your written and oral comp. exams

IF YOU ARE PRE-COMPS: Areas of study covered in your comprehensive exams. These should reflect a single set of exams that integrates requirements from both the primary unit and ESPP.

Insert a short description here about what topics your comprehensive exams will cover. This can be a short list of topics and should match what you listed for "Comprehensive exam areas" in GradPlan.

IF YOU ARE POST-COMPS: Justification statement from your ESPP committee member (advisor preferred if they are an ESPP member) about how your comprehensive exams integrated and applied knowledge of environmental science and policy.

If needed, you can attach the statement from your ESPP committee member, preferably your advisor, to the MOU.

DISSERTATION:

Provide your plan for a single, integrated dissertation that incorporates your primary major and environmental science and policy. If you have completed <u>substantial</u> work on your dissertation, a letter of endorsement from your ESPP committee member (advisor preferred if they are an ESPP member) that attests to the integration and application of knowledge in environmental science and policy must be provided.

Provide a short description of your dissertation, focusing on describing your research topic and how it integrates your primary major and environmental science and policy. This part of your MOU should match the info you listed for "Tentative Dissertation Subject" in GradPlan. If needed, you can attach the statement from your ESPP committee member, preferably your advisor, to the MOU.

Sparty	is expected to:
Student Name	
_	anding on all courses (minimum grade-point average of 3.0) taken proved by the Guidance Committee and as defined in the ir primary major and ESPP.
Complete the required minir 999).	mum number of 24 credits of Doctoral Dissertation Research
Plan and present your resear	rch in one colloquium to ESPP faculty and peers.
Regularly attend community	-building activities with ESPP students from different disciplines.
,	,
OTHER EXPECTATIONS (of P	rimary Department):
•	, ,
If your prima	ry major has any other expectations, you
	here. Otherwise, you can leave this blank.
	Leave these dates blank. The dates
Date Finalized:	will be filled in once your dual major
	will be filled in once your dual major request is approved and if you need
Date Finalized: Date Revised (if needed):	will be filled in once your dual major
	will be filled in once your dual major request is approved and if you need

REQUESTING THE DUAL MAJOR IN GRADPLAN

Approval Process: https://grad.msu.edu/interdisciplinaryprograms

The student must complete a dual degree request form (MOU) that includes at a minimum:

- Name of primary degree program
- Name of secondary degree program
- List of guidance committee members, including their departmental/programmatic affiliation
- Coursework that fulfills the requirements of the primary major
- Coursework that fulfills the requirements of the secondary major
- RCR requirements
- Examination areas and an explanation of their relation to both areas and to examination requirements in each program
- Proposed dissertation area, with an explanation of how the research incorporates aspects of both fields
- Signatures from the guidance committee chair, grad programs directors from each program, and the college associate deans from the appropriate areas

Additional information may be required by the participating programs.

Submission Instructions: https://grad.msu.edu/interdisciplinaryprograms

For PhD Students Graduating in Spring or Summer 2021

After the request form is signed by all parties above, the student should initiate the dual degree request in legacy GradPlan. The form must be attached as a PDF to the request in GradPlan. In addition, the primary college must e-mail the request to grad.approvals@msu.edu.

For PhD Students Graduating in Fall 2021 and Beyond

After the request form is signed by all parties above, the primary college must e-mail the request to grad.approvals@msu.edu. The approval request should include a copy of the request form. Note: this process will change slightly as more features become available in Campus Solutions in 2021.