Environmental Science and Policy MS and PhD Programs

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EVR MS & PHD HANDBOOK

ACADEMIC YEAR 2024-2025

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About the Department of Environmental Science and Policy

Overfishing, habitat degradation, water and land use mismanagement, pollution, natural hazards, and climate change are the principal threats to sustainability of natural environments and the societies that depend on them. We in the Department of Environmental Science and Policy (EVR) approach these challenges knowing that we cannot solve the environment's greatest crises without first accepting people and the environment as two inherently linked components of the earth system. EVR research and academics deal with complex interdependent nonlinear systems that involve human-environmental feedbacks, different legitimate perspectives and values, nontrivial or unclear tipping points, and limited possibilities for controlled experimentation.

EVR's mission is solutions-oriented, policy relevant research and scholarship, training the next generations of environmental managers, practitioners, and research scientists. Our faculty are leading scholars in the applied environmental social sciences dedicated to addressing pressing ocean, coastal, and climate challenges central to long-term sustainability and resilience. We are the hub at the Rosenstiel School for connecting the natural sciences with society and policy.

The EVR faculty and students seek to improve understanding of the dynamic interactions between humans and the natural world. Our motivation arises from an awareness that better scientific information alone, without a full understanding of the cultural, socioeconomic, political, and psychological context for the use of this information, can limit its impact, and in some cases lead to unintended or unwanted equity and environmental consequences. Here at the Rosenstiel School, and UM in general, in comparison to the natural and physical sciences, there has been a dearth of social scientists dedicated to environmental scholarship and teaching. The Department of Environmental Science and Policy fills this critical intellectual gap.

EVR is interdisciplinary at its core. The Department aims to broadly represent the functional and cultural intersection between humans and the natural world. As such, EVR focuses on providing environmental and social science perspectives that have explicit policy relevance for these complex challenges. In particular, the interdisciplinary aspect of the department refers to conducting teaching and research that are problem driven and solutions oriented, integrating data, methods, and theories from the social and natural sciences.

About the Abess Center

The Ph.D. in Environmental Science and Policy program is under the Leonard and Jayne Abess Center for Ecosystem Science and Policy and administered by the Rosenstiel School Department of EVR. The Center was founded in 2003 and the naming gift from the Abess

family was made in 2005. Its mission is to create innovative, interdisciplinary initiatives that bridge the gap between science and environmental policy.

The Center was inspired by the experiences in Washington, D.C., of Mary Doyle, late UM Law School Dean Emeritus, who served in the Clinton Administration as Assistant Secretary of the U.S. Department of the Interior. Doyle, who was instrumental in crafting the Comprehensive Everglades Restoration Plan and, during her time in the Interior Department, noted that scientific and technical personnel had difficulty communicating with policy and legal personnel, and vice versa.

Upon returning to UM, Doyle and the newly appointed President of the University, her Clinton Administration colleague Donna Shalala, agreed that addressing the communication problem between scientists and policy makers required a new type of interdisciplinary approach that would foster discourse between these communities. Their conversations resulted in the chartering of the Center for Ecosystem Science and Policy, with Doyle and then-Dean Otis Brown, of the Rosenstiel School of Marine, Atmospheric, and Earth Science, as co-directors. The aim was to provide programming and training for faculty and students that would enable them to bridge disciplines thanks to a broad exposure to the methods, theoretical approaches, operating assumptions, and political contingencies of the natural and social sciences. In 2004 the undergraduate program began, and in 2010, the Ph.D. program. Every initiative the Center undertakes is informed by an awareness of the importance of the co-production knowledge among scientists, policymakers, and the public, including our graduate Ph.D. program, our undergraduate program, our scholarly collaborations, and our community outreach.

In terms of governance, the Abess Center Director reports directly to the Provost, who also appoints the Faculty Advisory Committee, which currently includes representatives from all schools and colleges and advises on all Center activities. The Ph.D. degree is awarded under the Graduate School. The undergraduate B.S. and B.A. degrees are awarded by the College of Arts and Sciences, and the director of the undergraduate program reports both to the College and the Director of the Abess Center.

The current Director of the Abess Center is Kenny Broad, who worked closely with Mary Doyle for several years and assumed directorship in 2009. Andee Holzman is Associate Director of the Abess Center, and also served under Mary Doyle. Jennifer Jacquet is Director of the Environmental Science and Policy Ph.D. program. Cali Curley is Director of the Ecosystem Science and Policy B.A. and B.S. programs. Karlisa Callwood is Director of Diversified Engagement for the Abess Center, teaches and advises for the ECS program, and is Lecturer in the College of Arts and Sciences Department of Anthropology. Theresa Pinto is Director of Civic Engagement for the Abess Center, teaches and advises for the ECS program.

Kenny Broad's primary faculty appointment is at the Rosenstiel School, as is Jacquet's; Curley, Callwood, and Pinto have appointments in the College of Arts and Sciences; Holzman is the Abess Center administrator.

Requirements for the Environmental Science and Policy (EVR) Master of Science (M.S.) degree

Key milestones for the EVR M.S. degree:

- Required courses should be completed in Year 1, with progress towards other class credit requirements.
- Committee should be formed, with a first committee meeting in Year 1.
- Thesis proposal should be developed and defended before the start of Year 2.
- Thesis should be completed and defended by the end of Year 2.

Timeline

M.S. students are expected to complete the degree in 2 years, with a thesis equivalent to a single scientific paper that could be submitted and published in a scientific journal. A short extension of the time in residence may be requested in writing by the Committee Chair and submitted to the EVR Graduate Program Director.

> Year 1: Enroll in courses; Form committee and coordinate first committee meeting; Define research plan and draft proposal; Defend proposal before the end of summer semester
>
> Year 2: Conduct research and begin writing thesis chapters; Complete thesis and host defense

Students are required to meet with their committee a minimum of once per year and provide a succinct, 1-page progress report (template from GSO). The committee chair is expected to add a statement summarizing their view of student progress, and the report is then evaluated by EVR faculty during the annual student review. The progress report should be distributed annually to the EVR Graduate Program Director and the GSO for filing.

Thesis Committee

The thesis committee consists of no fewer than three members, as follows:

a. The Chair, who must be a member of the EVR/UM Graduate Faculty (https://environmental-science-policy.earth.miami.edu/people/faculty/index.html)
b. One additional EVR Graduate Faculty member
c. One faculty member from outside the Rosenstiel School (i.e., outside EVR or UM)

Students must submit their Appointment to Committee form to the GSO and notify both the GSO and EVR Graduate Program Director of any changes in membership.

Credits

Students enrolled in the M.S. program must complete 30 credits, including 24 course credits (18 of which must be completed in residence at UM) and 6 research credits. A maximum of 6 credits of graduate coursework from another school that did not result in the conferral of a degree may be transferred at the sole discretion of the

Committee Chair. Transferred credits should be relevant to the EVR program and each student's track. Students should discuss these courses with their Committee Chair and obtain an approval memorandum from each instructor of the equivalent graduate course at the Rosenstiel School. The memorandum is reviewed by the EVR Graduate Program Director and, upon approval, submitted to the GSO for official notice.

The distribution of credits in the M.S. program should follow one of the options below:

> Option 1: Students enroll in 18 course credits over 2 semesters, with the remaining 6 course credits completed in the 3rd semester. One (1) research credit is added to any semester in which enrollment is <9 credits in order to achieve full-time status. Students balance their time between coursework and research in the 3rd semester. The 4th semester is devoted to completing thesis research and will include the balance of research credits required to reach 6 total.
>
> Option 2: Students enroll in 24 course credits over 2 semesters. The remaining research credits are distributed across the 3rd and 4th semesters, and this time is devoted entirely to thesis research.
>
> Option 3: Students enroll in any number of credits across the 1st, 2nd, and 3rd semesters. One (1) research credit is added to any semester in which enrollment is <9 credits in order to achieve full-time status. Students balance their time between coursework and research in the 3rd semester. The 4th semester is devoted to completing thesis research and includes the balance of research credits required to reach 6 total.

Please note: Regardless of enrollment option, students are expected to submit their proposal and begin their thesis research no later than their first summer in residence. The subsequent pace will depend upon whether or not students elect to enroll in courses during their 3rd semester.

Course Requirements

Course enrollment and scheduling is defined by the student and their Chair. At minimum, all MES M.S. students in EVR are required to enroll in either of the following courses,
unless proficiency is clearly established:

> Statistics & Data Analysis for Environmental Science & Policy (MES 624)
> OR
> Statistics for Marine Scientists (RSM 612)

All M.S. students are required to complete at least 12 course credits in EVR. A formal request for an exception to this rule can be submitted in writing to the Committee Chair, and any/all exceptions must be approved by the EVR Graduate Program Director.

Full-time status is achieved by either a total of 9 course credits or 1 dissertation research credit (MES 810) (i.e., 800-level courses are full time status indicators) per semester.

Additionally, students are expected to attend EVR department and student seminars.

Thesis Proposal & Proposal Defense

The first step in designing a research project is to formulate clearly stated research questions, hypotheses, and research design. The purpose of the proposal is to certify the readiness of the student to conduct thesis research. A proposal template will be provided, and all M.S. students are required to attend a proposal writing seminar during their second semester in residence. Students must submit and defend their proposal before the start of their third semester in residence.

The purpose of the proposal defense is to ensure that each student possesses the requisite knowledge and expertise to successfully execute the proposed research project, as well as facilitate an open discussion regarding the stated objectives and experimental approach.

Thesis

The full thesis should be equivalent to a single, peer-reviewed publication.

Thesis Defense

EVR requires a public oral presentation of the M.S. thesis, and students are required to submit the complete written thesis to the committee 4 weeks prior to the oral defense. The Announcement of Defense form, signed by all committee members, must be submitted to the GSO two weeks before the intended defense. The final thesis must be evaluated by the Electronic Thesis and Dissertations office at the Gables Campus and signed by all committee members in accordance with the deadlines established by the UM Graduate School and posted on the UM Academic Calendar (http://www.miami.edu/index.php/registrar/calendar/).

Funding

Two funding models currently exist:

A) M.S.-1: a self-funded M.S. The Chair covers the research costs of the thesis. Tuition and insurance are paid by the student or granted to the student by fellowships.

B) M.S.-2: a fully funded M.S. The Chair covers the stipend, tuition, insurance, and thesis research costs (similar to that of a Ph.D. student).

Environmental Science and Policy Ph.D. degrees

The Abess Center, through the Department of Environmental Science and Policy, offers a unique interdisciplinary Ph.D. in Environmental Science and Policy. It also offers a joint Ph.D. and J.D. program with the School of Law. The Ph.D. program was launched in 2010 and is intended to provide students with the ability to work on grand environmental challenges using mixed methods from the natural and social sciences, humanities, engineering, and other disciplines for policy-relevant scholarship. The program attracts top-caliber students whose demonstrated skills and interests involve both science and societal needs and who seek the theoretical and analytical skills to address complex, human-environment problems from academic and applied perspectives.

Each Ph.D. student is paired with a faculty advisor. **Abess Ph.D. students can have faculty advisors and committee members from any school at UM – Architecture, Arts & Sciences, Business, Communication, Education, Engineering, Law, Medicine, Music, and/or Rosenstiel. This Ph.D. program is administered through the Rosenstiel School of Marine, Atmospheric, and Earth Science.** Mentors are generally identified prior to admission, when applications are reviewed by an admission committee and then referred to potential mentors. These mentors generally agree to fund two years of the student's stipend (approximately $80,280), plus costs associated with Ph.D. research activities, fieldwork, lab work, etc. The Abess Center provides two years of funding, and the Provost's office provides one year of funding for the student's required two semesters as a Teaching Assistant. All admitted students receive 5 years of tuition waivers and 100% health insurance coverage. Students are provided workspace and access to all university resources. The expectation is that students will be in-person for their degree. Exceptions are considered on a case-by-case basis.

During the first year, students receive training in the fundamentals of the methods and theories of environmental sciences, with an emphasis on the possibilities and constraints for integrating science and policy into problem-based research. Each student then consults with their advisor and with Abess Director Broad, EVR Graduate Program Director Jacquet, and any other relevant UM faculty, to determine additional coursework that will best prepare them to address their interdisciplinary research problem. Coursework is usually completed by the end of the second year, though certain advanced skillsets (e.g., Bayesian statistics, advanced remote sensing) may need to be acquired in later years.

The Ph.D./J.D. program with the School of Law launched in 2013. This joint program requires students to apply for and be accepted to both the Ph.D. and the J.D. separately. Students complete requirements for both degrees, with 12 Law credits counted toward the Ph.D. and 9 Ph.D. credits toward the J.D. The program enables students with strong interests in both environmental policy and law to prepare for careers in either the private or public sector in a shorter amount of time than if pursuing both degrees separately. Students admitted to the Ph.D. program first complete the core courses in the first year, spend the entire second year as law students, and thereafter take a mix of courses in order to accrue the necessary credits for both degrees. Alternatively, admitted students may begin as law students in Year 1, and then continue with a combination of Ph.D. and Law courses in subsequent years. Joint students have advisors in both the Ph.D. and J.D. programs who consult on their coursework and progress toward both degrees.

All Ph.D. students are able to tap into research networks across a range of schools and colleges at the University of Miami, including the Rosenstiel School, the School of Law, the College of Arts and Sciences, the Miller School of Medicine, the College of Engineering, the School of Architecture, the School of Communication, the College of Education and Human Development, and the School of Business. The graduate program draws upon existing interdisciplinary collaborations among Abess-affiliated faculty, as well as engaging in the continuous process of forging new connections with researchers and policymakers, both within and outside UM.

The Ph.D. program is intended to provide students with the ability to work on interdisciplinary research problems using mixed methods, both quantitative and qualitative. The goal is for students to formulate dissertation projects that factor in both social and natural science approaches at the outset in order to further understanding of linked social-ecological systems.

General Academic Requirements and Regulations for the Ph.D.

Key milestones for the EVR Ph.D. degree:

- Required courses should be completed in Year 1.
- Comprehensive exams (3 in total) should be completed by the end of Year 2.
- Committee should be formed by the middle of Year 2.
- Dissertation proposal should be developed and defended (including with a closed-door discussion with the committee) before the start of Year 3.
- Dissertation must be completed and defended by the end of Year 5.

Core courses

The EVR Ph.D. core courses are ECS 601 Interdisciplinary Environmental Research (cross listed as EVR 603), ECS 603 Interdisciplinary Environmental Methodology, ECS 605 Interdisciplinary Environmental Law, and EVR 607 Environmental Governance. In addition to the core courses, students take additional coursework according to their particular needs with regard to skills and knowledge for their dissertation project. Students may take Directed Readings or other special topics courses through EVR/ECS. (For the Ph.D./J.D. please see suggested six-year plan in the Appendix.)

Students who have not completed their comprehensive exams are enrolled in ECS 830 Pre-Candidacy Research credits; after they have attained candidacy, they are enrolled in ECS 840 Doctoral Dissertation credits, of which they need 12 to graduate.

Tracks for degrees

The EVR Ph.D. does not have tracks. Students complete the core courses and then take additional coursework according to their particular needs with regard to skills and knowledge for their dissertation project.

The Ph.D./J.D. has a suggested six-year plan (see Appendix).

Annual progress reports

Each Abess Ph.D. student and their faculty advisor must fill out an annual progress report at the end of each academic year.

Comprehensive exams

Students complete three comprehensive exams covering material from the core courses and their areas of dissertation focus by the end of their second year. The format of each exam is to be determined in consultation with the primary advisor(s) and the graduate program director. The exams may adopt a variety of approaches, such as a critical literature review or demonstration of deep knowledge of methods, and should be

10-15 pages (single-spaced text, including figures/tables, with references additional) covering areas relevant to the student's dissertation project. Each paper or project-based exam will be evaluated by at least two comprehensive exam evaluators using a standardized rubric (see Appendix). Comprehensive exam evaluators often become dissertation committee members, although this is not a requirement. Comprehensive exam evaluators can include faculty or senior-practitioner co-authors on publications that may eventually result from material in the comprehensive exam. They can be UM faculty or individuals from outside the University. Prior to exam submission, evaluators should be confirmed by the student in consultation with their advisor and graduate program director, so that the evaluators know they will be receiving a formal request to review the comprehensive exam. Each exam should be submitted to the graduate program director and to Andee Holzman, along with the names of the evaluators. Following exam submission, evaluators are contacted by the graduate program director, and students are not cc'd on emails. Both evaluators must give the paper an overall score of 3 or higher for the student to pass.

Students who do not achieve an average of 3 or higher on the rubric have the opportunity to revise or rewrite the exam within 1 year, which will then be re-graded by the same comprehensive exam evaluators. Students who do not achieve a 3 upon re-grading are deemed to have failed the comprehensive exam, will not have the opportunity to defend a dissertation proposal, and will exit the program (they may or may not be awarded an M.A. at the discretion of their advisor and the director of the Ph.D. program).

Dissertation proposal and presentation

The dissertation proposal process involves a combination of three components: a written proposal, an oral presentation of the proposal, and a committee only "closed-door" deliberation. This process, a major milestone towards your dissertation, should be completed after your comprehensive exams and by the start of the third year.

The **written proposal** of your research can take different forms corresponding to the disciplines and fields of inquiry relevant to your work. Please use past proposals close to your fields of inquiry as models, also drawing from strategies reviewed in ECS 601. You must circulate your written proposal to your committee for the defense at least two weeks prior to the meeting with them, or earlier if requested by any committee member. Copy the Ph.D. graduate program director and Andee on this email.

For the **oral presentation**, students, in consultation with their advisor(s) and the Ph.D. graduate program director, have the option of choosing either (1) a public presentation immediately followed by the committee-only "closed-door" deliberation or (2) a presentation done as part of the committee-only "closed-door" session. Prior to the proposal and presentation, students are strongly encouraged to practice their presentation for Abess students, relevant research groups, and/or Abess program leadership.

During the **"closed-door" deliberation** with the committee, whether the presentation itself is for the public or for the committee, committee members will pose questions to the student in multiple rounds of discussion. Once the discussion concludes, the committee members deliberate on a decision and evaluation for the student. The presentation and committee discussion may not exceed 2.5 hours in length.

The proposal and presentation will be assessed by the dissertation committee members and graded by a standardized rubric. Students who do not achieve an average of 3 or higher will have one opportunity to revise their proposal and have it re-graded. If they do not succeed in achieving an average of 3 or higher, they will not advance to candidacy and will exit the program (in rare cases, it may be possible to be awarded an M.A. at the discretion of their advisor, the director of the Ph.D. program, and the Dean of Graduate Studies). Students who have advanced to candidacy should work with Andee Holzman and Kristina Santana to complete program

and university paperwork central to this major milestone in the program. Students who advance to candidacy will then be expected to formulate a schedule with deadlines for their remaining time in the program.

Dissertation defense

By the middle of their second year, students should form a four-member dissertation committee in consultation with their faculty advisor. Three members must be members of the UM graduate faculty; one member must be from outside the program/department, with encouragement that they be from another institution. There may be more committee members if needed, but such situations should be discussed with the program director prior to contacting any committee members.

Once the committee is determined, students must fill out the committee form (now electronic) and submit it to the GSO and to Andee Holzman.

The dissertation will be defended in a public presentation of approximately 45 minutes with 15 minutes additional for questions from the audience. The public defense is followed by a "closed door" session where the committee meets with the candidate and will continue in-depth questions and discussion of the dissertation. There is no set time limit, and this usually runs 1.5-2 hrs. Following the discussion, the candidate is asked to leave the room and the committee discusses the candidate's progress and makes their determination on the success of the defense and any additional requirements for completion of the Ph.D.

Students must follow the Graduate School guidelines for Electronic Theses and Dissertations, which can be found in the Graduate Handbook as well as online at the Graduate School site.

Colloquia series, special seminars, and conferences

The Abess Center carries out extensive programming during the year as part of its mission. These events are open to all graduate students, faculty, undergraduate students, and community members. Our events expose graduate students to professionals from academia, industry, and government, and we frequently arrange for campus speakers to meet one-on-one with graduate students to discuss their dissertation projects, as well as to interact with them informally at Abess-sponsored lunches and dinners. Graduate students are expected to be active participants in all Abess Center events, as well as relevant programming from Rosenstiel, GSO, and the Department of Environmental Science and Policy.

Students are also expected to seek opportunities to present posters or do oral presentations at leading interdisciplinary conferences. They should plan with advisors to identify suitable conferences and clear all work to be presented with them in advance. Please also alert the program director and administrator of your plans and provide them copies of your materials for your files. The Abess Center and Department of Environmental Science and Policy should be credited as your affiliation in all public presentations, and the Abess logo should be included. Copies of the logo can also be obtained from Andee Holzman.

All Abess-EVR Ph.D. students are able to request funding for conference-related travel, field work, research supplies, necessary software, and other dissertation-related expenses that must be approved by Abess administration. Abess allots 3-4k total for each student for their tenure in the program. Requests must be made well in advance via email to Andee Holzman and Jennifer Jacquet, cc'ing the advisor, and should include a budget spreadsheet with the breakdown of expenses and any backup documentation (conference invitation, email communications, etc.). Once requests are received, Abess-EVR administration will review and respond. Andee will assist with the reimbursement process.

In addition, the Rosenstiel School has some funding opportunities; contact GSO for details.

Grading and remaining in good standing

The EVR Ph.D. program follows the Graduate School policies with regard to grading and remaining in good standing. According to the Graduate Handbook, "An average of B (3.0) is required for a graduate degree, and no 'D' credit may be counted toward the degree. All work leading to the graduate degree and taken as a graduate student will be counted in computing the quality point average, including courses graded 'D'." (Graduate Handbook, p. 9; please see that document for further rules regarding grading, active status, and withdrawal.)

Ethical obligations

EVR Ph.D. students must abide by the terms of the Graduate Student Honor Code, which can be found online at:

https://www.grad.miami.edu/policies-and-forms/academic-integrity/index.html

Academic calendar

The EVR Ph.D. program follows the University of Miami academic calendar, which can be found online through the Office of the Registrar. See: https://registrar.miami.edu/dates-and-deadlines/academic-calendars/index.html

Faculty for the Ph.D. program

University-wide faculty participation

The Abess Center does not have faculty permanently assigned to teach within the Ph.D. program. Instead, faculty participate in the Ph.D. program as affiliated faculty. Graduate students may establish research connections with faculty across the University and are guided in that effort by their advisors and by the Abess program administrators.

Interaction with other graduate programs

The EVR Ph.D. students, who take courses at multiple campuses, are exposed to faculty and students from a number of other graduate programs, especially including Epidemiology and Public Health, Biology, Geography and Sustainable Development (master's-level programs), Psychology, and most programs at the Rosenstiel School (Ph.D. and master's-level). Lecture series and other events coordinated by other graduate programs are routinely publicized to EVR students, such as the Biology lecture series, the Rosenstiel School speaker series, EVR department speaker series, and environmentally relevant talks at the medical campus. We also encourage students to take advantage of the programs organized by the Graduate School to bring students together from across the University to engage in professional development, hone their writing skills, and present their dissertations to an interdisciplinary audience (e.g., 3 Minute Thesis). In the past, the Abess Center has funded informal interdisciplinary get-togethers either at the Rathskellar or WetLab (food covered, not alcohol). Several of our students have also been involved in an environmental film discussion group organized by Ph.D. students in English Literature, and have hosted screenings and discussions in our central Abess Center space, Ungar 230-C/D/E.

Academic direction and day-to-day administration

The EVR Graduate Program Director is Jennifer Jacquet. The Abess Center is directed by Kenny Broad. Day-to-day activities are overseen by the Associate Director of the Abess Center, Andee Holzman. Jacquet and Broad are responsible for big picture planning and outreach, carry out their own research, head the admissions process, teach in the M.S./Ph.D./M.P.S. and Exploration Science programs, liaise with all faculty advisors, fundraise, and advise graduate students. Jacquet and Broad consult as necessary with the EVR Department Chair, relevant deans, and the Provost's office for administrative and other matters.

Andee Holzman and the Rosenstiel School GSO, led by Assistant Dean Sean Kennelly, are responsible for administering the annual admissions process; handling semester-by-semester enrollments, stipends, and tuition waivers; monitoring graduate student progress; assisting with field work planning and funding; aiding in communication with faculty advisors and committee members; and facilitating comprehensive exams and dissertation defenses. In addition, they counsel graduate students regarding personal or family disruptions, and oversee publicity for the graduate program.

Policy-making mechanisms

The Abess Center Director reports to the Provost as well as to the Dean of Graduate Studies for relevant graduate degree issues. In addition, the Abess Center Faculty Advisory Committee, which consists of representatives from all Colleges and Schools at UM, serves as a consultative body for the Center's activities, as well as its graduate and undergraduate programs. In this respect, graduate policy is determined directly by the EVR department and Graduate School and is influenced by the Faculty Advisory Committee.

Resources

Library resources and services

The University of Miami Libraries, comprising collections on Coral Gables, Miller School, and Rosenstiel campuses, are ranked among the top 50 research libraries in the U.S., with a collection of more than 3.75 million volumes and e-books and databases providing access to over 100,000 electronic journals. Services include Interlibrary Loan, multimedia equipment and support, subject-area research librarians, and a newly expanded digital humanities and digital learning group that promotes interdisciplinary digital research. Graduate students have full access to collections and services, and EVR and the Abess Center tap the expertise of research librarians as needed to help support students' M.S. and dissertation work. Abess students also have access to the School of Law's library, which has one of the largest collections in the southeastern U.S.

Existing equipment and facilities

The EVR Ph.D. program is housed in the Abess Center on the second floor of the Ungar Building, which is located near the Richter Library, the Cox Science Center and Plaza, and the School of Law along the Memorial Drive entrance to the Coral Gables campus. Abess Center occupies one L of the floor, while the undergraduate Marine Science and Marine Ecosystems and Society occupy the other L. With these programs we share a lobby, a student study space and kitchen area, and a large conference/lecture space that seats 50 and can be split into two smaller rooms seating approximately 15 and 35 people. There are three faculty offices and a staff office along one corridor and three faculty offices along the other. The remainder of the second corridor is devoted to four graduate student offices, shared by two students each. Across from those offices is a large, shared graduate space with an additional twelve desks, as well as chairs, bookshelves, and a display screen.

Classroom and laboratory space

Core graduate courses are taught in Ungar, the Coral Gables campus, and the Rosenstiel School, depending on faculty preference. Students take additional, elective courses on all campuses, depending on their research topic.

All Ph.D. students are provided office space on Ungar second floor, either in the shared space in Ungar (typically first- and second-year students) or in shared offices (two per office). The large, central Ungar 230 C/D/E space hosts many gatherings for graduate students, including lectures, workshops, and dissertation defenses.

Some students are also provided with office and/or laboratory space in other locations, depending on their faculty advisor.

Ph.D. Students

Requirements for admission and admission data

The EVR doctoral program admits students directly from undergraduate study, as well as those who have pursued graduate studies. Students for whom English is not a first language must comply with University requirements for English proficiency.

See Appendix for admissions data.

Teaching or research positions held by graduate students

All EVR Ph.D. students are required to serve for two semesters as teaching assistants for undergraduate Ecosystem Science and Policy courses. These include our introduction to Ecosystem Science and Policy, our spring field work course, and our Quantitative Methods course. At the discretion of the graduate program director and undergraduate program leadership, in consultation with students, they may also TA other courses as needed. The TA requirement must be completed in person as the course requires extensive interaction with the course professor and students.

Students with at least 18 credits also have the option of developing and teaching 200-level courses for the undergraduate program focusing on their dissertation topics. (This is permitted under our accrediting body). We are unable to compensate students for this but consider it as a necessary form of professional development to have available for students. Those proposing courses provide the Abess director and graduate program director with a short description, and then are given one-on-one feedback and guidance on designing a syllabus and teaching the course.

Research positions are assigned by individual faculty advisors and comport with the Graduate School guidelines of entailing no more than 20 hours of work per week. Because of varying disciplinary expectations, research positions may be in the lab, in the field, or may involve library or archival research.

Training of TAs and RAs

Entering EVR graduate students attend the annual orientation program organized by the Graduate School. In addition, they receive one-on-one guidance from faculty members for whom they serve as TAs or RAs. We endeavor to schedule professional development sessions or to encourage students to attend such sessions carried out by other units (e.g., IRB training, supplemental training in statistical or other software, grant writing workshops, dissertation proposal writing workshops, team science workshops, big data analysis, workshops on DEI in science, etc.).

Quality of applicants

Each year, we have drawn applicants from many top 50 U.S. colleges and universities. We have also generally drawn a fair number of applicants from China, India, Africa, and the Middle East. Our pool has generally been diverse, and students frequently have already earned one or two additional graduate degrees and have published in peer review journals. Typically, we skype, talk by phone, or meet in person with applicants and then connect them with faculty whom we believe they might have a productive connection with. We actively

have endeavored to encourage underserved minorities and women to apply through individual contact or follow up in response to email queries. As of 2024, we have enrolled a total of 49 female students and 26 male. Of these, we have had 19 international students (from the Bahamas, Canada, China, Kenya, Mexico, Nigeria, Sri Lanka, the Philippines, Iran, Korea, and the Netherlands). Ethnic backgrounds have included Black and African American, Latin and Hispanic American, Asian American, Iranian-American, and Pakistani-American. We have enrolled 2 Veterans.

Retention rate

Of 78 students admitted since the program's inception in Fall 2010 through 2024, eleven have not advanced to candidacy. Of these, eight students have received an M.A. from the program; three have left the program without a degree.

Additional Information

Appendix 1—Sample 6-year schedule JD/PhD**

Sample 6-Year Schedule: J.D./Ph.D. in Environmental Science and Policy (ECS) Students Entering through the School of Law**

The joint program will enable students to obtain both a JD and PhD in 6 years. The first year will be spent in the School of Law, and the remaining five years will be spent taking both Law and ECS courses. Students must complete 79 credits in the School of Law and 9 credits from ECS will be double counted to complete the total of 88 JD credits. Students must complete 48 credits toward the ECS PhD and 12 Law credits will be double counted toward the total of 60 ECS credits. (Students entering with a master's degree are eligible to have 24 of the 60 ECS credits waived.)

The sample schedule below is intended as a general scheme that shows how a student would proceed through the program, entering with Law first and is not intended to be prescriptive. Students who commence law study first will complete 32 credits the first year. In subsequent years, students will take a combination of law and ECS-related courses, with the caveat that all work toward the law degree, including a required professionalism/ethics course, an upper-level writing requirement, and a skills course, must be completed within 5 years of entering the JD program.

	Fall	Spring	Law CR	ECS CR	Cumulative credits
Year 1					
	LAW 16 CR	LAW 16 CR	32 CR	0 CR	32 LAW
Year 2					
	LAW 9 CR ECS 6 CR	LAW 9 CR ECS 6 CR	18 CR		50 LAW 12 ECS
				12 CR	
Summer 2					
	LAW Externship 6 CR		6 CR		56 LAW 12 ECS
Year 3					
	LAW 6 CR ECS 6 CR	LAW 6 CR ECS 6 CR	12 CR		68 LAW 24 ECS
				12 CR	
Year 4					
	LAW 5 CR ECS 6 CR	LAW 6 CR ECS 5 CR	7 CR		79 LAW 35 ECS
				11CR	
Year 5					
	ECS 3 CR	ECS 3 CR	0 CR		79 LAW 41 ECS
				6 CR	
Year 6					
	ECS 3 CR	ECS 4 CR	0 CR		79 LAW 48 ECS
				7 CR	

Students will also complete an environmentally related law externship for 6 credits. Students must complete 79 credits in the School of Law and 9 credits from ECS will be double counted to complete the total of 88 JD credits. Students must complete 48 credits toward the ECS PhD and 12 Law credits will be double counted toward the total of 60 ECS credits. (Students entering with a master's degree are eligible to have 24 of the 60 ECS credits waived.)

** **Schedule for Entering Through the Ph.D. Program**

We have not included a sample schedule for students entering through the ECS PhD program. They would follow a similar course, but details would be worked out on a case-by-case basis. Students may also begin in the PhD program, completing a year of coursework, including the 4 core ECS courses, before taking up their legal studies. PhD students who take courses in the School of Law prior to admission to the School of Law will not be able to count any of these courses toward their JD; consequently, it is expected that ECS students exploring the possibility of the JD will be advised to take only Law electives. For the PhD, students must also pass comprehensive examinations and take at least 13 dissertation credits. To be awarded the doctoral degree, students must successfully complete and defend a dissertation.

***** Note that the provision of completing the JD within 5 years is mandated by the ABA, which accredits the JD program.

Environmental Science and Policy
Evaluation Rubric for Comprehensive Exams and Proposal Defense

This form is intended to serve as a common comprehensive examination and qualifying examination evaluation rubric for doctoral students in Environmental Science and Policy. Examination committee members should complete the evaluation form after the comprehensive and qualifying exams have been graded, or following the proposal defense. The completed forms should then be returned to Dr. Jennifer Jacquet and Andee Holzman via email at jjacquet@miami.edu and andee@miami.edu.

Please evaluate the student's exam performance on the following criteria:	**1-Poor**	**2-Fair/Adequate**	**3-Good**	**4-Excellent**	**Rating (1-4, from scale to left)**
a. Command of literature	Has not included key and topical sources from the literature; makes numerous or substantial errors in interpreting readings; does not include analysis or synthesis of central concepts from the discipline; does not contextualize literature in relation to other disciplines accurately.	Has included some key and topical sources from the literature; makes some errors in interpreting readings; includes minimal analysis or synthesis of central concepts from the discipline; vaguely contextualizes literature in relation to other disciplines.	Has included all key and topical sources from the literature; exhibits a reasonable interpretation of readings; incorporates some analysis and synthesis of central concepts from the discipline; appropriately contextualizes the literature in terms of other disciplines; shows some insight and original thinking.	Shows mastery of the literature and interrogates readings incisively; makes a solid critical analysis and synthesis; shows a sophisticated understanding of interdisciplinary connections; has original and penetrating insights.	
b. Conceptual/ theoretical rigor	Muddled presentation with errors concerning key concepts/theories.	Some coverage of key concepts/theories, but no evidence of deep understanding.	Clear presentation of key concepts/theories at depth, with some awareness of context and awareness of implications	Clear evidence of mastery of concepts/theories and dynamic application of them to social structures and change	
c. Command of disciplinary methodologies	Discipline-specific methodology not referenced/well applied.	Some links to disciplinary knowledge and methodology but not clearly integrated.	Clear exposition of strengths and weaknesses of methodology and relationship of disciplinary knowledge and methodology vis-à-vis the student's expected research project.	Insightful references to sources and well thought out/appropriate application of methodology to student's expected research project.	
d. Ability to defend ideas expressed in exam	Overarching argument is largely lacking.	Argument is present, but claims are supported by weak or inappropriate warrants.	Argument is clearly laid out and claims are supported with appropriate warrants.	Argument is highly persuasive, with convincingly bolstered claims and novel conclusions.	
e. Quality of written communication	Writing generally unclear, with multiple errors and/or poor organization.	Writing sometimes unclear, with weak organization and/or grammatical errors.	Writing generally error free, with clear organization and depth.	Elegant writing, virtually error free, with fully developed arguments and clear organization.	
f. Overall performance evaluation (please circle one)	Unacceptable	Fair/Adequate	Good	Excellent	

Appendix 3—PhD dissertation defense rubric
(Students do not see the scores from the dissertation defense.)

Student Name:		Graduate Marine & Atmospheric Science	School Code: GRMS
UM ID:	Degree Level: PhD	Major: Environmental Science & Policy (EVR)	
Rating of: select		Defense Date:	

	Rating Scale and Explanations					Rating 1-5 (from scale to left)
	1 = Unacceptable	2 = Poor	3 = Average/Acceptable	4 = Very Good	5 = Exceptional	
Knowledge of the Discipline	Error(s) in exposition of the field and/or omission of key source(s)	Minor errors, omissions, and/or lack of synthesis	Adequate and accurate exposition of key sources	Good coverage and synthesis of key sources plus additional relevant material	Thorough review and excellent synthesis of sources, including some obscure but relevant ones	
Appropriate Methodology	Errors in methodology selection and/or use	Minor methodological errors and/or omissions	Methodology applied correctly and adequately; appropriate documentation	Methodology applied correctly, explained clearly, and documented well	Mastery of finer points of methodology plus elegant application and/or supplementary approaches	
Application of Knowledge and Methodology to Original Research Topic	Discipline and methodology not referenced/applied well	Some links to discipline knowledge and methodology but not clearly integrated with research	Adequate connection between knowledge of discipline and use of methodology and research	Clear exposition of relationship of disciplinary knowledge and methodology to original research	Insightful references to sources and application of methodology to excellent research topic	
Critical Thinking	Muddled presentation with errors in reasoning and/or without much analysis and synthesis	Reasoning sometimes confused, simplistic, and/or not clearly explained	Adequate reasoning, explanation of assumptions, and supporting evidence	Clear reasoning with organized presentation of evidence, assumptions, and conclusions	Clear and organized argument that represents sound, original, and complex thought	
Effective Written Communication	Writing generally unclear, with consistent errors and/or poor organization	Writing sometimes unclear with weak organization and/or grammatical errors	Writing clear, concise, and organized, with minor or no grammatical errors	Writing generally error-free with clear organization and depth	Elegant writing with fully developed arguments, clear organization, and correct grammar	
Effective Oral Communication	Presentation generally unclear, with poor organization and/or marred by distracting mannerisms or language	Presentation sometimes unclear, with weak organization, and/or some distracting mannerisms or language	Presentation organized to convey main points of thesis/dissertation clearly and without distractions	Articulate presentation with clear organization and professional language	Elegant, confident, and engaging presentation with clear organization and flow	
Overall Quality (not necessarily average of earlier ratings)	Unacceptable	Poor	Average/Acceptable	Very Good	Exceptional	

Comments:

University of Miami
Rosenstiel School of Marine and Atmospheric Science
RSMAS Campus (GRADUATE)

Appendix 4—PhD student progress report (to be completed after each academic year)

UNIVERSITY OF MIAMI
ABESS CENTER
for ECOSYSTEM
SCIENCE & POLICY

PhD student
PROGRESS REPORT

P.O. Box 248203
Coral Gables, Florida 33124

Phone: 305.284.8259
www.abess.miami.edu

At the end of each academic year we ask that students fill out this progress report and their advisors reflect and sign off on it. Please submit the completed form to **jjacquet@miami.edu** and **andee@miami.edu** by June 1.

TO BE FILLED OUT BY STUDENT:

Student name:

Expected date of graduation (month/year):

Progress toward degree milestones (e.g., courses completed and grades earned, progress toward comprehensive exams, proposal development):

Interaction with your academic advisor (e.g., do you meet regularly, attend lab meetings if relevant, etc.):

A list of scholarly outputs (e.g., peer-reviewed publications, book chapters, conference presentations):

A list of grants, fellowships, or research funds you have applied for in the past year (indicating amounts if awarded):

General comments or concerns (e.g., career aspirations, any challenges that may interfere with progress towards degree completion):

TO BE FILLED OUT BY ADVISOR:

Is this student making adequate academic progress (choose one)?
Yes
No
Yes, with further explanation or concerns:

Advisor Signature:

Name of Advisor:

Date: