

ENVIRONMENT AND SOCIETY (PH.D.)

Doctor of Philosophy (Ph.D.) in Environment and Society

The Doctor of Philosophy in Environment and Society is designed to provide transdisciplinary graduate education and research training integrating the environmental and social sciences. Students in the program will take a transdisciplinary core course in socio-environmental systems and multi-disciplinary electives across environmental sciences, social sciences, and research methods as part of a highly flexible curriculum designed to allow diverse specializations. Earning a Ph.D. in Environment and Society demonstrates a level of competence and accomplishment that enables graduates to pursue careers as transdisciplinary scientists, academics, and environmental managers focused on understanding and addressing society's most pressing environmental problems.

Minimum Requirements For Admission

Students are normally admitted in the fall Semester. Although applications for admission and fellowships are accepted throughout the year, application before February 1 is encouraged; beginning February 15 the admissions committee will make initial recommendations about applicants for the following fall class, with formal letters sent to applicants by the end of April. Depending on availability of space and funding, applications may be approved and students admitted throughout the year. In addition to the general admissions requirements of the Graduate School, requirements for admission to the Environment and Society Ph.D. program are:

1. A narrative statement indicating the student's research interests, professional goals and commitment to full-time study for completion of degree requirements. It is highly encouraged that prospective students reach out to the faculty to discuss research interests. Many of our Ph.D. students are funded through grant-funded research assistantships. Thus, acceptance of new students may be a condition of available funding as well as matching students to faculty with new grant funded projects.
2. Three letters of recommendation.
3. For students with baccalaureate degrees:
 - a. A baccalaureate degree in a related discipline (e.g., biology, environmental sciences, engineering, sociology, anthropology, etc.) from an accredited four-year college or university.
 - b. Applicants to graduate programs in Arts and Sciences typically have a minimum GPA of at least a 3.0 on all undergraduate work. In exceptional cases, applicants may be considered with at least a 2.5 GPA on all undergraduate work, or at least a 2.75 GPA on the last 60 hours of undergraduate work.
4. For students with MS degrees:
 - a. An MS degree in a related discipline (e.g., biology, environmental sciences, engineering, sociology, anthropology, etc.) from an accredited college or university.
 - b. A graduate minimum grade-point average of 3.0 overall.

5. International students must submit an official score of at least 71 on the Test of English as a Foreign Language (TOEFL), or equivalent score on computer administered tests.
6. The GRE score is not required for admission. You may optionally submit your GRE scores if you wish for them to be considered as part of your application to any graduate program in the Stokes School of Marine and Environmental Sciences, but this is not required. Individual faculty members may consider available GRE scores as part of a holistic evaluation of the candidates.

To ensure research compatibility between the student and the faculty in the program, attention will be given to the statement of research interests. A faculty member will be asked to act as a mentor for the applicant based on the statement of interests and, if necessary, a personal interview. Through this process, the student's interests will be matched to the expertise available within the faculty. Moreover, the mentor may also be able to offer the student financial support if a stipend is not available. Students whose interests do not correspond to those of a particular faculty mentor or who have not identified a faculty member willing to serve as a mentor will not be admitted into the Ph.D. degree program in Environment and Society.

Degree Requirements

Required Credit

A minimum of 60 semester hours of approved graduate course credit is required. Details about the curriculum are given below.

Transfer Credit

A maximum of one half of the minimum hours required for the degree is normally allowed as transfer credit. Exceptions are allowed under unusual circumstances, but in no case will the number of transfer credit hours exceed two thirds of the minimum hours required for the degree. Transfer credit from regionally accredited universities may be accepted by certain programs. In the event that the university is non-accredited, the individual USA graduate program will determine if the quality and content of the course meets the standards of the program. Students may also transfer appropriate courses taken while at USA while in non-degree graduate status or taken while in another graduate program. Some programs will allow graduate courses applied to certain master's degrees to be transferred in and also count towards the doctoral degree, subject to the limits of maximum transfer credit hours. The University of South Alabama does not award graduate credit for prior portfolio-based experiential learning. Approval of the program's graduate coordinator and the college director of graduate studies is required. Only courses with "A", "B", or "S" grades are acceptable for transfer.

Residence, Full-time Study, and Continuous Registration

A minimum of two (2) consecutive semesters of full-time study in residence is required. The residency requirements may be met at USA or the Dauphin Island Sea Lab. Students are considered full-time if registered for six (6) or more hours during fall and spring semesters. Students on assistantship must be registered continuously, i.e., every semester (fall, spring, and summer), during their program. Typical summer registration is 3 hours.

For students receiving assistantships, employment other than University activities directly associated with graduate study is not allowed during full-time study, unless specifically approved by the SSoMES Director.

Time Limit

All requirements for the Ph.D. degree must be completed within five years from the date of matriculation. A student who has not satisfactorily completed a dissertation in a five year period must apply for a defined extension to complete the degree. This request must be recommended by the major professor, the SSoMES Director or Associate Director, the Director of Graduate Studies, and approved by the Dean of the Graduate School.

Failure to complete the work within the periods specified shall necessitate reevaluation of the student's program and may result in a recommendation for dismissal by the Director of Graduate Studies to the Graduate Dean.

Curriculum

All students must complete ENS 601: Dynamics of Socio-Environmental Systems and two semesters of graduate seminar. All required courses will be offered annually in a Hybrid or HyFlex format. Students must also complete a 3-course core curriculum comprising one course in each of the following subject areas: Environmental Sciences, Social Sciences, and Research Methods. The lists below include example courses for each subject area, but specific courses may be approved by the SSoMES Director, Environment and Society Program Director, and student's Dissertation Committee.

Coursework

Core Courses Required for All Students (All offered HyFlex)

ENS 601 - Dynamics of Socio-Environmental Systems (3 cr)

ENS 692 - Seminar 1 (1 cr)

ENS 692 - Seminar 2 (1 cr)

Choose 1 Core Course in Environmental Sciences (3-4 cr)

Choose 1 Core Course in Social Sciences (3-4 cr)

Choose 1 Core Course in Research Methods (3-4 cr)

14-16 Hours in Program Electives

Environmental Sciences Core Course Options (1 Required)

Code	Title	Hours
MAS 581	Advanced Marine Ecology	3
CE 503	Intro to Coastal Engineering	3
MAS 521	Marine Conservation Biology	3
ENS 590	Special Topics	1-8
ENS 520	Natural Resource Management	3

Social Sciences Core Course Options (1 Required)

Code	Title	Hours
SY 567	Environmental Sociology	3
AN 542	Adv. Cultural Resource Mgmt.	3
ENS 521	Environmental Policy	4
ENS 590	Special Topics	1-8
GEO 562	GIS Apps II-Business/Social	4

Research Methods Core Course (1 Required)

Code	Title	Hours
SY 509	Social Research Analysis	3
ST 540	Stat in Research I	3
MAS 574	Marine Ecosystem Modelling	3
MAS 560	Mar Exp Ecol	4
SE 607	Systems Simulation	3

Selected Elective Courses

Courses chosen to fulfill a core requirement may not also count as an elective

Code	Title	Hours
MAS 581	Advanced Marine Ecology	3
CE 503	Intro to Coastal Engineering	3
BLY 526	Freshwater Ecology	3
MAS 521	Marine Conservation Biology	3
SY 567	Environmental Sociology	3
AN 542	Adv. Cultural Resource Mgmt.	3
MAS 520	Marine Resource Management	3
SY 509	Social Research Analysis	3
ST 540	Stat in Research I	3
MAS 574	Marine Ecosystem Modelling	3
SE 607	Systems Simulation	3
GEO 561	GIS Apps I-Environment-C	4
GEO 562	GIS Apps II-Business/Social	4
CH 514	Environmental Chemistry	3
GIT 561	Environmental GIS	4
MET 540	Topics in Air Pollution MET	3
BUS 759	Machine Learning and AI	3
CE 512	Mgmt & Sustainability of Infr	3
GY 576	Contaminant Hydrogeology	4
PSY 590	Sp Top in Psychology -	1-3
PSY 575	Comparative Psychology	3
PSY 586	Cognitive Neuroscience	3
BLY 520	Biometry	4
BLY 526	Freshwater Ecology	3
BLY 536	Advanced Animal Physiology	3
BLY 544	Molecular Biology	3
BLY 590	Special Topics -	1-4
MAS 524	Scientific Communication	3

Note: All special topics courses require approval of the Director, Associate Director, or Graduate Coordinator to fulfill core or elective requirements.

Directed Studies and Dissertation Courses

ENS 694 - Directed Studies. Independent research, not related to the thesis, under the direction of a member of the graduate faculty. May be used to learn new techniques or explore research questions of special interest. Students should take at least eight (8) hours and a maximum of twelve (12) hours of Directed Studies.

ENS 799 - Dissertation. Independent research by the student under the sponsorship of a member of the department. After reaching candidacy, students should take 1-5 hours of Dissertation per semester, minimum

requirement is 12 hours and maximum that may be applied to the 60 hour total is 18.

Dissertation Prospectus

Students are required to develop a dissertation proposal that involves at least 3 chapters of original research. All students should collaborate closely with their dissertation advisor and dissertation committee to develop their prospectus. While there are no disciplinary requirements for specific chapters, the overall dissertation prospectus and resulting dissertation should be transdisciplinary and involve collaboration across multiple fields of environmental sciences and/or social sciences.

The completed prospectus must be submitted to the dissertation committee at least 8 weeks prior to the prospectus defense. Each committee member should provide written feedback on the completed prospectus to the dissertation advisor and candidate at least 1 month before the scheduled prospectus defense. Committee members may also provide a list of supplemental readings along with the feedback as long as it is also received at least one month before the prospectus defense.

Dissertation Prospectus Seminar and Defense

All students must give a 30-minute seminar highlighting their proposed dissertation research, including key theories, research questions and hypotheses (as appropriate), methodologies (including statistical analyses), and environmental and societal implications. All dissertation prospectus seminars will be open to the public and allow time for questions from attendees. The dissertation advisor and committee will generally reserve their questions for the closed-door dissertation prospectus defense.

The prospectus seminar should occur after all Core Courses have been completed, and ideally with approximately 24-26 graded hours also completed. For full-time students, this could occur by the end of Year 2 in the program; however, this timing is flexible depending on individual course plans and circumstances.

The prospectus defense will focus on the intellectual foundation of each student's academic program and the specifics of their proposed dissertation research. This portion of the exam will be "closed door", and only include the students' dissertation advisor(s) and committee. The defense will be divided into multiple 10-15 minute periods per committee member. The committee members are encouraged to adopt an 'adaptive' approach during their examination by first asking relatively simple questions with clear answers (e.g., definitions, historical background) and gradually shifting to more complex and open-ended questions (e.g., thought experiments, mathematical derivations). Committee members are also encouraged to ask follow-up questions in situations where the student's answer was unclear or incomplete. Each examination will consist of at least two rounds of questions per examiner (~2 hours) but may continue until the committee has heard enough to make a final decision about the student's performance. The Prospectus Defense will be, at most, 3 hours.

The prospectus defense occurs on the same day as the prospectus seminar.

Candidacy

A doctoral student is admitted to candidacy after submitting a prospectus, successfully completing a prospectus seminar and defense, and completing all formal coursework requirements. The doctoral candidate is a student who has fulfilled all preliminary requirements for

the Ph.D. and has only completion of the dissertation research as the remaining requirement.

Defense of Dissertation

All PhD Candidates must complete a defense of their dissertation research consisting of a public seminar, public question-and-answer period, and a private defense of their written dissertation to their dissertation committee.

All Environment and Society PhD students are required to have at least one first-authored publications submitted to, or accepted in, a peer-reviewed journal prior to their defense.

The final oral defense of the dissertation is scheduled after the dissertation is written except for such revisions as may be necessary as a result of the defense. The final oral defense will not be given earlier than one semester after admission to candidacy and not before all required coursework has been completed or is currently in progress.