

# **The Environment and Natural Resources Graduate Program Handbook**

**2017-2018 Academic Year**

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## Deadlines for Master of Science Degree

Appeals for extension of these deadlines must be submitted in writing to the Graduate Studies Committee chair, must include a justification for the extension, and must be signed by both the student and the advisor. Environment and Natural Resources Graduate Program Handbook section numbers are shown in parentheses.

Semester/ Date	Action
Autumn	<ol style="list-style-type: none"> <li>1) Take ENR 6000 (2.6.1)</li> <li>2) Take ENR 8980 (2.6.1)</li> <li>3) Appoint an Advisory/Examination Committee (2.5)</li> <li>4) Select a Thesis topic (2.7.1)</li> </ol>
Spring	<ol style="list-style-type: none"> <li>1) Submit signed <b>Thesis Topic and Advisory Committee</b> form to the SENR graduate program office by March 1<sup>st</sup> (2.5)</li> <li>2) Submit signed <b>Program of Study*</b> to the SENR graduate program office by March 1st (2.6.4)</li> <li>3) Work with advisor and Advisory/Examination Committee on <b>Thesis Proposal</b>. Email the complete <b>Thesis Proposal*</b> document to the SENR graduate program office by the end of the semester (2.7.1)</li> <li>4) Take ENR 8980 (2.6.1)</li> <li>5) Take ENR 8897 (2.6.1)</li> <li>6) Remove all conditions of admission (8.8)</li> </ol>
Summer	<ol style="list-style-type: none"> <li>1) Research and course work</li> </ol>
Autumn	<ol style="list-style-type: none"> <li>1) Research and course work</li> <li>2) Take ENR 8980 (2.6.1)</li> </ol>
Spring or Graduation	<ol style="list-style-type: none"> <li>1) Research and course work</li> <li>2) Take ENR 8980 (2.6.1)</li> <li>3) Submit <b>Application to Graduate</b> at Gradforms.osu.edu prior to published deadline of expected semester of graduation. See the Graduation Calendar on the Graduate School website.** (2.9)</li> <li>4) Submit the <b>Exit Seminar</b> form to the SENR graduate program office no later than two weeks prior to the date of the seminar/master's examination (2.8.1)</li> <li>5) (Optional) Bring thesis to the Graduate School for a format check before or after your defense.</li> <li>6) Submit a thesis draft to your Advisory/Examination Committee at least two weeks before the date of the examination, then submit the <b>Thesis Draft Approval/Notification of Final Masters' Examination</b> form no later than one week prior to the date of the examination</li> <li>7) Take the Master's Examination during regular business hours prior to the published deadline for graduation. See the Graduation Calendar on the Graduate School website.**</li> <li>8) The Master's Examination Report will be submitted electronically through Gradforms.osu.edu by your committee members by the published deadline on the Graduate School website.</li> <li>9) Submit final thesis online (see the Graduate School website for instructions).</li> <li>10) Return assigned keys to the SENR human resources officer, clear/clean desk space, and give mail forwarding address to the SENR graduate program coordinator.</li> <li>11) Graduate** Congratulations!</li> </ol>

\* Program of Study and Thesis Proposal may be amended at any time with the written approval of the student's advisor and Advisory/Examination Committee and the Graduate Studies Committee (2.6.6)

\*\*End of Semester: If you complete all requirements for your degree and submit all required documents to the Graduate School by the last business day prior to the first day of classes for the following semester, you may graduate the following semester without registering or paying fees. Because your degree will be conferred the following semester, your title page must show the actual semester of graduation.

Revised November 2015

## Deadlines for Master of Environment and Natural Resources Degree

Appeals for extension of these deadlines must be submitted in writing to the Graduate Studies Committee chair, must include a justification for the extension, and must be signed by both the student and the advisor. Environment and Natural Resources Graduate Program Handbook section numbers are shown in parentheses.

Semester/ Date	Action
Autumn	<ol style="list-style-type: none"> <li>1) Meet with MENR Director and Program Coordinator to plan coursework.</li> <li>2) Enroll in appropriate coursework at part-time or full-time status.</li> <li>3) Submit <b>MENR Program of Study</b> form no later than December 1<sup>st</sup></li> <li>4) Meet with MENR Director to plan for seminar and internship requirements</li> </ol>
Spring	<ol style="list-style-type: none"> <li>1) Remove all conditions of admission.</li> <li>2) If not done already, meet with MENR Director to discuss and plan internship</li> </ol>
Summer	<ol style="list-style-type: none"> <li>1) Potentially internship or coursework</li> </ol>
Autumn and beyond	<ol style="list-style-type: none"> <li>1) Term prior to graduation, confirm graduation plans and Masters' Examination plans with Graduate Program Coordinator and MENR Director</li> <li>2) Confirm with Graduate Program Coordinator that all needed paperwork has been submitted</li> </ol>
Spring or Graduation	<ol style="list-style-type: none"> <li>1) Submit the <b>Application to Graduate</b> form through gradforms.osu.edu prior to the published deadline. See the Graduation Calendar on the Graduate School website.** (4.6)</li> <li>2) Complete the master's examination via the selected option.</li> <li>5) Return assigned keys to the SENR administrative associate and give mail forwarding address to the SENR graduate program coordinator.</li> <li>6) Graduate - Congratulations!</li> </ol>

\* Program of Study and Project Proposal may be amended at any time with the written approval of the student's advisor and Advisory/Examination Committee and the Graduate Studies Committee. (4.4, 4.5)

*Revised November 2015*



## Deadlines for Regular Admit Doctoral Degree

Appeals for extension of these deadlines must be submitted in writing to the Graduate Studies Committee chair, must include a justification for the extension, and must be signed by both the student and the advisor. Environment and Natural Resources Graduate Program Handbook section numbers are shown in parentheses.

Semester/ Date	Action
Autumn	<ol style="list-style-type: none"> <li>1) Take ENR 8980 (3.8.2).</li> <li>2) Work with advisor to explore Area of Specialization and dissertation topic (3.2, 3.16).</li> </ol>
Spring	<ol style="list-style-type: none"> <li>1) Appoint an advisory/examination committee (3.7).</li> <li>2) Select a dissertation topic (3.4, 3.16).</li> <li>3) Submit the signed <b>Dissertation Topic and Advisory Committee</b> form to the SENR graduate program office by March 1st. Upon receipt of this form, the Graduate Studies Committee chair will coordinate with your advisor to select the SENR Program Representative to the Advisory/Examination Committee (in addition to the required three members) who will be present until the Candidacy Exam (3.7).</li> <li>2) Take ENR 8980 (3.8.2).</li> <li>3) Take ENR 8785 (offered odd years) (3.8.2).</li> <li>4) Submit the signed <b>Program of Study*</b> form to the SENR graduate program office by the end of the semester (3.8, 3.12).</li> <li>5) Remove all conditions of admission (8.8).</li> </ol>
Summer	<ol style="list-style-type: none"> <li>1) Research and course work.</li> </ol>
Autumn	<ol style="list-style-type: none"> <li>1) Research and course work including ENR 8980 (3.8.2).</li> <li>2) Submit the signed <b>PhD Proposal</b> form and email the complete <b>Dissertation Proposal*</b> document to the SENR graduate program office by the end of the semester (3.16.2).</li> </ol>
Spring	<ol style="list-style-type: none"> <li>1) Research and course work including ENR 8980 (3.8.2).</li> <li>3) Take Candidacy Exam (recommended target).</li> <li>4) At least two weeks prior to the beginning of the written portion, your advisor must report the details of format, schedule, and evaluation procedure in writing to the Graduate Studies Committee so that the program office can confirm that you are eligible to take your candidacy exams. Submit the <b>Application for Candidacy</b> form through Gradforms.osu.edu at least two weeks prior to the oral examination(3.13).</li> <li>5) After the examination, committee members will electronically submit the Examination Report through Gradforms.osu.edu to the Graduate School.</li> <li>6) Present a Scholarly Seminar during an autumn or spring semester (summer term not permitted) between candidacy and the term of graduation. Discuss the best way to schedule the seminar with the appropriate ENRGP Graduate Studies Committee specialization representative (ask the SENR graduate program coordinator for current contact). Submit the <b>Doctoral Scholarly Seminar</b> form to the SENR graduate program office no later than one month prior to the seminar (3.15).</li> <li>6) Take ENR 8785 (offered odd years) (3.8.2).</li> </ol>
Summer	<ol style="list-style-type: none"> <li>1) Research</li> </ol>

Remaining Semesters	1) Research; may present a Scholarly Seminar (autumn or spring semesters only).
Graduation	<p>1) Submit the <b>Application to Graduate</b> form through gradforms.osu.edu prior to the published deadline of the expected semester of graduation. (3.18) See the Graduation Calendar on the Graduate School website.**</p> <p>2) Submit the completed dissertation draft via email to your Advisory/Examination Committee and to the graduate program coordinator no later than three weeks prior to the Final Examination (3.16.3).</p> <p>3) Submit the <b>Application for Final Exam</b> through gradforms.osu.edu at least 3 weeks prior to the Final Examination (note that this deadline is one week prior to the Graduate School deadline). You may also bring a hard copy of your draft dissertation to the Graduate School during business hours for a format check with Graduation Services. Drafts also need to be provided to each of your committee members, including the appointed Graduate Faculty Representative, in either electronic or hard copy.</p> <p>4) Submit the <b>Exit Seminar</b> form for the open portion of the Final Oral Examination to the SENR graduate program office at least 3 weeks prior to the seminar (3.17.1).</p> <p>5) Take the Final Examination during regular business hours prior to the published deadline for graduation. See the Graduation Calendar on the Graduate School website.**</p> <p>6) Submit final dissertation online (see the Graduate School website for instructions).</p> <p>7) Pay the microfilming fee for PhD students, which has been added directly to the OSU statement of account. This is an out of pocket expense, not covered by fee authorizations. The due date for the online payment is the final document submission deadline. If a student can't finish in one term and needs to apply for a subsequent term, the fee will only be applied and paid in the first attempted term. The fee will not be dropped and re-added. If left unpaid, a hold will be placed on the student's account just like other outstanding balances.</p> <p>PhD students pay for their doctoral hood (if attending commencement) at the OSU bookstore at the same time arrangements are made for the tam (cap) and gown. The hoods will still be delivered to commencement and presented to the students as part of the ceremony. Students will pick up the tam and gown before commencement at the OSU Bookstore.</p> <p>8) Return assigned keys to the SENR administrative associate or graduate program coordinator, clear/clean desk space, and give mail forwarding address to the SENR graduate program coordinator.</p> <p>9) Graduate** Congratulations!</p>

Program of Study and Dissertation Proposal may be amended at any time with the written approval of the student's advisor and Advisory/Examination Committee and the Graduate Studies Committee (3.8, 3.16).

\*\*End of Semester: If you complete all requirements for your degree and submit all required documents to the Graduate School by the last business day prior to the first day of classes for the following semester, you may graduate the following semester without registering or paying fees. Because your degree will be conferred the following semester, your title page must show the actual semester of graduation.

*Revised November 2015*

## Deadlines for Direct Admit Doctoral Degree

Appeals for extension of these deadlines must be submitted in writing to the Graduate Studies Committee chair, must include a justification for the extension, and must be signed by both the student and the advisor. Environment and Natural Resources Graduate Program Handbook section numbers are shown in parentheses.

Semester/ Date	Action
Autumn	1) Take ENR 8980 (3.8.2). 2) Work with advisor to explore Area of Specialization and dissertation topic (3.2, 3.16).
March 1	1) Appoint an advisory/examination committee (3.7). 2) Select a dissertation topic (3.4, 3.16). 3) Submit the signed <b>Dissertation Topic and Advisory Committee</b> form to the SENR graduate program office. Upon receipt of this form, the Graduate Studies Committee chair will coordinate with your advisor to select the SENR Program Representative to the Advisory/Examination Committee (in addition to the required three members) who will be present until the Candidacy Exam (3.7).
Spring	1) Take ENR 8980 (3.8.2). 2) Take ENR 8785 (offered odd years) (3.8.2). 3) Submit the signed <b>Program of Study*</b> form to the SENR graduate program office by the end of the semester (3.8, 3.12). 3) Remove all conditions of admission (8.8).
Summer	1) Research and course work.
Autumn	1) Research and course work including ENR 8980 (3.8.2).
Spring	1) Research and course work including ENR 8980 (3.8.2). 2) Submit Scholarly Paper Proposal form to the SENR graduate program office. 6) Take ENR 8785 (offered odd years) (3.8.2).
Summer	1) Research 2) Submit final scholarly paper approved by Advisory/Examination Committee with the <b>Final Scholarly Paper Form</b> to the Graduate Studies Committee (3.12).
Autumn	1) Submit the signed <b>PhD Proposal</b> form and email the complete <b>Dissertation Proposal*</b> document to the SENR graduate program office by the end of the semester (3.16.2).
Semester/ Day	Action
Spring	1) Take Candidacy Exam (recommended target). At least two weeks prior to the beginning of the written portion, your advisor must report the details of format, schedule, and evaluation procedure in writing to the Graduate Studies Committee so that the program office can confirm that you are eligible to take your candidacy exams. Submit the <b>Application for Candidacy</b> form through <a href="http://Gradforms.osu.edu">Gradforms.osu.edu</a> at least two weeks prior to the oral examination(3.13). 2) Present a Scholarly Seminar during an autumn or spring term (summer term not permitted) between candidacy and the term of graduation. Discuss the best way to schedule the seminar with the appropriate ENRGP Graduate Studies Committee specialization representative (ask the SENR

	graduate program coordinator for current contact). Submit the <b>Doctoral Scholarly Seminar</b> form to the SENR graduate program office no later than the beginning of the term in which the seminar will be presented (3.15).
Remaining Semesters	1) Research; may present a Scholarly Seminar (autumn or spring semesters only).
Graduation	<p>1) Submit the <b>Application to Graduate</b> form through gradforms.osu.edu prior to the published deadline of the expected semester of graduation. (3.18) See the Graduation Calendar on the Graduate School website.**</p> <p>2) Schedule Exit Interview with program coordinator (3.18.2)</p> <p>3) Submit the completed dissertation draft via email to your Advisory/Examination Committee and to the graduate program coordinator no later than three weeks prior to the Final Examination (3.16.3).</p> <p>4) Submit the Application for Final Exam through gradforms.osu.edu at least 3 weeks prior to the Final Examination (note that this deadline is one week prior to the Graduate School deadline). You may also bring a hard copy of your draft dissertation to the Graduate School during business hours for a format check with Graduation Services. Drafts also need to be provided to each of your committee members, including the appointed Graduate Faculty Representative, in either electronic or hard copy.</p> <p>5) Submit the <b>Exit Seminar</b> form for the open portion of the Final Oral Examination to the SENR graduate program office with the <b>Draft Approval/Notification of Final Oral Examination</b> form (3.17.1).</p> <p>6) Take the Final Examination during regular business hours prior to the published deadline for graduation. See the Graduation Calendar on the Graduate School website.**</p> <p>7) Submit the original, signed <b>Final Examination Report</b> form to the Graduate School and submit a copy to the SENR graduate program office by the published deadline (3.17).</p> <p>8) Submit final dissertation online (see the Graduate School website for instructions). Once it is accepted by the Graduate School, submit the original signed <b>Final Approval</b> form to the Graduate School and submit a copy to the SENR graduate program office by the published deadline.</p> <p>9) Pay the microfilming fee for PhD students, which has been added directly to the OSU statement of account. This is an out of pocket expense, not covered by fee authorizations. The due date for the online payment is the final document submission deadline. If a student can't finish in one term and needs to apply for a subsequent term, the fee will only be applied and paid in the first attempted term. The fee will not be dropped and re-added. If left unpaid, a hold will be placed on the student's account just like other outstanding balances.</p> <p>PhD students pay for their doctoral hood (if attending commencement) at the OSU bookstore at the same time arrangements are made for the tam (cap) and gown. The hoods will still be delivered to commencement and presented to the students as part of the ceremony. Students will pick-up the tam and gown before commencement at the OSU Bookstore.</p> <p>10) Return assigned keys to the SENR human resources officer, clear/clean desk space, and give mail forwarding address to the SENR graduate program coordinator.</p> <p>11) Graduate** and answer exit questionnaire from the SENR graduate program office via email.</p> <p>Congratulations!</p>

Program of Study and Dissertation Proposal may be amended at any time with the written approval of the student's advisor and Advisory/Examination Committee and the Graduate Studies Committee (3.8, 3.16).

\*\*End of Semester: If you complete all requirements for your degree and submit all required documents to the Graduate School by the last business day prior to the first day of classes for the following semester, you may graduate the following semester without registering or paying fees. Because your degree will be conferred the following semester, your title page must show the actual semester of graduation.

## **A COMMUNITY OF SCHOLARS**

The Environment and Natural Resources Graduate Program is the academic home for a group of faculty and graduate students who share a common interest in improving our understanding of the environment, our natural resources, and our ability to protect and manage them. These faculty and students are engaged in research, education, and learning in a variety of areas in the natural and social sciences. This diverse and interdisciplinary group is unified by a commitment to intellectual rigor and a common definition and standard for scholarship.

### **SCHOLARSHIP**

Scholarship involves developing an understanding of what is known and not known about a subject, proposing new ideas about that subject, studying those ideas by using appropriate scientific methods, drawing conclusions about the findings from those studies, and communicating those conclusions in critically reviewed publications. The goal of this scholarly effort is to expand the body of knowledge in a given field.

Both the Master of Science and the Doctor of Philosophy degree programs adhere to this definition for scholarship.

At the MS level, the creative idea for investigation may originate with the student's advisor, but the student must demonstrate that he or she has made a rigorous attempt to familiarize him or herself with literature relevant to the research topic, identify questions that can realistically be pursued as a master's thesis, design and carry out appropriate studies or experiments to address those questions, analyze the results of those studies or experiments, and incorporate those results into a coherent master's thesis.

At the PhD level, the expectation is that students will make an original contribution to the body of knowledge. To do so, doctoral students are expected to formulate research questions that probe the limits of what is known, identify the major issues involved, and develop a thorough understanding of the relevant theory bases and methodologies. Further, they are expected to demonstrate creativity in research design and critical rigor in analyzing and discussing their findings. Students completing the PhD program should be able to pursue independent scholarly research.

## **PROGRAM BACKGROUND**

The Environment and Natural Resources Graduate Program began with a Master of Science (MS) degree program in 1968 and included a thesis and a non-thesis track until March 2008, after which only the thesis track remained. Based on faculty and student feedback for the need for a non-thesis master's program that did not have the same degree title as the thesis master's degree, the professional non-thesis Master of Environment and Natural Resources (MENR) degree program was developed and approved by the Ohio Board of Regents in June 2009.

The doctoral graduate program was administered by the Graduate School's One-Of-A-Kind (OOAK) program between 1981 and 1997 while the Natural Resources doctoral program was developed and finally approved in 1999. Environment and Natural Resources graduate faculty have participated in the interdisciplinary Environmental Science Graduate Program (ESGP) by advising MS and PhD students since 1989 (over 40% of ESGP alumni) and by serving as ESGP Program Directors or Graduate Studies Committee members. The Environment and Natural Resources doctoral program only admitted students who had completed a thesis master's degree until 2009 when the School faculty approved the addition of the Direct-Admit PhD program. The Direct-Admit PhD program includes university fellowship nomination-eligible admission standards for students entering with a bachelor's or a non-thesis master's degree and supplemental degree requirements in addition to the Regular PhD program requirements.

In 2008, the Soil Science Graduate Program (SSGP) became a specialization within the Environment and Natural Resources Graduate Program (ENRGP), becoming a "legacy" program, and allowed current students to graduate under SSGP degree requirements but no longer admitted new students. In 2010, the Rural Sociology Graduate Program and its faculty joined the School, and in 2011 became a specialization within ENRGP and a "legacy" program.

# 1. THE ENVIRONMENT AND NATURAL RESOURCES GRADUATE PROGRAM

The Environment and Natural Resources Graduate Program offers a professional, non-thesis Master of Environment and Natural Resources (MENR) as well as a thesis Master of Science and a Doctor of Philosophy in seven Areas of Specialization: Ecological Restoration, Ecosystem Science, Environmental Social Sciences, Fisheries and Wildlife Science, Forest Science, Rural Sociology, and Soil Science. Within these Areas of Specialization, students can pursue graduate degrees in the MS and PhD programs. MENR students may adhere to similar areas of specialization or follow an individualized area of specialization.

**Ecological Restoration:** Human domination of ecosystems worldwide has rendered vast areas of land and many water bodies degraded to the point that they cannot support plant and animal growth. The new field of ecological restoration has as its goal the restoration, revitalization, and reuse of disturbed, disrupted and contaminated sites, based on ecological principles. The goal is not to duplicate exactly what was there before disturbance, but to restore the ecological processes that will enable the ecosystem to change and adapt as environmental conditions change. The focus is on function more than form.

**Ecosystem Science:** Ecosystem science is the study of biotic and abiotic factors and their interaction within an ecosystem. Ecosystem science is firmly grounded in ecological theory, and theory is a significant component of our research efforts. This program also has an applied focus that examines how ecosystem functions produce and maintain products and services of importance to human societies, e.g. water purification in wetlands. In this context, ecosystem science provides a powerful framework for identifying ecological mechanisms underlying environmental problems such as: problems of land degradation, water pollution, and loss of species and habitat.

**Environmental Social Sciences:** A productive society is marked by its harmony with a sustainable and healthy environment: Changing climate, energy policies, global food and water distribution, economic and social development to conserve habitat and biodiversity. In this world of unprecedented environmental challenges the common core is inextricably linked to human values. Within the Environmental Social Sciences (ESS) graduate specialization, students learn how to build scientific understanding of these issues, identify potential responses and evaluate their consequences, and ultimately, decide how and when to take action. Students work with faculty who study how people value and use the environment and natural resources, make decisions about, and design policies to address environmental and natural resources issues.

**Fisheries and Wildlife Science:** Fisheries and wildlife science integrates a wide range of disciplines, including biology, ecology, behavior, conservation biology, natural resource management, aquaculture, and the social sciences, and works across individual, population, community, and landscape scales. Students engage in basic and applied research that informs the conservation and management of animals in terrestrial and aquatic systems.

**Forest Science:** Forest science is a well-recognized and long-standing academic discipline dating to the first forestry schools that were established in the U.S. over a century ago. The Forest Science graduate area of specialization in the School of Environment and Natural Resources at The Ohio State University is the only graduate program in forest science in the state of Ohio. Our program brings together foresters, ecologists, hydrologists, and social scientists to conduct fundamental research on forest ecosystems, social systems, and their interactions. We endeavor to educate the next generation of scientists, managers, and users of forest

resources who seek to develop innovative and integrative approaches to sustainably manage and protect forest ecosystems and the important ecosystem services they provide.

**Rural Sociology:** Rural Sociology issues span the globe both internationally and domestically. Rural Sociologists engage in basic and applied sociological research related to the core discipline as well as meaningfully contribute to multidisciplinary research across a range of environmental, food, agricultural, community and development matters. Rural Sociology research focuses on environmental well-being, sustainable development of natural resources, social and community quality of life, and diffusion and impacts of technologies. Doctoral students can select from two tracks: Agriculture and the environment, or social change and development. Rural Sociology faculty maintain ties to Ohio State University Extension (OSUE) and the Ohio Agricultural Research and Development Center (OARDC), and form part of a larger cluster of social science faculty within SENR.

**Soil Science:** Soil is a fundamental resource for ecosystems functioning and environmental health. It is a living filter that provides vital ecosystem services – including carbon sequestration, recycling of nutrients, and assimilation of waste products. Soil is a key component of natural, agricultural, and wildland ecosystems that sustains all global processes. Soil science is highly interdisciplinary; soil scientists apply biology and microbial ecology, chemistry, earth sciences, ecology, hydrology, mineralogy, mathematics, nutrition, toxicology, and physics to understand, sustain, and improve the environment. A diverse range of research tools are used, such as geospatial analysis, computer modeling, microscopy, spectroscopy, bioassays, molecular biology, and other advanced field and lab technology for soil investigation.

The Environment and Natural Resources Graduate Program is based on the assumption that entering MS and PhD students are knowledgeable of and competent in the principles of natural science, including ecology, and possess a background in the humanities and social and administrative sciences relevant to environmental and natural resources management. During the Master of Science program, students build on this background to develop an understanding of the concepts and theories in their in their Areas of Specialization, learn how to pursue scholarly research in those areas, and learn how to apply their knowledge and technical skills to environmental and natural resource problems. Doctoral students are expected to expand their knowledge and understanding of environmental and natural resources science and management beyond that expected of master's students, to demonstrate their ability to focus their knowledge and skills on significant research topics or problems, and to make a contribution to the body of theory associated with those topics or problems. Upon completion of the doctoral degree, students are expected to be able to synthesize and clarify the ecological, social, political, economic, cultural, and educational aspects of their Areas of Specialization. Graduates of these two degree programs will have knowledge and analytical skills to enable them to contribute to the resolution of complex environmental and natural resource problems and will be able to assume leadership roles in environmental and natural resources science, management, policy, and education.

The Environment and Natural Resources Graduate Program assumes that entering MENR students may or may not have previous knowledge in areas of natural science and other sciences relevant to environmental and natural resources management. During the MENR program, students build upon existing knowledge or add new knowledge relevant to their career goals to develop their understanding of the sciences and other concepts and theories in the discipline of environment and natural resources and how to acquire and to apply their personal existing and new knowledge to issues related to environment and natural resources.



## **2. THE MASTER OF SCIENCE DEGREE PROGRAM (MS)**

### **2.1 PURPOSE**

The Master of Science is a research degree that engages students in course work, study, and research leading to the production of a scholarly master's thesis and publication in refereed, professional journals. The program prepares students to be critical thinkers who are familiar with the concepts, theories, and research methodologies in their fields. Students completing the Master of Science are prepared for careers in environmental and natural resource science, management, policy, and education (Graduate School Handbook, VI).

Matriculated MS students who wish to transfer to the MENR degree program should consult the Standard Operating Procedures (Appendix B, 4.1) and discuss their interest with their current faculty advisor, the Graduate Studies Committee chair, and the MENR program director.

Master of Science students who wish to request continuing to the Regular PhD program after completing the MS should see Appendix B.5 for more information.

### **2.2 AREAS OF SPECIALIZATION**

The Environment and Natural Resources Graduate Program offers degrees in seven Areas of Specialization: Ecological Restoration, Ecosystem Science, Environmental Social Sciences, Fisheries and Wildlife Science, Forest Science, Rural Sociology, and Soil Science. Master's students may choose any Area of Specialization in which their advisors hold faculty appointments (Appendix A). If a student chooses and follows the specialization course requirements (see Section 2.6.2), the student may have one or multiple Areas of Specialization designated on his or her transcript. The student must request that the SENR graduate program office complete the Graduate Specialization Transcript Designation form in GradForms so that it may be approved by the Graduate School. If the student does not wish to have a specific Graduate Specialization designated on the official transcript, graduate coursework may be determined by the student and the advisor and Advisory/Examination Committee.

ENR graduate students are not eligible to receive a Graduate Minor in Environment and Natural Resources or Rural Sociology or Soil Science. However, students are permitted to declare and fulfill the requirements for more than one Area of Specialization as long as courses are not double-counted. Students seeking multiple Areas of Specialization should have either an advisor who is a member of both specializations, a co-advisor in the second specialization, or a member of their Advisory/Examination Committee who is a member of the second Area of Specialization.

### **2.3 THE ADVISOR**

Each student shall have an advisor who must be a regular faculty member who holds a category M or P appointment in the Environment and Natural Resources Graduate Program. The advisor is primarily responsible for guiding the student through the master's program and chairs the student's Advisory/Examination Committee. Students are not admitted to the program unless a faculty member has agreed to advise them. Thus, student-advisor linkages are determined through communication between the applicant and the potential advisor prior to final admission. Once admitted, students may change advisors by following the procedure in Section 2.4 below.

## **2.4 CHANGING ADVISORS**

Students may petition the Graduate Studies Committee (GSC) to change advisors at any time after their admission. To do this, a student shall submit a request for change of advisor to the Graduate Studies Committee chair. That request must stipulate the reasons for the requested change. The student shall also obtain a letter from the prospective new advisor indicating his or her willingness to assume that role and stipulating any conditions attached to that acceptance. Upon receipt of those letters, the Graduate Studies Committee will review the request and may request input from the current advisor, members of the student's Advisory/Examination Committee and additional information from the student and the proposed new advisor. A decision will be rendered within 30 days of receipt of the written request.

If a faculty advisor leaves the university prior to the student's completion of degree requirements, the student's current advisor will assist the student in selecting a new faculty advisor. The current advisor, new advisor, and student must inform the Graduate Studies Committee of the change as soon as possible so that arrangements can be made with the Graduate School for the faculty member leaving the university to continue to serve as co-advisor or committee member if desired PRIOR to the departure date of the faculty member.

## **2.5 ADVISORY/EXAMINATION COMMITTEE**

All students must select an Advisory/Examination Committee and submit a signed Thesis Topic & Advisory Committee for Master of Science Students form to the SENR graduate program office no later than the second semester of full-time enrollment in the program or after 10 credits of graduate course work for part-time students. The Advisory/Examination Committee shall comprise at least three members of the graduate faculty, including the advisor. At least two of the Advisory/Examination Committee members, including the advisor, shall be members of the Environment and Natural Resources graduate faculty. To promote a diversity of perspectives within the committee, one member shall meet one of the following criteria:

- Hold graduate faculty status in a department outside of SENR
- Be an SENR graduate faculty member belonging to multiple specializations or to one specialization that is not the student's

In any case, that member should have expertise appropriate and applicable to the student's thesis research.

Adjunct and visiting faculty at The Ohio State University, faculty at other colleges and universities, and other qualified professional scientists may serve on master's Advisory/Examination Committees with the approval of the Graduate Studies Committee and the Graduate School. These "extra" members shall be in addition to the three members who must be graduate faculty members at The Ohio State University. Students must submit a Committee and Examination Petition on GradForms and have it approved by their advisor. It will then be considered by the Graduate Studies Committee and, if approved, proceed to the Graduate School for final approval. These petitions for "extra" members should be submitted when the signed Thesis Topic & Advisory Committee for Master of Science Students form is submitted.

Unless significant changes in program direction occur or personal conflicts arise, the Advisory/Examination Committee should remain unchanged through the duration of the student's program. Petitions to change the composition of the Advisory/Examination Committee must be submitted in writing to the Graduate Studies Committee for approval. The student must submit a letter justifying the change and the advisor must demonstrate their support for the change, both the "old" and "new" committee members signing their agreement, by signing the student's letter or submitting an additional letter.

## 2.6 DEGREE REQUIREMENTS

<u>Requirements</u>	<u>Semester Credits</u>
Core Courses	5
Area of Specialization Courses	15
Thesis Research	10
Total Credits	30

### 2.6.1 Core Requirements (5 Credits)

All Master of Science students must complete the following core courses that are designed to introduce students to the research and scholarship process and guide them through the process of preparing their thesis research proposals:

**ENR 6000** Research in Environment and Natural Resources (2 credits)

The use of science and research to address environmental and natural resource problems; development of a thesis proposal. Autumn.

**ENR 8980** Environment and Natural Resources Seminar (1 credit)

All master's students must enroll in the School of Environment and Natural Resources Seminar each semester except summer. Only 2 credits of ENR 8980 may be applied to the minimum course work requirements for the degree. In the event that a student is away from campus for fieldwork, enrolls in a course that conflicts with the Seminar, or cannot attend for some other reason, the student must request a waiver of the Seminar requirement by emailing the Graduate Studies Committee chair. If approved, a copy of the email is placed in the student's file in the SENR graduate program office. It is recommended that students keep a copy for their personal records. If a student is absent from attending a particular seminar, the absence may be "made up" by submitting a summary of another seminar attended to the "instructor" or Seminar coordinator for the given semester.

**ENR 8897** Research Proposal Symposium (1 credit)

A symposium in which graduate students present thesis and dissertation proposals.

### 2.6.2 Area of Specialization Courses (15 Credits)

Working with their advisors and Advisory/Examination Committees, student must select and complete a minimum of 15 credits of graduate course work that provide them with the understanding of the theory and methodology underpinning their chosen area of research. If the student wishes to have a specific Graduate Specialization designated on their official transcript, the student must list 10 credit hours of coursework from the specialization or fulfill the specialization's specific requirements, as listed in Appendix A. If the student does not wish to have a specific Graduate Specialization designated on their official transcript, the 15 credits of graduate coursework may be determined solely by the student and the advisor and Advisory/Examination Committee.

### 2.6.3 Research Credits (10 Credits)

Master's students must complete 10 research credits (ENR 8998). While students may accumulate more than 10 credits of ENR 8998 during their thesis research, only 10 credits may be applied to the Program of Study.

### 2.6.4 Program of Study (POS)

The Program of Study (POS) is an official document that stipulates the course work that the student shall complete as part of his or her degree requirements. Therefore, it is important that the POS be approved early in the student's enrollment. The Program of Study, approved by the student's Advisory/Examination Committee, shall be submitted on the Program of Study for Master of Science Degree Students form to the Graduate Studies Committee by the end of the second semester of full-time enrollment or immediately after 10 credits have been completed by part-time students.

All Programs of Study shall include all Core Requirements, at least 10 credits of appropriate coursework (see Section 2.6.2), and research credits. At least 24 credit hours of the total 30 credit hours (or eighty percent) must be completed at this university over a period of at least two terms in order to earn an MS degree in the Environment and Natural Resources Graduate Program from Ohio State University. Also, there is a limit of five credit hours of Independent Study (ENR 6193) that may be applied to the Area of Specialization Courses on a Program of Study. The course work listed on the POS must prescribe a cohesive scholarly program within the field of environment and natural resources.

The Graduate Studies Committee reviews Programs of Study for adherence to required courses and seminars, required research credits, scholarship, and appropriateness of course work for a degree in the field of environment and natural resources.

Requests for changes in the Program of Study must be approved by the student's advisor and Advisory/Examination Committee and by the Graduate Studies Committee prior to the semester in which the course changes are to be implemented. Requests for substitutions for core courses shall be submitted in writing to the Graduate Studies Committee, and supporting explanations must be submitted in writing by the advisor. Alteration of core requirements will be allowed only under extraordinary conditions.

## **2.7 THESIS REQUIREMENTS**

### 2.7.1 Thesis Proposal

All students shall prepare a thesis proposal during their first nine months in the Environment and Natural Resources Graduate Program. This should be a collaborative effort between the student and his or her advisor and Advisory/Examination Committee. It is not expected that the student will be fully conversant in all aspects of his or her research before completing the thesis proposal. Guidelines for preparation of the thesis proposal are provided in Appendix C.

The thesis proposal, approved by the student's advisor and Advisory/Examination Committee, along with a completed Thesis Topic & Advisory Committee form, shall be submitted to the Graduate Studies Committee no later than the end of the student's second semester of full-time enrollment (normally spring semester).

The Graduate Studies Committee chair shall review the submission to ensure that the proposed research falls within the generally recognized bounds of the fields of environment and natural resources, and that it adheres to the standards of scholarship set forth by the graduate faculty and listed in the front of this Handbook. If it

does, then the Graduate Studies Committee chair shall sign the cover sheet and place the proposal in the student's official file in the School office. If it does not, then the Standard Operating Procedures (see Appendix B. 3) shall guide handling of the case. Any faculty member of the Environment and Natural Resources Graduate Program may review any proposal at any time by emailing a request to the SENR graduate program office.

### 2.7.2 Change in Research Direction

The thesis proposal is meant to be reasonably flexible to allow students to develop and carry out their research as they and their advisors and Advisory/Examination Committees see fit. If, however, the thesis research direction is altered to such an extent that there is a significant change in the theory bases or bodies of knowledge being pursued, the student shall inform the Graduate Studies Committee and file an amendment to the thesis proposal. This amendment must be approved in writing by the student's advisor.

### 2.7.3 Thesis Format and Approval

The thesis shall be prepared in accordance with the rules and regulations of the Graduate School. The student must submit a completed, typed thesis draft to his or her Advisory/Examination Committee (see Section 2.5) for review no fewer than two weeks prior to the date of the Final Master's Examination (see Section 2.8). Approval of the thesis draft indicates that the members of the Advisory/Examination Committee judge it to be of sufficient quality, and is a complete document (e.g. no unfinished chapters or sections), to warrant holding the Final Master's Examination. Each Advisory/Examination Committee member indicates approval of the thesis draft by signing the Draft Approval/Notification of Final Master's Examination form that must be submitted to the ENR Graduate Program Office no later than one week prior to the scheduled Final Master's Examination. It is the responsibility of the student to collect signatures on the form and ensure submission to the ENR Graduate Program Office. Guidelines for preparing and submitting theses are available on the Graduate School website. Examples of graduated MS student theses are available through OhioLink and the SENR website.

### 2.7.4 Delay Dissemination

In order to complete degree requirements at Ohio State, students are required to submit their final, approved documents through OhioLINK as a PDF. Documents submitted to OhioLINK are made available to the public via OhioLINK several weeks after the Graduate School accepts the document as fulfilling that degree requirement. The full text of a thesis is available through OhioLINK. There is no charge for viewing or downloading a published thesis on OhioLINK.

Ohio State does allow a delay in the dissemination of the electronic version to the OhioLINK Electronic Theses and Dissertation (ETD) Center and to ProQuest/UMI for thesis documents. However, these policies do not prevent the university from providing access to Ohio State theses or dissertations through the libraries. Local access to the material, interlibrary loan, length of loan, and patron confidentiality are determined by the Ohio State libraries.

In certain situations, there may be a reason to delay the electronic distribution of the thesis. Because the university policy is to disseminate all theses as soon as possible, requests for delays must be reviewed and approved by the Graduate School.

Situations in which delaying may be appropriate include (but are not limited to):

- a. the graduate student wishes to publish an article from the thesis in a journal whose policy is not to publish anything that has already been disseminated electronically,
- b. the graduate student is in the process of applying for a patent on research contained in the thesis or dissertation and does not wish to make its contents public until the patent application has been filed.

Graduate students can apply to the Graduate School to delay the electronic dissemination of their dissertations and theses for one to five years. Such requests will be reviewed and granted in the Graduate School. Once the initial request has been granted, additional extensions can be requested up to five years total. Graduate students bear the responsibility for requesting extensions. If the Graduate School does not receive a request for an extension, OhioLINK will release the document according to the original schedule.

Graduate students can request a delay when they submit their PDF file to OhioLINK by checking the second button in the Publication section of the Permissions and UMI Publication web page.

In the UMI Permissions box, Master's students choose, "Do not upload to UMI." Theses are not archived through UMI. Graduate students must complete and submit the Graduate School's Delay of Dissemination Form, available online. This form can be signed by the graduate student and his or her advisor at the time of the final examination. Turn the completed form in with final paperwork.

Graduate students are responsible for requesting a delay of electronic dissemination and for sending their completed request to the Graduate School for review.

If a graduate student checks the OhioLINK delay button but does not obtain approval from the Graduate School, the thesis will be released for dissemination.

## **2.8 FINAL MASTER'S EXAMINATION**

### **2.8.1 The Examination**

In order to be eligible to schedule the Final Master's Examination, the student must apply to graduate for the term any part of the examination is to be held (see Section 2.9). Each student's Advisory/Examination Committee will conduct a final oral examination that centers on, but is not necessarily restricted to, the thesis research. The examination must include the open portion, or Exit Seminar, and the closed portion (Advisory/Examination Committee only). The advisor will chair the Master's Examination and all Advisory/Examination Committee members must be present for the duration. The examination must be completed prior to the published deadline for the semester of graduation and must take place during announced university business hours, Monday through Friday on either the Columbus or Wooster campuses. Students are advised to schedule the examination at least one month in advance of published deadlines to ensure that all Advisory/Examination Committee members can attend at the required time.

If not all Advisory/Examination Committee members can be physically present, a Petition For Graduate Committee and Examinations form must be submitted through [gradforms.osu.edu](http://gradforms.osu.edu) no later than two weeks prior to the examination. Refer to the Graduate School Handbook, Appendix B, for the complete guidelines for videoconferencing.

Once the Graduate School receives the Application to Graduate form, no changes or substitutions to the Advisory/Examination Committee are permitted without prior approval from the Graduate School. If changes are made without Graduate School approval, the examination must be postponed until approval is acquired; if the examination proceeds without prior approval, the examination may be considered invalid.

No later than two weeks prior to the scheduled Master's Examination, the student must submit the completed Exit Seminar form to the SENR graduate program office. The School will produce fliers advertising the seminar. The student is responsible for posting the fliers in visible areas of Kottman Hall and sending them to other departments as appropriate.

Candidates and their advisors are to schedule two hours for the Master's Examination. Within this two-hour block of time, the Master's Examination must include two components: (1) an open seminar followed immediately by (2) a closed examination. The first component is open to any faculty member, staff, students, and other guests interested in attending. This open component will consist of a 20 minute overview of the thesis presented by the candidate, followed immediately by 10 minutes of questions from the general audience. At the close of this open question period or when no questions remain from those in attendance – whichever comes first – the examination will proceed into a closed session in which only the candidate and Advisory/Examination Committee will be present.

All members of the student's Advisory/Examination Committee must be present during the entire Master's Examination (consisting of both the open and closed components), and all will vote. Only Advisory/Examination Committee members may be present for discussion of the student's performance and for the vote. Once the examination has begun, it must continue to a voting conclusion. The vote in favor of passing the student must be unanimous (Graduate School Handbook, VI.3).

After a conclusion has been reached, Advisory/Examination Committee members will indicate that conclusion on the Master's Examination form online by marking the appropriate spaces. All committee members must electronically complete the Master Examination Report and submit it through gradforms.osu.edu by the Graduate School's published deadline for the semester of graduation. Failure to submit this form prior to the published deadlines will result in removal of the student from the graduation list.

Upon recommendation by the Advisory/Examination Committee, a student who has failed his or her Master's Examination may retake that examination one time. In these instances, only the closed portion of the examination need be repeated. The Advisory/Examination Committee for the second examination will include the same faculty members as the first, unless substitution is approved by the Graduate Studies Committee and the Graduate School prior to the date of the second examination. If the student fails the second examination, the advisor must inform the Graduate Studies Committee chair who will inform the Graduate School. The student will be denied further enrollment in the Environment and Natural Resources Graduate Program.

### 2.8.2 Appeal and Review

If a student is judged to have failed either the first or second examination, the student or any member of the Advisory/ Examination Committee may appeal the decision, but only on the grounds that the "fairness and without prejudice" concept was violated. An appeal must be submitted in writing to the Graduate Studies Committee for review. The Graduate Studies Committee will conduct a hearing and then evaluate the Master's Examination according to the "fairness and without prejudice" concept (Graduate School Handbook, VI.3 and

Appendix D). If the Graduate Studies Committee cannot resolve the case, it will forward it to the Graduate School who will refer it to the Graduate Council for resolution. If either the Graduate Studies Committee or the Graduate Council finds that the rules were not followed or that the examination was not fair or without prejudice, the Graduate School may direct that a new examination be administered.

## **2.9 APPLICATION TO GRADUATE**

Each student must complete and submit an Application to Graduate form through [gradforms.osu.edu](http://gradforms.osu.edu) by the published deadline for the expected semester of graduation. Students must be enrolled and fees paid in the minimum number of credit hours required in order to be eligible to graduate and complete any examinations (see Section 6). The application is valid only for that semester. By submitting this form, the student indicates that he or she expects to complete all degree requirements by the published deadlines of that semester. The Application to Graduate form must be submitted by the student, and approved by his or her advisor, and the Graduate Studies Committee chair. The names of the members of the Advisory/Examination Committee must be listed -- and any co-advisors noted -- on the application. If the student chooses, and follows the specialization course requirements (see Section 2.6.2), the student may have one or multiple Areas of Specialization designated on his or her transcript, the student must inform the SENR graduate program office to submit the Graduate Specialization Transcript Designation form to the Graduate School.

### **2.9.1 End of Semester Completion**

A student who does not meet published graduation deadlines but who does complete all degree requirements and has submitted all forms and the thesis to the Graduate School by the last business day prior to the first day of classes for the following semester may graduate the following semester without registering or paying fees. Students who wish to use the End of Semester option must have applied to graduate through [gradforms.osu.edu](http://gradforms.osu.edu) and informed the SENR graduate program office and the Graduate School.

## **2.10 COMBINED BACHELOR'S–MASTER OF SCIENCE PROGRAM**

The purpose of the Combined Program is to provide outstanding, mature students an opportunity to pursue the BS and MS simultaneously, and thereby reduce the time required to complete the two degrees while still pursuing a high quality graduate education. Admission requirements for the Combined Program may be found in Section 8.3.2.

Students in the Combined Program are responsible for completing all requirements and deadlines for the MS in Environment and Natural Resources. The Graduate Studies Committee and the student's advisor will monitor the student's progress toward the graduate degree, but the student is ultimately responsible for completing all requirements and meeting all deadlines.

Combined Program students may only receive graduate credit for Core Requirements and Area of Specialization courses (see Section 2.6) if enrolled either under Senior Petition prior to admission to the Combined Program or as an admitted Combined Program student. Research credits may only be taken as an admitted Combined Program student.

To earn both degrees, the student must be enrolled in the Combined Program for a minimum of two semesters; if a student wishes to graduate with both degrees prior to being enrolled as a Combined Program student for two semesters, a written petition must be submitted to the Graduate Studies Committee prior to the



completion of the Application to Graduate. Should the student fail to make “reasonable progress,” he or she may be denied further enrollment in the graduate program and may then complete only the Bachelor of Science (see Section 7.2).

## **2.11 DUAL MASTER’S DEGREE PROGRAM WITH THE JOHN GLENN COLLEGE OF PUBLIC AFFAIRS**

The management of natural resources inevitably involves public agencies and the processes by which policies affecting these agencies are developed, implemented, and changed. Graduate faculty in the School of Environment and Natural Resources and the John Glenn College of Public Affairs cooperate in offering Dual Master’s Degree Programs for qualified students wanting preparation for academic and/or professional careers in natural resources public policy and management. Except where modified below, all rules and requirements for each regular master’s program apply to this dual degree program. Students completing the program will receive two degrees: Master of Science in Environment and Natural Resources and either a Master of Arts in Public Policy and Management or a Master of Public Administration.

### **2.11.1 Admission and Enrollment**

Students wishing to enroll in the Dual Master’s Degree Program must apply and be admitted to both graduate programs. As part of the application procedure, all applicants must complete a Program Plan for Dual Degree form and submit it to the Environment and Natural Resources Graduate Studies Committee chair and the Public Affairs Graduate Studies Committee chair. This form is available on [www.gradforms.osu.edu](http://www.gradforms.osu.edu).

Students admitted to the Environment and Natural Resources Graduate Program may subsequently pursue admission to the Public Affairs program shortly after they arrive on campus or vice versa. All regular admission procedures and criteria apply to applicants wishing to pursue a Dual Master’s Degree Program. The Program Plan for Dual Degree form (and any updates to the form) must be submitted prior to graduating with one of the two degrees in order to receive dual credit. Once the Program Plan has been approved by the Graduate School, the student may apply to graduate from both programs in the same or separate semesters. Students admitted to the Dual Master’s Degree Program will have two advisors. The student’s Advisory/Examination Committee will comprise a minimum of four members, at least two from each program.

### **2.11.2 Integrated Course Work and Research Requirements**

A minimum of 50 percent of the regular course credits applied to either the Environment and Natural Resources or Public Affairs must be unique to each degree. At least 15 hours must be unique to ENR degree (most likely the core courses and research hours) and 19 hours unique to MA to earn the MS/MA or 26 unique to MPA to earn the MS/MPA. The remainder may be applied to satisfy both requirements (dual credit). The sum of the unique credit hours and dual credit hours must be equal to the total number of hours required for the given degree, e.g. 30 hours for the MS and 38 hours for the MA or 52 hours for the MPA. Also, students must enroll every semester for the Environment and Natural Resources Seminar until they graduate with the MS degree. Only 2 credits of ENR 8980 may be applied to the minimum course requirement for this dual degree.

This is to be developed in consultation with and be approved by the student’s advisor and Advisory/Examination Committee. Integrating course work requires careful planning. Students should work closely with their advisors in both programs.

### 2.11.3 Final Master's Examinations

Students who have completed all other requirements for the Dual Master's Degree Program must satisfactorily complete a Final Master's Examination in Environment and Natural Resources. The Advisory/Examination Committee for the Environment and Natural Resources Examination will comprise a minimum of three graduate faculty (see Section 2.5). All rules and requirements for Final Master's Examinations apply, including reexamination and appeal rules and procedures (see Section 2.8). Rules for the Public Affairs examination requirements may be obtained from the Public Affairs program.

### 2.11.4 Semester of Graduation

Students in the Dual Master's Degree Program will be officially enrolled at any given time in one or both of the two graduate programs. Prior to submitting Applications to Graduate for both degrees, students should confirm that the Program Plan for Dual Degree form was approved by the Graduate School to ensure that the Graduate School is aware that the student is seeking to graduate with two degrees. Students intending to graduate with one degree in a given semester and the second during a subsequent semester must be enrolled in the appropriate program during the semester of graduation from that program. During any semester in which the student is enrolled in Public Affairs and not in Environment and Natural Resources, he or she must advise the SENR graduate program office that he or she remains active in the Dual Master's Degree Program.

## **3. THE DOCTOR OF PHILOSOPHY DEGREE PROGRAM (PHD)**

### **3.1 PURPOSE**

The Doctor of Philosophy is an advanced research degree that prepares students to pursue high-level, independent, scholarly research. While the PhD program is fundamentally oriented toward preparing students to pursue academic careers, it also provides a foundation for students wishing to pursue research careers in government and the private sector (Graduate School Handbook, VII).

Matriculated PhD students who wish to transfer to the MS or MENR degree program should consult the Standard Operating Procedures (Appendix B, 4.1) and discuss their interest with their current faculty advisor, and SENR graduate program coordinator.

### **3.2 RESEARCH FOCUS**

The PhD is a research degree. Therefore, the doctoral dissertation is the central focus of the PhD program. Students in the PhD program are expected to select and design their own research projects, develop a high level of understanding of the concepts, theories, and methodologies related to their research topics, and produce scholarly dissertations that make a tangible contribution to theory bases in their fields of study.

Therefore, the requirements for the PhD are based on the student's Area of Specialization and dissertation research topic. The selection of an Advisory/Examination Committee and courses for the Program of Study are both determined by the dissertation research to be done by the student. The Candidacy Examination is a test of the student's comprehension of the field, allied areas of study, his or her capacity to undertake independent research, and his or her ability to think and express ideas clearly (Graduate School Handbook, VII.4). The Final Oral Examination tests originality, independence of thought, the ability to synthesize and interpret, and the quality of research presented in the student's Area of Specialization. The final oral examination concerns principles and historic perspective as well as data (Graduate School Handbook, VII.10). It is important that

doctoral students select their Advisory/Examination Committee members and identify their dissertation research projects as early as possible after entering the Environment and Natural Resources Graduate Program.

### **3.3 REGULAR AND DIRECT-ADMIT DEGREE TRACKS**

Most students admitted to the PhD program will have completed a thesis master's degree in or related to their chosen fields. Those students are classified in the doctoral program as Regular-Admit PhD students. Regular Admit PhD students must complete a minimum of 50 credits beyond the master's degree (30 credits) for a total of 80 credits to earn a doctoral degree. Regular Admit PhD students must complete all of the other requirements listed herein.

Occasionally, however, students who hold only a bachelor's degree or a bachelor's degree with a professional or non-thesis graduate degree may be admitted directly into the PhD program (see Section 8.3.5). Those students are classified in the doctoral program as Direct-Admit PhD students. Direct-Admit PhD students must complete a minimum of 80 credits to earn a doctoral degree. Direct-Admit PhD students must also complete all of the other requirements listed herein in addition to those listed in Section 3.12.

### **3.4 AREAS OF SPECIALIZATION**

The Environment and Natural Resources Graduate Program offers degrees in seven Areas of Specialization: Ecological Restoration, Ecosystem Science, Environmental Social Sciences, Fisheries and Wildlife Science, Forest Science, Rural Sociology, and Soil Science. Doctoral students may choose any Area of Specialization in which their advisors hold faculty appointments (see Appendix A). If the student chooses, and follows the specialization requirements (see Section 3.8.3), the student may have one or multiple Areas of Specialization designated on his or her transcript. The student must inform the SENR graduate program office to submit the Graduate Specialization Transcript Designation form to the Graduate School via GradForms. If the student does not wish to have a specific Graduate Specialization designated on the official transcript, graduate coursework may be determined solely by the student and the advisor and Advisory/Examination Committee.

ENR graduate students are not eligible to receive a Graduate Minor in Soil Science, Environment and Natural Resources, or Rural Sociology. However, students are permitted to declare and fulfill the requirements for more than one Area of Specialization as long as courses are not double-counted. Students seeking multiple Areas of Specialization should have either an advisor who is a member of both specializations, a co-advisor in the second specialization, or a member of their Advisory/Examination Committee who is a member of the second Area of Specialization.

### **3.5 THE ADVISOR**

Each student shall have an advisor who is a regular faculty member in the Environment and Natural Resources Graduate Program and holds category P status in the Graduate School. The advisor is primarily responsible for guiding the student through the PhD program and chairs the student's Advisory/Examination Committee. Students are not admitted to the program unless a faculty member has agreed to advise them. Thus, student-advisor linkages are determined through communication between the applicant and the potential advisor prior to final admission. Once admitted, students may change advisors by following the procedure in Section 3.6 below.

### **3.6 CHANGING ADVISORS**

Students may petition the Graduate Studies Committee to change advisors at any time after their admission. To do this, a student must submit a request for change of advisor to the Graduate Studies Committee chair and stipulate the reasons for the requested change. The student must obtain a letter from the prospective new advisor indicating his or her willingness to assume that role and stipulating any conditions attached to that acceptance. Upon receipt of those letters, the Graduate Studies Committee will review the request and may request input from the current advisor, members of the student's Advisory/Examination Committee, and additional information from the student and the proposed new advisor. A decision will be rendered within 30 days of the receipt of the written request.

If a faculty advisor leaves the university prior to the student's completion of degree requirements, the student's current advisor will assist the student to select a new faculty advisor. The current advisor, new advisor, and student must inform the Graduate Studies Committee of the change as soon as possible so that arrangements can be made with the Graduate School for the faculty member leaving the university to continue to serve as co-advisor or committee member if desired PRIOR to the departure date of the faculty member.

### **3.7 ADVISORY/EXAMINATION COMMITTEE**

As soon as possible after entering the doctoral program, the student and his or her advisor must select an Advisory/Examination Committee and submit the Dissertation Topic and Advisory/Examination Committee for Doctoral Degree Students form by the eighth Friday of the student's second semester in the program, usually by March 1 of spring semester. Upon receipt of this form, the Graduate Studies Committee chair will appoint a Program Representative to the Advisory/Examination Committee.

The role of the Advisory/Examination Committee is four-fold: 1) guide the student in the preparation of the Program of Study, the development of the Dissertation Proposal, and the initiation of the dissertation research project; 2) serve as the examining committee for the Candidacy Examination; 3) advise the student in carrying out the doctoral research project and the preparation of the dissertation; and 4) serve as the examining committee for the Final Examination.

The Student's Advisory/Examination Committee shall comprise the student's advisor, who must be a Category P member of the Environment and Natural Resources graduate faculty and two additional members of the university graduate faculty who hold Category P appointments. Graduate faculty members with Category M appointments may serve on doctoral Advisory/Examination Committees with the approval of the Graduate Studies Committee. Doctoral Soil Science specialization students must have a minimum of three graduate faculty committee members, including one who is not a Soil Science faculty member (either from ENR in another Area of Specialization or from another department in the university) in order to foster cross-disciplinary investigation and innovation.

Adjunct and visiting faculty at The Ohio State University, faculty at other colleges and universities, and other qualified professional scientists may serve on doctoral Advisory/Examination Committees with the approval of the Graduate Studies Committee and the Graduate School. These "extra" members shall serve in addition to the required three members who hold graduate faculty appointments at The Ohio State University. Students must submit a Committee and Examination Petition on GradForms and have it approved by their advisor. It will then be considered by the Graduate Studies Committee and, if approved, will proceed to the Graduate School for final approval. These petitions for "extra" members should be submitted when the signed Dissertation Topic

and Advisory/Examination Committee for Doctoral Degree Students form is submitted.

The Graduate Studies Committee chair, in cooperation with the student's advisor, shall appoint a fourth member to each student's Advisory/Examination Committee who shall serve as Program Representative through the Candidacy Examination. This person must be a member of the Environment and Natural Resources graduate faculty and shall be a full, voting member of the student's Advisory/Examination Committee, which includes giving at least one question for the written portion of the Candidacy Examination. The Program Representative should be a faculty member who can contribute to the student's research, but also remain objective and ensure that graduate program and Graduate School rules and procedures are adhered to as the student prepares for candidacy.

After the student passes his or her Candidacy Examination, the Program Representative departs the Advisory/Examining Committee, leaving a three-person committee to continue guiding the student's doctoral research and the preparation of the final dissertation. If the student, advisor, and Program Representative wish to retain the Program Representative on the Final Examination committee, then the student will go forward with a four-member committee. For the Final Examination, the Graduate School appoints a Graduate Faculty Representative who will serve as a full, voting member of the student's Final Examination committee.

Unless significant changes occur in the student's program direction or personal conflicts arise, the members of the student's Advisory/Examination Committee should remain unchanged through the duration of the student's program, except for the special cases of the Program and Graduate Faculty Representatives. Changes in the composition of the Advisory/Examination Committee must be approved by the Graduate Studies Committee. The student must submit a letter justifying the change, the "old" and "new" committee members must sign the agreement, and the advisor must demonstrate support for the change by signing the student's letter or by submitting an additional letter.

### **3.8 DEGREE REQUIREMENTS**

Students admitted to the Regular doctoral program should already hold an earned thesis master's degree in a related environmental and natural resources field. Those students must complete the degree requirements described in this Section. Students who are admitted to the Direct-Admit doctoral program with only a bachelor's degree or a bachelor's degree with a professional or non-thesis graduate degree must complete the requirements listed in this section in conjunction with those listed in Section 3.12.

<b>Requirements for Regular PhD</b>	<b>Approximate Semester Credits</b>
Competency Requirement*	1-7*
Core Courses	8
Area of Specialization Courses	13 minimum
Methodology Courses	9 minimum

Dissertation Research (ENR 8998)	20 maximum
Total Credits	50**

\*Not applicable to 50-credit minimum.

\*\*Assumes 30-hour master's degree, plus 50 post-master's doctoral coursework for a total of 80 minimum PhD credit hours (Graduate School Handbook, VII.2).

### 3.8.1 Competency Requirements

All doctoral students must show competency in ecology and an environmentally relevant area of the social sciences, e.g. if in a social science specialization the competency should be shown in the natural/physical/biological sciences or if in a natural/physical/biological science specialization the competency should be shown in the social sciences. This can be done by taking or having taken one undergraduate- or graduate-level course in ecology/ecosystem science or one undergraduate- or graduate-level course in environmental decision making, economics, law, policy, or sociology. Courses used to satisfy the Competency Requirements should be determined by the faculty advisor. Competency credits may not be included in the minimum number of credits required for the doctoral degree.

### 3.8.2 Core Requirements (8 Credits)

All doctoral students must complete the following core requirements that are designed to acquaint them with the broad paradigms of scientific research in environmental and natural resource science.

#### **ENR 8980** Environment and Natural Resources Seminar (1 credit)

All doctoral students shall enroll in the Environment and Natural Resources Seminar (ENR 8980) each autumn and spring semester until they pass their Candidacy Examinations. Only 5 credits of ENR 8980, however, may be listed on the Program of Study. In the event that a student is out of the Columbus area for fieldwork, enrolls in a course that conflicts with the Seminar, or cannot attend for some other reason, the student must request a waiver of the Seminar requirement by emailing the Graduate Studies Committee chair. If approved, a copy of the email is placed in the student's file in the SENR graduate program office. It is recommended that students keep a copy for their personal records. Following admission to Candidacy, students are expected to attend, but not enroll in, ENR 8980 seminars. Each doctoral student must present a seminar on his or her research area after passing the candidacy exam and before graduation as part of the Natural Resources Seminar Series (see Section 3.15). If a student is absent from attending a particular seminar, the absence may be "made up" by submitting a summary of another seminar attended to the "instructor" or seminar coordinator for the given semester.

#### **ENR 8785** Research Paradigms (3 Credits)

An examination of research paradigms and techniques used in the disciplines involved in environmental and natural resource science and management. Offered spring semester during odd years. If a student is away from Columbus during the semester of offering, the student should consult with the instructor(s) of the course to make alternative arrangements for attendance.

### 3.8.3 Area of Specialization Courses (13 Credits)

Working with the advisor and Advisory/Examination Committee, students must select and complete a minimum of 13 credits of graduate course work. If the student wishes to have a specific Graduate Specialization designated on their official transcript, there must be 10 hours of coursework (listed in either the Area of Specialization or the Methodology sections) from the approved course lists in the student's Area of Specialization (see Appendix A) on the Program of Study, in addition to any specific specialization requirements listed below and in Appendix A. If the student does not wish to have a specific Graduate Specialization designated on their official transcript, the graduate coursework may be determined by the student and the advisor and Advisory/Examination Committee.

### 3.8.4 Methodology Courses (9 Credits)

Methodology or techniques courses are considered to be important parts of any doctoral student's research preparation. Direct-Admit PhD students are permitted to include ENR 6000 (Research in Environment and Natural Resources) as a methodology course on the Program of Study. Direct-Admit PhD students are encouraged but not required to take ENR 6000, depending on the advisor's recommendation.

### 3.8.5 Research Credits (20 Credits)

It is assumed that doctoral students will spend some part of every semester designing or working on their dissertation research. Therefore, all doctoral students must enroll for ENR 8998 credit every semester and include a maximum of 20 credits of ENR 8998 on their Program of Study. While students will accumulate more than 20 credits of ENR 8998, only 20 credits may be applied to Regular PhD students' Program of Study. Direct-Admit PhD students may only include a maximum of 30 credits of ENR 8998 on their Program of Study.

The number of ENR 8998 credits taken each semester should reflect an honest assessment of the amount of time spent working on dissertation research. Students and advisors should be aware of the Graduate School's restrictions on credits that may be taken by post-Candidacy doctoral students. Post-Candidacy students wishing to enroll for more than three credit hours must consult with the Graduate Studies Committee chair and the SENR graduate program office for the current interpretation of the three-credit-hour rule.

### 3.8.6 Program of Study (POS)

No later than the end of the second semester that the student is enrolled in the program, he or she shall submit an approved Program of Study (POS) to the SENR graduate program office. Part-time doctoral students must include a schedule for meeting all deadlines stipulated for the program with their Programs of Study. This schedule must be approved by the Graduate Studies Committee.

At least 40 credit hours of the total 50 credit hours for Regular PhD students, and 64 credit hours of the total 80 credit hours for Direct-Admit PhD students (or eighty percent) must be completed at this university over a period of at least two semesters in order to earn a PhD degree in the Environment and Natural Resources Graduate Program from The Ohio State University. Also, there is a limit of five credit hours of Independent Study (ENR 6193) that may be applied to the Area of Specialization courses on a Program of Study.

The Program of Study sets forth the detailed course and credit requirements for the degree. All courses listed on the POS must be completed before the student may take the Candidacy Examination. All Regular PhD Programs of Study must include ENR 8785, up to five credits of ENR 8980, a minimum of 13 Area of

Specialization credits, a minimum of 9 Methodology credits, and a maximum of 20 credits of ENR 8998. Further, the POS must indicate the courses that the student is using to satisfy the competency requirement.

The student must work closely with his or her advisor and Advisory/Examination Committee in designing the Program of Study. While Programs of Study will vary among students with different scholarly interests, all should be designed to prepare the student for the Candidacy Examination and for successful pursuit of dissertation research. Further, the POS must combine depth and breadth or course work designed to foster research and scholarship in the student's Area of Specialization.

The POS is to be prepared on the Program of Study for Regular (or Direct-Admit) Doctoral Students form that is available online from the School website. The POS must be approved and signed by the advisor, all members of the Advisory/Examination Committee (including the Program Representative), and the Graduate Studies Committee chair.

Changes in the Program of Study must be approved by the student's advisor and Advisory/Examining Committee and reported to the Graduate Studies Committee prior to the semester in which the course changes are to be implemented.

The Graduate Studies Committee reviews each Program of Study for compliance with rules of the program and the Graduate School, including required course work, seminars, research credits, and the acceptability of the courses used to satisfy the Competency Requirement (see Section 3.8.1). They also determine whether the selected course work reflects a program within the fields of environmental or natural resources science, and whether the overall program described in the POS meets the expectations for scholarship as defined by this faculty and set forth at the beginning of this Handbook.

### **3.9 CREDITS AND GRADE POINT AVERAGE**

A minimum of 80 graduate credits beyond the baccalaureate degree is required to earn a doctoral degree. If the student has earned an accredited master's thesis degree, then a minimum of 50 graduate credits beyond the master's degree is required. A thesis-based master's degree earned at another university may be transferred to this university (Graduate School Handbook, IV.2, VII.2, VII.14).

If the earned master's degree is from The Ohio State University, and that student has earned graduate credit in excess of the minimum required for that degree, no additional steps are needed in order to apply that credit towards the 50 post-master's graduate credit hours required for the doctoral degree. No ENR 8998 credits may be included in this transfer of credits to the doctoral program.

A non-thesis master's degree may not be transferred towards the completion of a PhD. However, Direct-admit PhD students who have earned a non-thesis master's degree may transfer credit from individual courses that were used in the completion of the non-thesis master's degree. The student, together with his or her advisor, must identify previously-completed courses whose curricula match the requirements of an SENR graduate specialization. These courses will then be considered for approval by the Graduate Studies Committee by the process outlined in the Graduate School Handbook section 4.2.5. Credit transferred from a non-thesis master's degree may not exceed 30 credits; however, the policies on graduate credit earned in excess of the master's degree still apply (Graduate School Handbook 4.2.7)



Students must maintain a cumulative grade point average of 3.0 for all graduate course work completed at this university to qualify for graduation.

### **3.10 RESIDENCY REQUIREMENT FOR THE PHD**

The purpose of the residency requirements is to give students the opportunity to engage in intensive, concentrated study over an extended period of time in association with faculty members and other students in an atmosphere conducive to a high level of intellectual and scholarly activity. (Graduate School Handbook, VII.2).

The following requirements must be fulfilled after the thesis master's degree has been earned or after the first 30 hours of graduate credit have been completed:

- a. A minimum of 24 graduate credit hours required for the Ph.D. must be completed at this university. (Graduate School Handbook, VII.8)

### **3.11 TIME TO DEGREE**

Full-time Regular doctoral students should complete course work and take their Candidacy Examinations by the end of their second year in the program and complete all degree requirements in three years. Full-time Direct-Admit doctoral students must take their Candidacy Examinations by the beginning of their third year in the PhD program and may take four years to complete their degrees. It is understood that certain types of research and data collection may extend the time to degree completion.

Students deemed to be making reasonable progress may remain in the pre-candidacy stage of the doctoral program for as long as five years with concurrence of their advisors, their Advisory/Examination Committees, and the Graduate Studies Committee.

Part-time doctoral students will require more time to complete their degree requirements. These students must include with their Programs of Study a schedule for meeting all deadlines stipulated for the program. This must be approved by the Graduate Studies Committee.

The Five-Year Rule of the ENR Graduate Program applies to courses used to satisfy doctoral degree requirements (see Section 6.4). This Five-Year Rule is unique from the Graduate School five-year limit on candidacy examinations (Graduate School Handbook, VII.8).

### **3.12 SUPPLEMENTAL REQUIREMENTS FOR DIRECT-ADMIT STUDENTS**

Students admitted to the PhD Program who hold only a bachelor's degree will be required to satisfy all of the requirements for the Environment and Natural Resources PhD Degree (see Sections 3.1-3.11) plus those listed here:

- a. By the end of the sixth semester in the program the student must submit to the Graduate Studies Committee a scholarly paper, approved by the student's Advisory/Examination Committee, that includes empirical data or is a substantive review and critique of a significant problem in the student's area of study, and is the student's original work. Submit the Direct-Admit Doctoral Student Scholarly Paper Proposal form, signed by the advisor, to the Graduate Studies Committee by the end of the fifth semester. Submit the

Direct-Admit Doctoral Student Final Scholarly Paper form with the complete final paper to the Graduate Studies Committee by the end of the eighth semester.

b. Complete both portions of the Candidacy Examination by the end of the seventh semester in the program, and if a second exam is necessary, complete it by the end of the eighth semester.

c. If the student fails the second Candidacy Examination, that student shall be placed in the Master of Science program and will be awarded a master's degree upon submitting and successfully defending a master's thesis.

Direct-Admit PhD students must include the following minimum credit hours on the submitted Program of Study:

<b>Requirements for Direct-Admit PhD</b>	<b>Approximate Semester Credits</b>
Core Courses	8
Area(s) of Specialization Courses	27 minimum
Methodology Courses	15 minimum
Dissertation Research (ENR 8998)	30 maximum
Total Credits	80

### **3.13 CANDIDACY EXAMINATION**

The Candidacy Examination is a single examination consisting of two portions: written and oral. It is administered under the auspices of the Graduate Studies Committee and is carried out by the student's Advisory/Examination Committee. The student's advisor acts as chair of the Candidacy Examination and is responsible for coordinating and conducting both the written and oral portions. The oral portion of the Candidacy Examination must take place during announced university business hours, Monday through Friday on either the Columbus or Wooster campus. If not all Advisory/Examination Committee members can be physically present, a Petition for Graduate Committee and Examinations form may be submitted through [gradforms.osu.edu](http://gradforms.osu.edu) no later than two weeks prior to the examination. Refer to the Graduate School Handbook for the complete guidelines for videoconferencing.

#### **3.13.1 Purpose**

The Candidacy Examination tests the doctoral student's knowledge of his or her Area of Specialization, capacity to undertake independent research, and ability to think and express ideas clearly. See the Graduate School definition of candidacy in the Graduate School Handbook, VII.8.

#### **3.13.2 Schedule and Notification**

The Candidacy Examination may be scheduled at any time thought appropriate by the student and his or her Advisory/Examination Committee, but it may not be taken until all coursework on the Program of Study, excluding ENR 8998, is completed. Further, it must be successfully completed at least two semesters or one semester and a summer term before graduation. During the term in which the examination is administered, the student must be in good standing and registered for a minimum of three graduate credits for the term in which any part of the candidacy examination is taken. Students who plan to take the candidacy examination during the summer term are responsible for making certain that committee members are on duty in the summer. Graduate students holding Graduate Associate appointments must be registered for a full-time credit load during the semester in which any part of the Candidacy Examination is taken (see Section 6.1).

Once the written examination has been scheduled, the advisor must report the details of format, schedule, and evaluation procedure in writing to the Graduate Studies Committee no later than two weeks prior to the beginning of the written portion in order to confirm that the student has completed all courses on his or her Program of Study. The student must submit an Application for Candidacy through gradforms.osu.edu at least two weeks prior to the date of the oral portion of the examination. Once the Graduate School receives the Application for Candidacy form, they will generate a Report on Candidacy form in gradforms.osu.edu for the advisor and committee members. At this point, no changes or substitutions to the Advisory/Examination Committee are permitted without prior approval from the Graduate School. If changes are made without Graduate School approval, the examination must be postponed until approval is acquired; if the examination proceeds without prior approval, the examination may be considered invalid.

At the conclusion of the oral portion of the Candidacy Examination, all members of the committee must electronically complete the Report on Candidacy form through gradforms.osu.edu. This must be completed within one working day of the completion of the exam. The Report on Candidacy must be completed and submitted whether the results are satisfactory or unsatisfactory.

### 3.13.3 Written Portion

**a. Procedures:** The format and schedule of the written portion of the Candidacy Examination is determined by the Advisory/Examination Committee. The advisor is responsible for coordinating the written examination.

**b. Waiver:** If, based on evaluation of the written portion, the Advisory/Examination Committee members see no possibility for a satisfactory performance on the Candidacy Examination, the student may waive the right to take the oral portion. The Advisory/Examination Committee may not, however, deny a student the opportunity to take the oral portion. If the student decides to waive the right to take the oral portion, he or she must provide the Advisory/Examination Committee with a written statement explaining that decision. In such cases, the Advisory/Examination Committee records an “unsatisfactory” on the Report on Candidacy and submits the appropriate copies to the Graduate School and the SENR graduate program office. For second Candidacy Examinations procedures, see Section 3.13.6.

### 3.13.4 Oral Portion

The oral portion of the Candidacy Examination, normally two hours long, must be completed within one month of the conclusion of the written portion.

**a. Attendance:** Attendance at the oral portion of the Candidacy Examination is limited to the student and members of the Advisory/Examination Committee. All members of the Advisory/Examination Committee

must be in attendance during the entire oral examination and are expected to participate fully in the questioning, discussion, and decision making. If not all Advisory/Examination Committee members can be physically present, a Petition for Graduate Committee and Examinations form may be submitted to the Graduate School no later than two weeks prior to the examination. Refer to the Graduate School Handbook, Appendix B, for the complete guidelines for Videoconferencing.

**b. Postponement:** The oral portion of the Candidacy Examination is expected to be held as scheduled. Circumstances, however, may force postponement. Before taking this action, the advisor must consult the student and the members of the Advisory/Examination Committee and must then notify the Graduate School and the Graduate Studies Committee of the new date, time, and location for the examination. Once formal questioning has begun, the examination must proceed to a voting conclusion.

### 3.13.5 Candidacy Examination Results

The decision regarding the outcome of the Candidacy Examination (including both written and oral portions) is reached by the full Advisory/Examination Committee at the conclusion of the oral portion in the absence of the student. After discussion, the satisfactory / unsatisfactory decision is made by vote.

**a. Satisfactory:** The student is considered to have completed the Candidacy Examination successfully only when the decision of the Advisory/Examination Committee is unanimously affirmative.

**b. Unsatisfactory:** If there are one or more negative votes, the student's performance will be judged unsatisfactory. In such cases, the Advisory/Examination Committee must decide if the student will be permitted to take a second examination. This decision must be reported on the Report on Candidacy.

Members of the Advisory/Examination Committee indicate their concurrence with the decision by selecting the appropriate box on the electronic Report on Candidacy available through [gradforms.osu.edu](http://gradforms.osu.edu).

### 3.13.6 Second Candidacy Examination

The nature of the second examination will be determined by the Advisory/Examination Committee, but it must include both written and oral portions. Further, the Advisory/Examination Committee must be the same as for the original examination, unless a substitution is approved in advance by the Graduate Studies Committee and the Graduate School. A second Candidacy Examination may not be taken in the same semester or summer term during which the first Candidacy Examination was attempted. A second Candidacy Examination must be completed no later than two semesters or one semester and a summer term before graduation. When submitting the Application for Candidacy Exam to the Graduate School for the second time, the student should inform the Graduate School that this is the second examination so that a Graduate Faculty Representative may be assigned.

### 3.13.7 Repeat Examinations

No student is permitted to take the Candidacy Examination more than twice. Any student whose performance is recorded as unsatisfactory on two attempts at the Candidacy Examination is not permitted to continue enrollment in the Environment and Natural Resources Graduate Program or in any other doctoral program at The Ohio State University (Graduate School Handbook, VII.7).

### 3.13.8 Review

Decisions to fail a student on his or her Candidacy Examination are subject to appeal and review. On written appeal by the student or a member of the Advisory/Examination Committee, the Graduate School will ask the Graduate Council to review the Candidacy Examination to ensure that it was conducted fairly and without prejudice to the student and according to the rules of the Environment and Natural Resources Graduate Program and the Graduate School. The Council has established review procedures which are available in the Graduate School Handbook, Appendix D.

### **3.14 CANDIDACY**

Provided that the student is in good standing (see [Section 7.1](#)) at the end of the semester in which the Candidacy Examination is completed, satisfactory completion of that examination admits the student to candidacy for the doctoral degree at the end of that semester. Candidacy signifies that the student is judged to be prepared to undertake work on the dissertation. Effective for all students who were admitted to the Graduate School autumn semester 2008 and after (or previously admitted students who are reactivated after a more than two-year absence), all students who successfully complete the doctoral candidacy examination will be required to be enrolled in every semester of their candidacy (summer excluded) until graduation. Students must be enrolled for at least three credits per semester. Under normal conditions, students will enroll only in ENR 8998 after advancing to candidacy. Post-Candidacy students wishing to enroll for more than three credits of course work must consult with the Graduate Studies Committee chair and the SENR graduate program office for the current interpretation of the three-credit-hour rule. Continuous enrollment is required every autumn and spring semester post-candidacy (summer excluded) unless a leave of absence is requested and approved prior to non-enrollment. Please read the Graduate School Handbook VII.8 very carefully about continuous enrollment, consequences of non-enrollment, and requests for leaves of absence.

### **3.15 SCHOLARLY SEMINAR**

Each doctoral candidate must present a scholarly seminar on his or her research area (not the dissertation research and/or findings) after passing the candidacy exam and before graduation. This seminar must be presented as a specially organized, public seminar offered under the auspices of the candidate's graduate specialization.

Doctoral candidates must work with the appropriate specialization representative to the Graduate Studies Committee to schedule a time and place for their seminar or determine whether a presentation as part of the SENR Seminar Series is appropriate; see SENR website under Current Students, PhD Students or see the SENR graduate program office for the most current specialization representative contact information. The seminar should be scheduled the semester before the semester during which the candidate is expected to present the seminar. When a date, location, and seminar title are finalized, the doctoral candidate must submit the Doctoral Scholarly Seminar form to the SENR graduate program office.

Doctoral candidates may not present their scholarly seminar during the summer term. The Graduate Studies Committee chair will not approve the application to graduate until the scholarly seminar has been presented. Therefore, doctoral candidates must plan ahead so they can complete this requirement prior to graduation.

### **3.16 DISSERTATION REQUIREMENTS**

The central focus of the PhD degree is the development of a scholarly research dissertation. Scholarly research encompasses activities that probe in depth what is known about a subject or a problem under investigation, identifying questions at the edge of the unknown, proposing hypotheses and pursuing

information that might contribute to seeking answers and insights to those questions to the satisfaction of critical peer review. The goal is to expand the body of knowledge in a given field. Scholarly work, therefore, consists of the (a) acquisition of significant and extensive knowledge in an area or areas of study, (b) synthesis and description of the diverse aspects of knowledge, and (c) creative proposition and investigation of a novel aspect or new idea which purports to expand, alter, or clarify the status of knowledge. Stated simply, doctoral dissertation research should make a contribution to the body of knowledge. Thus, the development of a scholarly research dissertation is not a trivial exercise.

### 3.16.1 Dissertation Topic

Students shall select a dissertation topic by the end of their second semester in the program, generally the spring semester, and report that topic to the Graduate Studies Committee using the Dissertation Topic & Advisory Committee for Doctoral Degree Students form available on the School website.

### 3.16.2 Dissertation Proposal

All students shall prepare a dissertation proposal during their first year in the PhD program. This should be a collaborative effort between the student and his or her advisor and Advisory/Examination Committee. Guidelines for preparing the dissertation proposal are provided in Appendix C.

The dissertation proposal, approved by the student's advisor and Advisory/Examination Committee, shall be submitted to the Graduate Studies Committee by the fourth semester of enrollment or prior to the Candidacy Examination. The proposal must be accompanied by the completed Dissertation Topic & Advisory Committee Form.

The Graduate Studies Committee chair shall review the submission to ensure that the proposed research falls within the generally recognized bounds of the field of environment and natural resources, and that it adheres to the standards of scholarship set forth by the graduate faculty and listed in the front of this Handbook. If it does, then the Graduate Studies Committee chair will sign and return the form to the SENR graduate program office. If it does not, then the Standard Operating Procedures (see Appendix B.3) shall guide handling of the case. Any faculty member of the Environment and Natural Resources Graduate Program may review a proposal by requesting a pdf copy of the proposal via email from the SENR graduate program office.

The dissertation proposal is meant to be reasonably flexible to allow students to develop and carry out their research as they, their advisor, and their Advisory/Examination Committee see fit. If, however, the research direction is altered to such an extent that there is a significant change in the theory bases or bodies of knowledge being pursued, the student shall inform the Graduate Studies Committee and file an amendment to the dissertation proposal. This amendment must be approved in writing by the student's advisor.

### 3.16.3 Draft Approval and Notification of Final Oral Examination

In order to be eligible to schedule the Final Oral Examination, the student must apply to graduate for the term any part of the examination is to be held (see Section 3.18). The student must submit via email a completed, typed dissertation draft to the graduate program coordinator and to the Advisory/Examination Committee (see Section 3.7) no fewer than three weeks prior to the date of the Final Oral Examination (see Section 3.17); this is to ensure that the committee has sufficient time to review the draft before approving it. Approval of the dissertation draft indicates that the members of the Advisory/Examination Committee judge it to be a complete document (e.g. no unfinished chapters or sections) and of sufficient quality to warrant holding the Final Oral

Examination. Each Advisory/Examination Committee member indicates approval of the dissertation draft by approving the Application for Final Exam, which must be submitted by the student in GradForms and approved by all members of the committee no later than two weeks before the date of the Final Oral Examination . Additionally, the student must submit to the SENR graduate program office an Exit Seminar form for the open portion of the Final Oral Examination, as stated in [Section 3.17.1](#)). The student is also responsible to deliver, in person, a printed copy of the dissertation for format review to the Graduate School by the same deadline. Once the Graduate School approves the Application for Final Examination, the examination committee members are sent in GradForms a Report on Final Exam and a Report on Final Document. If a student is not able to deliver the form and draft in person, the student should make arrangements with the SENR graduate program office to ensure the form is received in the Graduate School by the published deadline. Once the Graduate School receives the Application for Final Examination, no changes or substitutions to the Advisory/Examination Committee are permitted without prior approval from the Graduate School. If changes are made without Graduate School approval, the examination must be postponed until approval is acquired; if the examination proceeds without prior approval, the examination may be considered invalid.

#### 3.16.4 Format Review

The student must submit the complete, typed dissertation draft to the Graduate School for format review no later than two weeks before the date of the final defense. The dissertation must conform to Graduate School format requirements as described in the Guidelines for Preparing and Submitting Theses, Dissertations and D.M.A. Documents, available on the Graduate School website. The involvement of the Graduation Services area in dissertation preparation is limited to standardizing the format and arrangement of content. Specific content matters are handled between the student and the advisor. Approved dissertations must be submitted electronically to OhioLINK and the Final Approval form must be submitted by the published deadlines for the student to be eligible for graduation during the given semester.

#### 3.16.5 Approval

The final approval of the dissertation cannot occur until the Final Oral Examination has been completed satisfactorily and all changes required by the Advisory/Examination Committee have been incorporated. Each member of the Advisory/Examination Committee indicates approval by checking the appropriate box in the Report of Final Document form available through [gradforms.osu.edu](http://gradforms.osu.edu) by the published deadline for the semester of graduation. Examples of graduated PhD student dissertations are available through OhioLink and the SENR website.

#### 3.16.6 Restricted Material

Dissertations must not contain material restricted from publication.

#### 3.16.7 Submission

Approved dissertations must be submitted electronically to OhioLINK, and the Final Approval form and fees must be submitted by the published deadlines for the student to be eligible for graduation during the given semester.

#### 3.16.8 Delay Dissemination

In order to complete degree requirements at Ohio State, students are required to submit their final, approved documents through OhioLINK as a PDF. Documents submitted to OhioLINK are made available to the public

via OhioLINK several weeks after the Graduate School accepts the document as fulfilling that degree requirement. The full text of a dissertation is available through OhioLINK. There is no charge for viewing or downloading a published dissertation on OhioLINK.

Ohio State does allow a delay in the dissemination of the electronic version to the OhioLINK Electronic Theses and Dissertation (ETD) Center, and to ProQuest/UMI for dissertations documents. However, these policies do not prevent the university from providing access to Ohio State theses or dissertations through the libraries. Local access to the material, interlibrary loan, length of loan, and patron confidentiality are determined by the Ohio State libraries.

In certain situations, there may be a reason to delay the electronic distribution of the dissertation. Because the university policy is to disseminate all dissertations as soon as possible, requests for delays must be reviewed and approved by the Graduate School.

Situations in which delaying may be appropriate include (but are not limited to):

- a.** The graduate student wishes to publish an article from the dissertation in a journal whose policy is not to publish anything that has already been disseminated electronically.
- b.** The graduate student is in the process of applying for a patent on research contained in the dissertation and does not wish to make its contents public until the patent application has been filed.

Graduate students can apply to the Graduate School to delay the electronic dissemination of their dissertations and theses for one to five years. Such requests will be reviewed and granted in the Graduate School. Once the initial request has been granted, additional extensions can be requested up to five years total. Graduate students bear the responsibility for requesting extensions. If the Graduate School does not receive a request for an extension, OhioLINK will release the document according to the original schedule.

Graduate students can request a delay when they submit their PDF file to OhioLINK by checking the second button in the Publication section of the Permissions and UMI Publication web page. In the UMI Permissions box, PhD students can choose "Upload my paper to UMI for traditional publishing."

Graduate students must complete and submit the Graduate School's Delay of Dissemination Form, available online. This form can be signed by the graduate student and his or her advisor at the time of the final examination. Turn the completed form in with final paperwork.

Graduate students are responsible for requesting a delay of electronic dissemination and for sending their completed request to the Graduate School for review. If a graduate student checks the OhioLINK delay button but does not obtain approval from the Graduate School, the dissertation will be released for dissemination.

### 3.16.9 Fees

Fees for the doctoral hood (if attending commencement) and processing must be paid to the Graduate School online via the Student Center by the published deadline for the semester of graduation along with the Final Approval form.



### **3.17 FINAL ORAL EXAMINATION**

The Final Oral Examination tests originality, independence of thought, ability to synthesize and interpret, quality of research presented, and contribution to the body of knowledge. The examination is administered by the student's Advisory/Examination Committee and is chaired by the student's advisor. The examining panel also includes a representative from the Graduate School appointed specifically for that examination (see Section 3.17.3). The focus of the examination includes, but is not restricted to, discussion of the dissertation and may cover principles, philosophies and historical perspectives as well as data. The Final Oral Examination must be completed prior to the published deadline for the semester of graduation. Students are strongly advised to schedule their Final Oral Examination at least one month in advance to ensure all members of the Final Oral Examination Committee, including the Graduate Faculty Representative, may attend at the required time. In order to be eligible to schedule the Final Oral Examination, the student must apply to graduate for the term any part of the examination is to be held (see Section 3.18) and submit the Draft Approval/Notification of Final Oral Examination form (see Section 3.16.3).

All doctoral students must present an Exit Seminar on the dissertation research as a part of their Final Oral Examination in addition to the completed Scholarly Seminar (see Section 3.15). He or she must submit the completed Exit Seminar form with the Draft Approval/ Notification of Final Oral Examination form to the SENR graduate program office. The office will produce announcement fliers that can be posted in Kottman Hall and sent to other potentially interested departments and programs. The student is responsible for posting fliers in Kottman Hall.

#### **3.17.1 Scheduling the Final Oral Examination and Exit Seminar**

It is the responsibility of the student to schedule the Final Oral Examination. The examination may be scheduled for up to a three-hour block of time and must be scheduled during announced university business hours, Monday through Friday, on either the Columbus or Wooster campuses.

Within this three-hour block of time, the final oral examination must include two components: (1) an open portion, or Exit Seminar, followed immediately by (2) a closed examination. The first component is open to any faculty member, staff, students, and other guests interested in attending and should be completed in one hour or less, as determined by the Advisory/Examination Committee. This seminar will generally include an overview of the dissertation presented by the candidate and questions from the general audience. All members of the Advisory/Examination Committee should be present for the full seminar and question period with the exception of the Graduate Faculty Representative. The Graduate Faculty Representative is invited, but not required, to attend the Exit Seminar. Immediately following completion of the seminar and question period, the examination will proceed into a closed session in which only the candidate, the Advisory/Examination Committee, including the Graduate Faculty Representative will be present. While different formats are allowed, at least one hour of the examination period must be allotted for the closed examination.

#### **3.17.2 Notification**

Once the dissertation draft is approved by the student's Advisory/Examination Committee, members of the Committee will sign the Draft Approval/Notification of Final Oral Examination form (see Section 3.16.3). This document must be submitted to the Graduate School and the SENR graduate program office not later than two weeks prior to the scheduled date for the Final Oral Examination.

#### **3.17.3 Graduate Faculty Representative**

Once the Draft Approval/Notification of Final Oral Examination form is received in the Graduate School a Graduate Faculty Representative is appointed who will be a graduate faculty category P member who does not

hold an appointment in the School of Environment and Natural Resources and is not a member of the student's Advisory/Examination Committee. Not less than one week before the Final Oral Examination, or as soon as the Graduate School has assigned the GFR (whichever comes first), the student must provide the Graduate Faculty Representative with a dissertation draft (usually a hard copy, such as the one used for the format review at the Graduate School). In addition to being a full voting member of the Final Oral Examination Committee, the Graduate Faculty Representative reports his or her judgement on the quality of the examination, the dissertation, and the student's performance to the Graduate School.

If the Graduate Faculty Representative judges the dissertation to be unsatisfactory, he or she will advise the student's advisor and the Graduate School of that fact not later than one day prior to the Final Oral Examination. After consulting with the student and the members of the Advisory/Examination Committee, the advisor may elect to hold the Final Oral Examination as scheduled or postpone it until the situation is resolved.

In cases where the Final Oral Examination is reviewed, the Graduate Faculty Representative reports to the Graduate Council on the fairness of the conduct of the examination and its conformity to Graduate School rules.

#### 3.17.4 Postponement

The Final Oral Examination must be held at the time and place scheduled unless circumstances prompt the advisor to postpone it. Before taking such action, the advisor must consult the student and the members of the Advisory/Examination Committee, including the Graduate Faculty Representative, and inform the Graduate Studies Committee and the Graduate School.

#### 3.17.5 Attendance of Advisory/Examination Committee

All members of the student's Advisory/Examination Committee must be present during the entire final oral examination (consisting of both the open and closed components). Members of the Advisory/Examination Committee are expected to participate fully in questioning and discussion during the course of the closed portion of the examination and in the decision on results at the end of the examination. If not all Advisory/Examination Committee members can be physically present, a Petition for Graduate Committee and Examinations form may be submitted to the Graduate School no later than two weeks prior to the examination. Refer to the Graduate School Handbook, Appendix B, for the complete guidelines for video conferencing.

#### 3.17.6 Results

Immediately after the Final Oral Examination, the Advisory/Examination Committee will meet alone to discuss the student's performance and determine the outcome. A decision on satisfactory or unsatisfactory performance will be determined by vote. Each examiner will indicate his or her judgment by checking the appropriate section of the Report of Final Examination form available through [gradforms.osu.edu](http://gradforms.osu.edu). Failure to meet this deadline will result in the student being removed from the graduation list (Graduate School Handbook, VII.11).

a. **Satisfactory:** The student is considered to have completed the Final Oral Examination successfully only when the decision of the Advisory/Examination Committee is unanimously affirmative.

b. **Unsatisfactory:** If the examination is judged unsatisfactory, the Advisory/Examination Committee must decide whether the student will be permitted to take a second Final Oral Examination and must record that

decision on the Final Oral Examination Report form.

### 3.17.7 Second Final Oral Examination

If a second Final Oral Examination is held, the Advisory/Examination Committee must be the same as for the first Final Oral Examination unless a substitution is approved in advance by the Graduate Studies Committee and the Graduate School. The second examination is not open to persons other than the Advisory/Examination Committee and the Graduate Faculty Representative. In the instance of a second Final Oral Examination, only the closed portion of the examination need be repeated.

### 3.17.8 Repeat Examinations

No student is permitted to take the Final Oral Examination more than twice. A student whose performance is recorded as unsatisfactory on two attempts at the Final Oral Examination is not permitted to be a doctoral candidate in the Environment and Natural Resources Graduate Program or in any other graduate program at The Ohio State University.

### 3.17.9 Review

On written appeal by the student or a member of the Advisory/Examination Committee, the Graduate School will ask the Graduate Council to review the Final Oral Examination to ensure that it was conducted in conformity with the rules of the Environment and Natural Resources Graduate Program and the Graduate School, fairly and without prejudice to the student. The Graduate Council has established review procedures which are available in the Graduate School Handbook, Appendix D.

## **3.18 APPLICATION TO GRADUATE**

Any student planning to graduate must complete and submit the Application to Graduate form through [gradforms.osu.edu](http://gradforms.osu.edu) not later than the published deadline for the expected semester of graduation. Students must be enrolled and fees paid in the minimum number of credit hours required in order to be eligible to graduate and complete any examinations (see Section 6). The application is good for that semester only. Submitting this application indicates that the student expects to complete all degree requirements by the published deadlines for the semester of graduation. The application must be submitted by the student and approved by his or her advisor and the Graduate Studies Committee chair. The names of the members of the Advisory/Examination Committee and any co-advisors noted must be listed on the application. If the student chooses, and follows the specialization requirements (see [Section 3.8.3](#)), the student may have one or multiple Areas of Specialization designated on his or her transcript, the student must inform the SENR graduate program office to submit the Graduate Specialization Transcript Designation form to the Graduate School.

### 3.18.1 End of Semester Completion

A student who does not meet published graduation deadlines but who does complete all degree requirements by the last business day prior to the first day of classes for the following semester may graduate the following semester without registering or paying fees. Students must have applied to graduate through [gradforms.osu.edu](http://gradforms.osu.edu) and notified the SENR graduate office and the Graduate School.

### 3.18.2 Other Graduation Requirements

To qualify for graduation, students must:

- a. have fulfilled all requirements of the Graduate School as published in the Graduate School Handbook and the Environment and Natural Resources Graduate Program as published in this Handbook; and
- b. have final grades for all courses posted with the University Registrar prior to noon on the Friday before commencement.
- c. complete an in-person exit interview with the school director plus the Graduate Studies Committee chair and/or the graduate program coordinator. The exit interviews will be in individual or small group sessions and must be completed during the expected semester of graduation. The exit interview seeks constructive feedback from graduate students about the graduate program administration, courses, facilities, and other aspects of graduate education in the School of Environment and Natural Resources. Comments and suggestions made in exit interviews will be confidential but may be used to assess and improve the graduate program and to submit performance reports to college and university offices at The Ohio State University.

## **4. THE MASTER OF ENVIRONMENT AND NATURAL RESOURCES GRADUATE PROGRAM (MENR)**

### **4.1 PURPOSE**

The Master of Environment and Natural Resources is an applied graduate degree for practicing professionals and others who want to enhance their professional competency in environmental and natural resource science and management. The MENR is a separate program from the Master of Science for students seeking a theory-into-practice orientation that does not require a thesis. The MENR provides a rigorous but flexible program, creating valuable educational and training experiences for persons planning for or already engaged in professional careers in environmental or natural resources management, administration, planning, or education. Students in the MENR program can extend their breadth and depth of knowledge and expertise in environmental and natural resource science and management beyond that acquired during bachelor's degree programs and at the same time improve their professional skills, enhance their network of experience, and gain additional experience with professional practice.

Matriculated MENR students who wish to transfer to the MS or PhD degree programs should consult the Standard Operating Procedures (see [Appendix B 4.2](#)) and discuss their interest with their potential MS or PhD faculty advisor, the Graduate Program Coordinator, and the MENR Director.

### **4.2 THE MENR DIRECTOR**

The Director of the School of Environment and Natural Resources shall designate and appoint a faculty member to serve as the MENR Director to guide and oversee the administration of the MENR program. This shall be a 50% appointment. The roles of the MENR Director shall include but not be restricted to: promoting the program to potential clientele groups; recruiting students; advising students on their internship and seminar experiences; serving on the Environment and Natural Resources Graduate Studies Committee; serving on the MENR Exam Grading Committee; and advising the Graduate Studies Committee chair and the School Director on policy and administrative matters involving MENR students. The policy-making body for the MENR will be the Graduate Faculty in the Environment and Natural Resources Graduate Program working through the Environment and Natural Resources Graduate Studies Committee.

### 4.3 PROGRAM COORDINATOR

The Program Coordinator is an administrative staff member working with all graduate programs. Each MENR student shall meet with the Program Coordinator to seek basic academic advising as they complete their program. The Program Coordinator will work with students to help them narrow their Program of Study choices and direct students toward appropriate resources. The Program Coordinator will also support the MENR Director with recruiting and admission efforts, administering the network and internship experience components of the MENR program, as well as managing program information and records.

### 4.4 MENR EXAM GRADING COMMITTEE

The MENR Exam Grading Committee (EGC) will guide and oversee the administration of options 1 and 2 for the MENR Master's Exam (see section 4.5.5). The EGC will be composed of the MENR Director and graduate faculty who represent MENR specializations. Members of the EGC will be appointed by the SENR Director in collaboration with the Graduate Studies Committee Chair. The EGC Chair is elected by the Exam Grading Committee from among its faculty members, serves for one year and may be re-elected. The EGC Chair will assign at least two EGC members to serve as graders for each MENR student completing a Master's Exam under option 1 or 2. The EGC can also engage external practicing professionals with relevant expertise to assist with the review of papers or exams. These external reviewers would be advisory to the EGC to provide added depth to an examination review and guidance for the graduate faculty. They would not be members of the committee or have a final decision related to a student's passing or failing of an exam.

### 4.5 DEGREE REQUIREMENTS

Requirements for MENR Degree	Semester Credits
Core Courses (3)	8-9
Specialization Courses	13-14
Skills Courses	6
Professional Development Courses	8
Total Credits	36

#### 4.5.1 Core Courses (8-9 Credits)

The Core comprises three courses that provide students with a fundamental understanding of the ecological foundations of environmental and natural resources problems and issues, the legal framework that defines the responsibilities of environmental and resources agencies and organizations, and the processes that underlie environmental management and decision making. These courses serve to develop a breadth of knowledge across the field and are:

- a. ENR 7520 Environmental Science and Law (3 credits)

Introduction to the common and statutory law and administration of environmental protection, with special

emphasis on scientific and technological aspects.

b. One social science course (5000 level or above).

c. One ecology course (5000 level or above).

#### 4.5.2 Specialization Courses (13-14 credits)

Through careful consultation with the Program Coordinator and the MENR Director, students must select courses within their field of study that best support their areas of interest, professional goals, and objectives. Specialization Courses must be selected within a coherent field of study in environment and natural resources; the intention is to allow students to develop a depth of knowledge connected to their career goals. While students are encouraged to take ENR classes as part of their Specialization Courses, student may also include Graduate level courses in other departments, if these courses best support a student's academic path and relate directly to the field.

#### 4.5.3 Skills Courses (6 credits)

Through careful consultation with the MENR Director, students must select courses that help develop skills needed to succeed in their chosen field. These graduate level courses will have direct applicability to a student's career goals and connect to a student's selected specialization.

#### 4.5.4 Professional Development Courses (8 credits)

##### **ENR 7981** MENR Seminar (1 credit, repeatable)

Students must enroll in 7981 for a minimum of two terms. This course provides professional networking opportunities within the ENR field and allows for professional growth through exploration of different career paths. Students who are unable to attend the scheduled meeting times may enroll in the credit and pursue alternate networking opportunities with the permission of the MENR Director.

##### **ENR 7191** MENR Internship: Advanced Professional Practice in Environment and Natural Resources (3 credits)

Students must enroll in ENR 7191 to engage in an experiential internship during their time in the MENR program. The internship should be taken for 3 credit hours and students will spend a minimum of 120 hours throughout the semester/summer engaged with the internship opportunity. This experience must be in a relevant work environment and be approved by the MENR Director. Students may use a paid or unpaid experience to fulfill this requirement. Students currently working in the field may count their current employment as their internship experience with written approval from their employer.

##### **Keystone Course** (minimum 3 credits)

As part of their Program of Study, students will enroll in a 3 credit hour keystone course. This course may be a graduate level ENR course or offered by another department. This course should serve as the culminating academic experience and should provide experience relevant to a student's career goals. This course may be taken during any term of a student's program. The Keystone Course must be designated on the Program of Study.

#### 4.5.5 Master's Examination

During the last term of a student's MENR program, the student will complete the Master's Examination. The Master's Examination will validate a student's scholarship, literacy, and professional competency. There are two main options to fulfill this requirement (options 1 and 2 below). Option 3 will be less common but can be used in cases where a graduate faculty member identifies a project opportunity that is well aligned with a student's career goals and is mutually agreeable to the faculty member and the student.

##### a. Option 1: Scholarly Paper

For this option, students will be required to complete a scholarly paper within their specialization area. By the tenth week of the term prior to graduation, students will submit a topic proposal to the Exam Grading Committee (EGC). The EGC Chair will return the revised and approved proposal to the student no later than the end of the second week of the student's final term. At this time, the student will be notified of the two assigned graders and can then apply for graduation, listing the assigned graders as the committee members. The scholarly paper examination will not include a lengthy review and revision process (as done with a thesis/dissertation) but is considered an assessment of the student's knowledge of the field. The student will submit a draft paper to his or her assigned graders for review by the sixth week of the term. The graders will return the paper to the student with comments by the end of the seventh week of the term. The student will have until the tenth week of the term to complete and submit the scholarly paper for final evaluation. Final papers should be emailed to the assigned graders with the MENR Director and Program Coordinator copied on the email. The EGC will make a determining decision on the paper no later than the Graduate School's published deadlines for regular graduation. Students who do not receive a satisfactory passing evaluation on their scholarly paper will be able to complete a new Master's Examination during a subsequent term (within a reasonable timeframe approved by the Graduate Studies Committee Chair). The Master's Examination process may only be attempted twice no matter what format a student selects.

##### b. Option 2: Comprehensive Exam

For a given term, all MENR students wishing to complete the Master's Examination requirement using this option will be administered the exam during the same standardized four-hour period. Students will be notified no later than the second week of the term of their two assigned graders and the date, time and location of the exam. Students can then apply for graduation, listing the assigned graders as their committee members. Exam questions will be developed by the EGC graduate faculty. The MENR Director will format individual student exams utilizing the developed exam questions. Examinations will be created to evaluate both the core content of the MENR program as well as a student's specialization area. The EGC will evaluate the examinations no later than the published Graduate School deadline for regular graduation. Students who do not receive a satisfactory passing evaluation on their comprehensive exam will be able to complete a new exam during a subsequent term (within a reasonable timeframe approved by the Graduate Studies Committee Chair). The Master's Examination process may only be attempted twice no matter what format a student selects.

##### c. Option 3: MENR Project

A graduate faculty member who sees a direct connection between his or her area of research and a student's career goals and program of study may approach a student about pursuing an MENR Project as a student's Master's Examination and serving as the student's committee advisor. If the student agrees, they will find a second graduate faculty member to serve as a committee member and

contribute to the final project. After discussion with the faculty advisor and committee member, the student would submit a project proposal form to the Graduate Program Coordinator to be reviewed by the MENR Director and the Graduate Studies Chair. The student will then enroll in at least 1 credit of **ENR 7888**. The MENR project must be reviewed and evaluated by the student's advisory committee no later than the Graduate School's deadline for graduation. Students who do not receive a satisfactory passing evaluation on their project will be able to revise and complete the project during a subsequent term (within a reasonable timeframe approved by the Graduate Studies Committee Chair). The Master's Examination process may only be attempted twice no matter what format a student selects.

Students will indicate their choice for the Master's Examination on their Program of Study during their first term in the program. If a student desires to change options, he or she will need to submit a written request to the MENR Director with a detailed explanation for the request. This must be done prior to the eighth week of the term prior to graduation to allow time to accommodate the change if approved. The MENR Director may deny approval if the timeline is not met, or if the reasoning for the change is not justified. Following approval by the MENR Director, the request will be submitted to the GSC chair for final approval.

Students may only attempt the Master's Examination twice, independent of which option is utilized. If a student fails the first attempt, the student may attempt the examination in a subsequent term. Prior to completing a second exam, a student may choose to change options for the examination with the approval of the MENR Director and GSC chair.

#### 4.5.6 Program of Study

The Program of Study (POS) is an official document that stipulates the course work that the student shall complete as part of his or her requirements. Therefore, it is important that the POS be approved relatively early in the student's enrollment. The student will initially meet with the Program Coordinator early during the first term to discuss the POS. Following the initial meeting with the Program Coordinator, the student will meet with the MENR Director for review and approval of the POS. The student will need to submit the POS for approval no later than the 12<sup>th</sup> week of their first term in the program. The POS will be reviewed and signed by the MENR Director and the GSC Chair.

The POS shall include Core Courses, Specialization Courses, Skills Courses, Professional Development Courses (including an identified Keystone Course), and the selected option for the Master's Examination. The course work listed on the POS must entail a cohesive professional program within the field of environment and natural resources. Short courses, workshops, professional training courses and certifications are not appropriate for inclusion in the POS (unless these are included as elements of graduate level courses).

Requests for changes to the POS must be approved by the MENR Director and then by the Graduate Studies Chair prior to the semester in which the course changes are to be implemented.

## **4.6 APPLICATION TO GRADUATE**

Each student must complete an online Application to Graduate through [gradforms.osu.edu](http://gradforms.osu.edu) by the published deadline for the term in which they plan to graduate. The application is valid only for that semester. By submitting this form, the student indicates that he or she expects to complete all degree requirements by the



prescribed deadlines of that semester. The Application to Graduate must be submitted by the student and then approved by his or her advisor (the MENR Director) and the Graduate Studies Committee chair. The MENR Director should be listed as the Advisor, and the assigned EGC graders or advisory committee members should be listed as the committee. Students must be enrolled in and have paid the relevant tuition and fees for the minimum number of credit hours required by the Graduate School to be eligible to graduate.

#### 4.6.1 End of Semester Graduation

A student who does not meet published graduation deadlines but who does complete all degree requirements and has submitted all forms to the SENR graduate program office, as well as having the Master's Examination approved through gradforms.osu.edu by the last business day prior to the first day of classes for the following semester, may graduate the following semester without registering or paying fees. Students who wish to use the End of Semester option must have applied to graduate through gradforms.osu.edu and informed the SENR graduate program office and the Graduate School.

### **4.7 DUAL MASTER'S DEGREE PROGRAMS**

Many aspects of the environment and natural resources intersect and overlap with other areas, such as public agencies, business, law, and planning. Graduate faculty in the School of Environment and Natural Resources and the John Glenn College of Public Affairs, Knowlton School of Architecture's City and Regional Planning, and Fisher College of Business formally cooperate in offering dual degree programs for qualified students wanting preparation for academic and/or professional careers in the natural resources, public policy, and management. Except where modified below, all rules and requirements for each program apply to this dual degree program. Students completing the program will receive two degrees: Master of Environment and Natural Resources and one of the degrees offered by the graduate program in the aforementioned schools and colleges.

- For the John Glenn College, the graduate degree is a Master of Public Administration (MPA).
- For the Knowlton School of Architecture, the graduate degree is a Master of City and Regional Planning (MCRP).
- For the Fisher College of Business, the graduate degree is a Master of Business Administration (MBA).

While there are formal agreements for dual/combined programs between the MENR and these degrees, any graduate student may create an individualized dual degree program as long as the student is admitted by the Graduate Studies Committee in each program and the Dual Degree Program Plan Approval form, available on the Graduate School website, is completed and submitted to the Graduate School as soon as possible and no later than the semester or summer term prior to graduation in one or both degrees.

#### 4.7.1 Admission and Enrollment

Students wishing to enroll in the Dual Master's Degree Program must apply and be admitted to both graduate programs. As part of the application procedure, either before or after the student is admitted to the second program, all applicants must complete the Dual Degree Program Plan Approval form on GradForms and submit it to the Environment and Natural Resources Graduate Studies Committee chair and the second degree's Graduate Studies Committee chair.

Students admitted to the Environment and Natural Resources Graduate Program may subsequently pursue admission to the second program shortly after they matriculate to their primary program. All regular admission procedures and criteria apply to applicants wishing to pursue a Dual Master’s Degree Program. Students admitted to the Dual Master’s Degree Program will need to meet the master’s examination process for both graduate programs.

**4.7.2 Integrated Course Work**

A minimum of 50 percent of the regular course credits applied to either the MENR or the second degree must be unique to each program. The remainder may be applied to satisfy both requirements (dual credit). The sum of the unique credit hours and dual credit hours must be equal to the total number of hours required for the given degree.

The Dual Degree Program Plan Approval form and additional degree requirements are to be discussed and developed in consultation with the MENR Director, the Graduate Studies Committee, and potentially other faculty, in each degree program. Integrating course work requires careful planning. Students should work closely with the MENR Director to make sure the specific agreements between the two degrees are followed.

**1. MPA at the John Glenn College**

<b>Degree</b>	<b>Unique Hours</b>	<b>Dual Hours</b>	<b>Total of Unique &amp; Dual Hours</b>
MENR	At least 18	Up to 18	36
MPA	At least 26	Up to 18	52

**2. MBA in the Fisher College of Business**

<b>Degree</b>	<b>Unique Hours</b>	<b>Dual Hours</b>	<b>Total of Unique &amp; Dual Hours</b>
MENR	At least 18	Up to 18	36
MBA	At least 29 (27 hours of core classes are required)	Up to 18 ~ 12 hours must be ENR ~ 6 hours must be MBA	57

**3. MCRP in the Knowlton School of Architecture**

<b>Degree</b>	<b>Unique Hours</b>	<b>Dual Hours</b>	<b>Total of Unique &amp; Dual Hours</b>
MENR	At least 18	Up to 18	36
MCRP	At least 31 (core classes required)	Up to 18	60

#### 4.7.3 Master's Examination

Students who have completed all other requirements for the Dual Master's Degree Program must satisfactorily complete a Master's Examination in Environment and Natural Resources. Rules for the second degree's examination requirements may be obtained from the other degree's graduate program.

#### 4.7.4 Semester of Graduation

Students in the Dual Master's Degree Program will be officially enrolled at any given time in one or both of the two graduate programs. Prior to submitting Applications to Graduate for both degrees, students should confirm that the Program Plan for Dual Degree form was approved by the Graduate School to ensure that the Graduate School is aware that the student is seeking to graduate with two degrees. Students intending to graduate with one degree in a given semester and the second during a subsequent semester must be enrolled in the appropriate program during the semester of graduation from that program. During any semester in which the student is enrolled in the second degree program only and not in Environment and Natural Resources, he or she must advise the SENR graduate program office and the MENR Director that he or she remains active in the Dual Master's Degree Program.

## **5. REGISTRATION**

The Graduate School Handbook Section III has more general information about the registration and scheduling process. A normal course load per semester is two to three graduate-level classes and research or project hours.

Research or project credit reflects time spent by a graduate student pursuing thesis/dissertation research or the MENR project and time invested by faculty members in supervising such research or project. Therefore, students who in any semester or summer term are spending time on their thesis/dissertation research or MENR project must register for appropriate numbers of ENR 8998 or 7888 credits. While there are no firm rules for the number of credits, a general rule should be that for every two (2) hours per week that the student intends to devote to thesis/dissertation research or MENR project in a semester, he or she should register for one credit of ENR 8998 or 7888. In effect, a student intending to spend approximately 10 hours per week on research or project activities, should register for five (5) credits of ENR 8998 or 7888. See also Sections 2.6.3 and 3.8.5 for requirements to satisfy minimum credit requirements for the MS and PhD degrees.

The maximum credit hour load permitted without approval of the Graduate School is:

- a. Eighteen (18) hours autumn and spring semesters
- b. Twelve (12) hours summer term in any combination of sessions

Graduate students are expected to register each semester online through the Academic Center under Buckeye Link. Registration deadlines for each term are available on the Graduate School and the University Registrar's websites. Graduate associates and fellowship recipients are encouraged to register early for the appropriate number of hours to ensure disbursement of the fee authorization. Students should discuss their scheduling plans with their advisors, especially if they plan to take courses not on their Program of Study. Graduate students may take courses not on their Program of Study but may not graduate until all Program of Study courses have been completed. Students needing assistance with registration and scheduling must contact the SENR graduate program office.

Students who do not register for a semester are not automatically assigned an enrollment appointment for the next semester. In order to be assigned an enrollment segment, students must contact Registration Services in the Graduate School and request to be reactivated and assigned an enrollment window for the specific semester in which they plan to enroll. If a student does not enroll for two years or more, the student must contact the SENR graduate program office to request reactivation in the graduate program.

## **5.1 POST-CANDIDACY DOCTORAL STUDENTS**

For doctoral students who have passed their candidacy examination, it is expected that all Program of Study coursework has been completed and students are enrolling in research credit only, and the following registration criteria apply:

- a. A full-time load for all post-candidacy doctoral students is three credits per semester. This applies to all post-candidacy doctoral students regardless of appointment or funding source. It also applies for international students, Graduate Associates (GAA, GRA, GTA), fellows, and veterans for student health insurance, financial aid, loans, on-campus housing, athletic event ticket eligibility.
- b. Post-candidacy students wishing to enroll for more than three credits of course work must consult with the Graduate Studies Committee chair and the SENR graduate program office for the current interpretation of the three-credit-hour rule.
- c. Effective for all students who were admitted to the Graduate School autumn 2008 and after (or previously admitted students who are reactivated after a more than two-year absence), all post-candidacy doctoral students will be required to be enrolled in every semester of their candidacy (summer excluded) until graduation. Leaves of absence may be requested; see guidelines in the Graduate School Handbook VII.8.
- d. Summer semester enrollment is optional except when the Candidacy and Final Oral Examination or graduation occurs in the summer.

## **5.2 GRADUATE ASSOCIATES AND GRADUATE FELLOWS**

The School of Environment and Natural Resources prefers that full-time MS and pre-candidacy doctoral students enroll in 16 hours (coursework plus research hours) each autumn and spring semester and six (6) each summer term in which they are employed as a GA.

In order to maintain eligibility to receive the monthly stipend, tuition and fee authorization, and student health insurance subsidy, all Graduate Associates (GAA, GRA, GTA) and Graduate Fellows must be enrolled in the appropriate number of hours prior to the week before the day classes begin in a given semester.

Under certain circumstances, non-graduate credit course work may count toward the minimum requirements for GA eligibility (Graduate School Handbook, IV.1), but audited courses do not count. Monitoring the appropriateness of non-graduate credit course work will be the responsibility of the Graduate Studies Committee chair.

Only eligible graduate students may be appointed and serve as Graduate Teaching Associates (GTAs). As established by the Graduate School, "volunteer" GTAs do not exist at Ohio State University, to protect the instructors, graduate students, and the students enrolled in courses from liabilities, grading issues, etc. Graduate students who are appointed as Graduate Fellows on university, OARDC, or external awards may not concurrently hold GA appointments without an advance request to the SENR Associate Director and permission of the Graduate School (Graduate School Handbook, section IX). See Section 9 for other important information for Graduate Associates.

- a. All Graduate Associates on 50% appointments (except post-candidacy doctoral students) must register for a **minimum** of
  - \* eight (8) credits autumn and spring semesters (can include research hours but not audits)
  - \* four (4) credits summer term (can include research hours but not audits)each semester or summer term the appointment is held and when the Summer Fee Authorization is used.
  
- b. Graduate Associates whose appointments permit them to work full time on thesis or dissertation research, such as OARDC Director's, Minority, Thorne, or International Associateships (except post-candidacy doctoral students) must register for a **minimum** of
  - \* eight (8) credits autumn and spring semesters (can include research hours but not audits)
  - \* four (4) credits summer term (can include research hours but not audits)each semester or summer term the appointment is held and when the Summer Fee Authorization is used.
  
- c. All Graduate Fellows (except post-candidacy doctoral students) on University Fellowship or the FAES Environmental Graduate Research Fellowship must register for a **minimum** of
  - \* 12 graduate credits (undergraduate and audit options do not count) autumn and spring - can include research hours
  - \* six (6) graduate credits (undergraduate and audit options do not count) summer term - can include research hourseach semester or summer term the appointment is held.
  
- d. All Graduate Associates on 25% appointments (except post-candidacy doctoral students) must register for a minimum of
  - \* four (4) credits autumn and spring semesters

\* two (2) credits summer term

each semester or summer term the appointment is held and when the Summer Fee Authorization is used.

### **5.3 ALL OTHER GRADUATE STUDENTS**

To be considered full-time, all students (including international students for visa eligibility, unless a reduction is requested through the Office of International Affairs) who are not post-candidacy, Graduate Associates or Graduate Fellows must enroll in a minimum of eight (8) credit hours. Full-time students are eligible for student health insurance and federal financial aid and are responsible for paying the student activity, student union, COTA, RPAC and other fees.

To be considered half-time, all students (including international students for visa eligibility, unless a reduction is requested through the Office of International Affairs) who are not post-candidacy, Graduate Associates or Graduate Fellows must enroll in a minimum of 4-7.99 credit hours each semester. Half-time students are eligible for student health insurance and federal financial aid and are responsible for paying the student activity, student union, COTA, RPAC and other fees.

Students registered less than half-time are not eligible for student health insurance and federal financial aid.

The minimum enrollment for the semester of graduation or in which any part of an examination occurs is three credit hours.

## **6. ACADEMIC STANDARDS**

Students are responsible for being aware of and meeting all university, Graduate School, and Environment and Natural Resources Graduate Program requirements and deadlines.

### **6.1 GOOD STANDING**

Students will be considered to be in good standing as long as their graduate cumulative grade point average is 3.00 or above and they are deemed to be making “reasonable progress” toward their degrees. Students on Conditional status must satisfy all specified conditions by the end of their second semester in the program (see Section 8.8) to remain in good standing (Graduate School Handbook V).

### **6.2 REASONABLE PROGRESS**

A student will be making reasonable progress if he or she maintains a 3.0 cumulative grade point average, is in continuous enrollment (2 semesters/summer terms out of every 3), is meeting the requirements and deadlines established for the degree program (see Section 2 for MS, Section 3 for Regular and Direct-Admit PhD, and Section 4 for MENR), and is meeting the expectations of his or her Advisory/Examination Committee.

### **6.3 DEGREE TIME LIMITS**

Full-time students should normally complete all requirements for the MS in two years. Full-time, Regular doctoral students should normally complete their degrees in three to four years, and full-time Direct-Admit doctoral students should be able to complete their degrees in four to five years. It is understood that some students will take longer due to field or data collection requirements for their research. Full-time MENR

students should normally complete all requirements within two years.

Part-time students must complete the MS within five years from the date of entry; if a student takes more than five years to complete the degree, the student will need to justify the relevance of coursework that is more than five years old (see Section 6.4). Part-time doctoral students will usually take longer than four years to complete their degrees and may exceed five years but must complete all graduation requirements no later than five years after entering candidacy (Graduate School Handbook, VII.8), and may need to justify the relevance of coursework that is more than five years old according to the Environment and Natural Resources Graduate Program Five-Year-Rule (see Section 6.4). Part-time MENR students may take up to five years to complete the degree from the date of entry; if a student takes more than five years to complete the degree, the student will need to justify the relevance of coursework that is more than five years old (see Section 6.4).

Students deemed to be making reasonable progress may remain in the MS and MENR programs for as long as five years and in the pre-candidacy stage of the doctoral program for as long as five years with concurrence of their advisors, their Advisory/Examination Committees, and the Graduate Studies Committee.

#### **6.4 COURSE TIME LIMIT — 5-YEAR RULE**

For MS and MENR students, only courses taken within five years prior to the date of successful completion of the Master's Examination may be applied toward the degree. For doctoral students, only courses taken within five years prior to the date of successful completion of the Candidacy Examination may be applied toward the degree. This policy is applied without regard to the student's full- or part-time status. The five-year clock is in effect during semesters in which the student is not registered at the university.

Early during the second semester in which the student is NOT in continuous enrollment, the chair of the Graduate Studies Committee will send a letter to the student informing him or her that "reasonable progress" may be maintained if, and only if, the student:

- a. maintains frequent and effective communication with their advisor;
- b. demonstrates to the Graduate Studies Committee that progress is being made toward his or her degree;
- c. keeps the School of Environment and Natural Resources informed of his or her current mailing address through the Academic Center on Buckeye Link and respond promptly to written and email correspondence;
- d. complies with all relevant deadlines for completion of the Master's Examination, Candidacy Examination, and/or doctoral Final Oral Examination; and
- e. files reports of progress with her or his advisor and the Graduate Studies Committee.

Failure to satisfy these conditions will, after four semesters of non-continuous enrollment, be considered evidence of "failure to maintain reasonable progress," and the Graduate Studies Committee may recommend to the Graduate School that the student be denied further registration in the program. If such action is taken, the student may reenter the program only by submitting a written letter of petition to the Graduate Studies Committee.

## **7. GRADUATE ADMISSION**

### **7.1 RESPONSIBILITY FOR ADMISSION**

The admission of students to the Graduate School and the Environment and Natural Resources Graduate Program is the dual responsibility of the Graduate Studies Committee and the Graduate School. Following review of a completed application, the Graduate Studies Committee recommends admission to the Graduate Admissions Office, signified by the SENR graduate program office posting the decision in the Student Information System. Acting for the Graduate School, the Office of Graduate and Professional Admissions issues a letter of admission on behalf of The Ohio State University.

### **7.2 ADMISSION CATEGORIES**

Students are admitted to the Environment and Natural Resources Graduate Program in one of two categories: Regular and Conditional (see Sections 8.7 and 8.8, Graduate School Handbook, II.4).

- a.** Regular: Applicants who have met all the Graduate School and Environment and Natural Resources Graduate Program requirements and have been approved for admission by the Graduate Studies Committee are designated as regular students.
- b.** Conditional: Applicants whose academic records indicate that they may have difficulty performing satisfactorily in a graduate degree program are designated as conditional students by the Graduate Studies Committee or by the Graduate School. The purpose of the conditional classification is to provide students an opportunity to compensate for any deficiencies and to demonstrate the ability to perform satisfactorily in the graduate program.

It is recommended that conditional students not enroll for more than eight (8) or 10 credit hours per autumn and spring semester and not hold Graduate Associate appointments requiring them to give instruction in the area of subject matter deficiency. If the conditional designation results from a low entering cumulative point-hour ratio (CPHR), the candidate is ineligible to hold an appointment as a Graduate Associate (GA) unless the Graduate School approves a petition from the Graduate Studies Committee. Students admitted conditionally will have two semesters to complete any conditional requirements. If requirements are not completed in that time the student will be discontinued from the program unless approval for continuing in the program is granted by the Graduate Studies Committee.

### **7.3 ADMISSIONS REQUIREMENTS**

The following requirements for admission to the Environment and Natural Resources Graduate Program are in addition to those of the Graduate School (Graduate School Handbook II).

All matriculating MS and PhD Soil Science specialization students are expected to have completed the undergraduate courses listed below in mathematics, biological science, chemical science, and physical science, or their equivalent. Students with prerequisite deficiencies should take the coursework during the first year of graduate studies. A grade of B or better is required.

Elementary Mathematical Functions, Differential Calculus, and Integral Calculus  
General Biology  
General Chemistry



### 7.3.1 Master of Environment and Natural Resource Degree

All interested applicants will submit a current resume and brief statement of goals to the Graduate Program Coordinator for the MENR Director to review work experience and eligibility for admission. The Program Coordinator will encourage the applicant to schedule an interview/conversation with the MENR Director to discuss the program and the fit with the applicant's professional goals and experiences. The MENR Director communicates with the applicant regarding the alignment between his or her career goals and the MENR program. Following this conversation the applicant will submit the online application and supporting materials. Once an application is complete, the Program Coordinator will conduct an initial review of that application to see if needed foundation courses have been completed. The Program Coordinator will then forward the application to the MENR Director for final review. The MENR Director will then approve the application for submission, along with a recommendation for admission, to the Graduate Studies Committee.

The graduate program admission letter will inform MENR applicants that MENR students are responsible for funding their own graduate education. Positions as a graduate associate (GRA, GTA) in the School of Environment and Natural Resources are not available to MENR students, but they may pursue other means of assistance, including federal loans, employer reimbursement, and/or graduate associate positions in other units of Ohio State University.

- a. An undergraduate degree from an accredited college or university with a major in an environmental or natural resources field or in a related discipline. Applications are also encouraged from professionals in other fields who want to move into environmental or natural resource professions.
- b. The following course work must be completed prior to enrollment in the graduate program. These courses will be evaluated and interpreted by the Program Coordinator and the MENR Director:
  - i. ENR 2100, Introduction to Environmental Science, or a similar course
  - ii. Six semester hours of college mathematics and/or statistics
  - iii. Six semester hours of physical science
  - iv. Six semester hours in biological science
  - v. Six semester hours in English or communications
  - vi. Six semester hours in social science
  - vii. Six semester hours in the humanities

Students who have taken these courses at another institution may be asked to provide the MENR Director with a course syllabus or description for each course. Students who have not taken these courses at the college level, but feel their professional experience has given them the foundation needed are encouraged to submit a petition to waive the foundation course requirement. To petition, the student should write a separate statement for each course being petitioned. Statements should address what training, skills, and background they gained in their professional roles that have met the spirit of the foundation course requirement. Students are encouraged to provide documentation for any training, certification, or special projects that would be related to the course in question. The MENR Director will have final approval over approving or denying petitions, and may consult with the Graduate Studies Committee or other faculty when needed.

- c. A current (no older than five years) GRE score. GRE results should be sent directly to the Graduate Admissions Office. Applicants with 5 or more years of Environmental and Natural Resources professional experience and an undergraduate GPA of 3.0 or higher are not required to take the GRE. In-Career applicants should confirm with the MENR Director that the GRE is or is not needed prior to applying and taking the test.
- d. An undergraduate grade-point average of 3.0 or higher on a 4.0 scale. Applicants with lower than a 3.0 may still be considered for conditional admission based on a combination of GRE scores and professional experience (see Appendix B.4).
- e. Applicants must provide a statement describing their focus area, career goals, and how the MENR program will assist them in attaining those goals and a current curriculum vitae or resume.
- f. Applicants must solicit three letters of recommendation and have them submitted online. For applicants with fewer than five years professional experience, at least two of those letters should come from faculty in their undergraduate programs, and one letter should be from an immediate supervisor who can discuss the applicant's professional experience and potential for advancement. Applicants with five or more years of professional experience should include at least one letter from an immediate supervisor who can discuss the applicant's professional experience and potential for advancement. All letters should address an applicant's suitability to pursue a graduate degree leading toward professional practice.
- g. International students whose first language is not English are required to score at least 550 (written), 213 (computer-based), or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL) or 82 in the MELAB or 7 in the IELTS. Scores should be no more than two years old from the proposed semester of admission. The TOEFL is waived if the applicant earned a bachelor's degree or higher from, or is a citizen of, one of the following countries and regions: Australia, Belize, Canada (except Quebec), Ireland, New Zealand, Liberia, United Kingdom (England, Wales, Scotland, Northern Ireland), the Commonwealth Caribbean, and the United States.
- h. Students seeking to enter the dual-degree program with another OSU graduate program should consult with the graduate program coordinator of that degree. Normally, admission to these programs is restricted to the autumn semester. Students in other graduate degree programs who want to do a dual degree in Environment and Natural Resources should consult with the SENR graduate program office for guidelines.
- i. Graduate students enrolled in another degree-seeking graduate program at Ohio State may request a transfer to the Environment and Natural Resources Graduate Program by submitting an online Intra-University Graduate Transfer application (found on [gpadmissions.osu.edu](http://gpadmissions.osu.edu)) and attaching an updated statement of purpose and resume. New letters of recommendation (if applicable) should be requested on the online application. The Graduate Studies Committee may request additional materials to assist their evaluation of the transfer request. The request for transfer will be reviewed after all of the materials are received and reviewed by the MENR Director.

### 7.3.2 Combined Bachelor's - Master of Science Program

The purpose of the Combined BS–MS Program is to provide outstanding, mature students an opportunity to

pursue the BS and MS simultaneously, and thereby reduce the time required to complete the two degrees. See Graduate School Handbook VIII.1 for more information.

Applicants for the Combined Program are evaluated by the Graduate Studies Committee by the same standards and criteria used when evaluating applicants for regular admission. In order to be eligible to apply for the Combined Program, applicants must have satisfactorily fulfilled the following requirements:

- a. have an overall grade point average at the time of application of at least 3.5 and be a participant in the Environment and Natural Resources Honors Program or eligible for admission to that program, and
- b. have completed at least 90 undergraduate credits, including all General Education Curriculum requirements.

As part of the application process for the Combined Program, applicants must complete and submit:

- a. a statement of professional goals and objectives explaining what the applicant expects to accomplish in the MS program and a current curriculum vitae or resume,
- b. an MS thesis research proposal,
- c. official GRE scores to the Graduate Admissions Office,
- d. three letters of recommendation including one from the applicant's undergraduate advisor, and
- e. the Combined Undergraduate/Graduate and Professional/Graduate Program Form from the Graduate School's website (see requirements in Sections 2.6 and 2.10)

Admission to the Combined Program requires approval of the School of Environment and Natural Resources, the Graduate Studies Committee, and the Graduate School. Applicants must complete and submit the application for admission on the Graduate Admissions Office's website and the Combined Undergraduate/Graduate and Professional/Graduate Program Form on the Graduate School's website. Upon approval, the Graduate School posts the admission to the Combined Program and issues an admission letter. Admission to the Combined Program cannot be under Conditional status.

The Combined Program materials are completed in consultation with the student's undergraduate faculty advisor including the preparation of an MS thesis research proposal and a Program of Study listing all intended course work. The completed Combined Undergraduate/Graduate Program form is then submitted to the Secretary of the School of Environment and Natural Resources, who will refer it to the school's Honors Committee for approval of the undergraduate aspects of the proposed Program of Study. Once the Honors Committee has approved the Combined Undergraduate/Graduate Program form, it is forwarded to the Graduate Studies Committee, where it is added to the graduate application for admission and reviewed for admission by the Graduate Studies Committee. Upon approval, the Graduate School posts the admission to the Combined Program and issues an admission letter.

Once accepted to the MS program, the Combined Program student must satisfy all requirements, deadlines,

and standards of that program (see Section 2).

### 7.3.3 Master of Science Degree

- a.** An undergraduate degree from an accredited college or university with a major in a natural resources field or a related discipline. Applications from those in fields not normally considered to be related to natural resources will be considered when special merit warrants.
- b.** Recommended, but not required, that the following coursework be completed before or during enrollment in the graduate program: A minimum of six semester credits of college mathematics and/or statistics; six semester credits in physical science; six semester credits in biological science; six semester credit hours in English or communications; six semester credit hours in social science; and six semester credit hours in the humanities. Students with limited deficiencies may be admitted conditionally and must remove the deficiencies within the first two semesters of enrollment.
- c.** An undergraduate grade-point average of 3.0 or higher on a 4.0 scale.
- d.** Environment and Natural Resources Graduate Program target scores are university averages for the Verbal, Quantitative, and Analytical sections of the Graduate Record Exam (GRE). University averages as of 2013 are 66<sup>th</sup> percentile in the verbal section, 69<sup>th</sup> percentile in the quantitative sections and 51<sup>st</sup> percentile in the analytical writing section. Scores should be no more than five years old from the time of application.
- e.** Three letters of recommendation. Letters should address an applicant's academic abilities and suitability to pursue a research based degree.
- f.** A statement of professional goals and objectives explaining what the applicant expects to accomplish in the MS program and a current curriculum vitae or resume.
- g.** International students are required to score at least 550 (written), 213 (computer-based), or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL), 82 in the MELAB, or 7 in the IELTS. Scores should be no more than two years old from the proposed semester of admission. The TOEFL is waived if the applicant received a bachelor's degree or higher from, or is a citizen of, one of the following countries and regions: Australia, Belize, Canada (except Quebec), Ireland, New Zealand, Liberia, United Kingdom (England, Wales, Scotland, Northern Ireland), the Commonwealth Caribbean, and the United States. Students in other graduate degree programs who want to do a dual degree in Environment and Natural Resources should consult with the SENR graduate program office for guidelines.
- h.** Students seeking to enter the dual degree program with another OSU graduate program should consult with the graduate program coordinator of that degree. Normally, admission to these programs is restricted to the autumn Semester. Students in other graduate degree programs who want to do a dual degree in Environment and Natural Resources should consult with the SENR graduate program office for guidelines.
- i.** Graduate students enrolled in another degree-seeking graduate program at Ohio State may request a transfer to the Environment and Natural Resources Graduate Program by submitting an online Intra-

University Graduate Transfer application (found on [gpadmissions.osu.edu](http://gpadmissions.osu.edu)) and attaching an updated statement of purpose and resume. New letters of recommendation (if applicable) should be requested on the online application. The Graduate Studies Committee may request additional materials to assist their evaluation of the transfer request. The request for transfer will be reviewed after all of the materials are received and an ENR graduate faculty member has agreed to serve as the potential advisor.

#### **7.3.4 Regular PhD Program**

- a.** A thesis master's degree in environment and natural resources or a related discipline from an accredited college or university.
- b.** Foundational course work as follows:
  - Chemistry through organic or biochemistry
  - Physics, Geology or Soil Science
  - General Ecology
  - Mathematics through calculus
  - Statistics
  - Resource or Environmental Economics
  - Resources Sociology or Environmental Psychology
  - Resource Policy or Environmental Law
- c.** An undergraduate grade–point average of 3.0 or higher (a GPA of 3.5 or higher is preferred) and a master's grade–point average of 3.5 or higher on a 4.0 scale.
- d.** Environment and Natural Resources Graduate Program target scores are university averages for the Verbal, Quantitative, and Analytical sections of the Graduate Record Exam (GRE). University averages as of 2013 are 66<sup>th</sup> percentile in the Verbal section, 69<sup>th</sup> percentile in the Quantitative sections, and 51<sup>st</sup> percentile in the Analytical section. Scores should be no more than five years old from the time of application.
- e.** International students are required to score at least 550 (written) or 79 (internet-based) on the Test of English as a Foreign Language (TOEFL), 82 in the MELAB, or 7 in the IELTS. Scores should be no more than two years old from the proposed semester of admission. The TOEFL is waived if the applicant earned a bachelor's degree or higher from, or is a citizen of, one of the following countries and regions: Australia, Belize, Canada (except Quebec), Ireland, New Zealand, Liberia, United Kingdom (England, Wales, Scotland, Northern Ireland), the Commonwealth Caribbean, and the United States.
- f.** A statement of professional goals and objectives explaining what the applicant expects to accomplish in the PhD program and a current curriculum vitae or resume.
- g.** A description of the applicant's master's thesis research.
- h.** Three letters of recommendation, including one from the applicant's master's thesis advisor and one from a member of the applicant's master's advisory committee.
- i.** Students enrolled in the Master of Science program in Environment and Natural Resources at The Ohio

State University who wish to apply for admission to the doctoral program may do so by submitting a letter to the Graduate Studies Committee chair. They must also submit a current, detailed statement of goals, a description of their master's thesis research, and letters of recommendation from the three members of their master's Advisory/Examination Committee. Those letters must comment on the student's potential for doing PhD-level scholarly research. Because these referees cannot provide such assessments until the student has made significant progress on his or her master's research, students wishing to pursue doctoral degrees are advised to focus on their research early in their master's programs. The same admission criteria applied to students entering from off campus will be used in evaluating applicants receiving master's degrees from the Graduate School in the Environment and Natural Resources Graduate Program. If the request to continue to the Regular PhD program is approved by the ENR Graduate Studies Committee, the SENR graduate program office will inform the Graduate School to update the student's record.

- j. Graduate students enrolled in another degree-seeking graduate program at Ohio State may request a transfer to the Environment and Natural Resources Graduate Program by submitting an online Intra-University Graduate Transfer application (found on [gpadmissions.osu.edu](http://gpadmissions.osu.edu)) and attaching an updated statement of purpose and resume. New letters of recommendation (if applicable) should be requested on the online application. The Graduate Studies Committee may request additional materials to assist their evaluation of the transfer request. The request for transfer will be reviewed after all of the materials are received and an ENR graduate faculty member has agreed to serve as the potential advisor.

Exceptional students who are deficient in one or more of these admission requirements may occasionally be admitted to the doctoral program with the support of the potential faculty advisor (written or verbal to the Graduate Studies Committee). These students will be informed of their deficiencies and will be expected to remove them by the end of their first year in the program.

### 7.3.5 Direct-Admit PhD Program

Outstanding applicants to the Environment and Natural Resources Graduate Program who hold an appropriate bachelor's degree or a bachelor's degree with a professional or non-thesis graduate degree may, upon the recommendation of their future advisor and with the approval of the Graduate Studies Committee, be admitted directly into the PhD program. Such students must present an academic record of a quality suitable for nomination for a University Fellowship without the use of waivers. This program allows outstanding students to focus on long-term academic goals. This degree track normally takes four-five years to complete.

Students applying for admission as Direct-admit doctoral students must hold a bachelor's degree in natural resources, environmental science, or a related field and must satisfy all of the admissions requirements except those involving an earned thesis master's degree. These students must include three letters of recommendation, plus the fourth letter from the future faculty advisor.

## **7.4 ADMISSION DATES**

Admission to Environment and Natural Resources MS and PhD degrees is normally restricted to autumn semester. Admitted students who wish to matriculate in any semester other than autumn or wish to defer admission for up to one year from the original semester of admission due to compelling circumstances may request the change to their semester of admission only with their potential advisor's approval and the approval of the Environment and Natural Resources Graduate Studies Committee.

Admitted students who wish to advance their admission date more than one year must reapply for admission through the Graduate Admissions Office and may need to resubmit application materials to the School of Environment and Natural Resources.

## **7.5 APPLICATION DEADLINES**

Applications for the MS and PhD programs are reviewed between October and March of each academic year for admission the following autumn semester. All international MS and PhD applicants seeking University Fellowships must have a completed application on file in the Graduate Admissions Office no later than the last business day of November. All other international students and U.S. students seeking financial support (fellowships and SENR Graduate Teaching Associate positions) must have a completed application in the Graduate Admissions Office by January 1 (by the last business day in December is preferred). All other applications are considered through May 1 for domestic applicants and April 1 for international applicants depending on faculty availability to advise and on available funding. Applications received after May 1 will be reviewed only at the request of a member of the graduate faculty who is interested in advising the applicant.

Members of the graduate faculty may request that particular applicants be reviewed for admission in the spring or summer terms. Upon receipt of such a request, the Graduate Studies Committee will perform such a review and send approved requests to the Graduate Admissions Office.

Applications for the MENR program are accepted for both autumn and spring semesters, but students are highly encouraged to begin autumn semester due to course sequencing. Domestic applications are accepted until May 1 for autumn admission and November 1 for spring admission. International applications are accepted until April 1 for autumn admission and September 15 for spring admission.

## **7.6 ADMISSION PROCEDURES**

Official applications for admission must be submitted online to the Office of Graduate and Professional Admissions. Applicants must also send official GRE and TOEFL scores and the online application fee directly to the graduate admissions office. Applicants must upload the statement of goals and curriculum vitae/resume through the applicant portal. Applicants can also request electronic letters of recommendation through the portal. With technical questions related to the online application, please contact the Office of Graduate and Professional Admissions at 614-292-9444. Official transcripts from each higher education institution previously attended (except OSU) should be sent directly to the Office of Graduate and Professional Admissions at:  
Student Academic Services Building  
281 W Lane Avenue  
Columbus, Ohio 43210

Once an applicant's file is complete and a graduate faculty member has indicated a willingness to serve as advisor for MS and PhD applicants or the Faculty Director of Environmental Professional Programs approves of the application, it is reviewed by the Graduate Studies Committee, which will take one of three actions:

- a. determine that the applicant meets all requirements and is admissible Regular,
- b. determine that the applicant has minor deficiencies but is admissible Conditional, stipulate the exact conditions to be met and send the application to the Graduate School for review, or

- c. determine that the applicant is not admissible.

The Graduate Studies Committee will inform graduate faculty of applicant files that are available for review. Faculty members may review the completed applications for admission and indicate their interest in advising a potential student. No student is admitted to the MS or PhD programs unless a faculty member has been identified to serve as that student's advisor. It is understood, however, that admitted students may change advisors after they arrive on campus with the approval of the Graduate Studies Committee (see Sections 2.4 and 3.6).

Once a faculty member has indicated a willingness to serve as advisor for an admissible applicant, the Graduate Studies Committee chair signs the referral form indicating the admission decision of the Graduate Studies Committee and the conditions, if applicable. Regular admits are posted and sent a welcome letter from the SENR graduate program office, and the Office of Graduate and Professional Admissions sends the official letter of admission. Conditional admits must be approved and posted by the Graduate School.

In unusual cases where a rapid decision on admission is required, the Graduate Studies Committee chair is empowered to make this decision and report it for concurrence at the next meeting of the Graduate Studies Committee.

## **7.7 REGULAR ADMISSION**

Students who meet all of the admissions requirements are admitted Regular.

## **7.8 CONDITIONAL ADMISSION**

Because the Environment and Natural Resources Graduate Program is broadly interdisciplinary, otherwise well qualified applicants may have deficiencies in their academic background or GRE or TOEFL scores. The specific conditions, including course or credit requirements and time limits are included in the official letter of acceptance sent by the Graduate Admissions Office. Further, non-traditional students occasionally have grade records that are not clear enough to enable the Graduate Studies Committee to make a judgment about likely success in the Environment and Natural Resources Graduate Program. In such cases, applicants may also be admitted conditionally with the stipulation that they must earn B or higher grades in their first 10 credits of regular, graded graduate course work.

Students on Conditional status may petition the Graduate Studies Committee to amend or remove some or all conditions. This must be done in writing to the Graduate Studies Committee chair and the reasons for the request must be clearly elaborated. A support letter from the student's advisor is recommended but not required. The Graduate Studies Committee will act on such petitions within one month of the date they are received.

All conditions must be satisfied no later than the end of the second term of the student's enrollment in the program. Failure to do so can result in a recommendation to the Graduate School for dismissal based on failure to maintain "reasonable progress." The Graduate Studies Committee will review the progress of all students on Conditional status each semester. When a student satisfies all conditions, the Graduate Studies Committee chair will inform the Graduate School and request that the student be removed from Conditional status. When a student has failed to satisfy all conditions by the end of the second term in residence, further registration in the program may be denied until the conditions are satisfied.



Students admitted conditionally must be transferred to Regular status before they may submit the Application to Graduate: i.e., the Graduate Studies Committee chair may not sign an Application to Graduate form for a student still on Conditional status.

In the case of part-time students, the two-term limit may be extended with the permission of the Graduate Studies Committee. During any semester in which a student is enrolled for 8 or more credits (4 in summer), that student is considered to be a full-time student.

It is the student's responsibility to understand and satisfy the conditions of admission within the allotted time. Students wishing clarification should consult with the Graduate Studies Committee chair. Students should also be aware that faculty advisors and Advisory/Examination Committees can neither amend nor waive conditional requirements, including the two-term time limit.

## **7.9 INQUIRIES FROM POTENTIAL STUDENTS**

The Graduate Studies Committee chair and the SENR graduate program office will be responsible for responding to inquiries and conducting much of the correspondence with potential applicants. It is understood, however, that faculty members are the most effective agents in graduate student recruitment. Graduate faculty members are encouraged to correspond directly with potential students and are asked to copy all correspondence to the Graduate Studies Committee chair and the SENR graduate program office for inclusion in the student's file. It is especially important that outstanding candidates be identified early so they can be considered for fellowship nominations and other funding opportunities.

When potential applicants contact the School, they should be sent information on the Graduate School, the School of Environment and Natural Resources, and other pertinent literature or directed to online information available from the SENR graduate program office. These materials should be sent with a letter or email message from the Graduate Studies Committee chair welcoming their interest in the Environment and Natural Resources Graduate Program.

## **8. GRADUATE ASSOCIATES**

Prior to matriculation, the MS and PhD students' faculty advisors must complete the Faculty Request for SENR Graduate Associate (GTA, GRA, GAA) Funding form demonstrating the funding sources or the funding requests for the student's duration in the graduate program in order to assist the SENR graduate program coordinator and human resources officer in preparing GA contracts and completing human resources processes. If SENR GTA funds are requested, the ENRGP Graduate Studies Committee submits a ranked list of all admitted students to the School Associate Director to assist him in awarding GTA positions and making GTA assignments based on funding availability and course priority. The ranked list is prepared based on the strength of the admitted MS and PhD students' GPA and GRE scores as well as faculty matched funding requests. If there are any changes or updates to a student's funding source or appointment, the faculty advisor must inform the Associate Director, human resources officer, and SENR graduate program coordinator in writing either by email or by submitting an updated Faculty Request Form.

Prior to the beginning of each term, each GA is emailed a contract listing the assignment duties. If a student is awarded multiple terms of SENR or SENR-administered funding sources prior to matriculation, the student or

faculty advisor can request a letter of offer from the School Associate Director. If an award letter is not sent, the contract each term serves as the “guarantee” of funding for that period of time. Graduate Associate funding may be withdrawn if one or more documented situations of unsatisfactory performance of duties assigned is presented that requires the school to request an early termination from the Graduate School (see the Graduate School Handbook, section IX).

A Graduate Associate (GA) is a currently enrolled, full-time MS or PhD seeking graduate student who holds an appointment to perform services such as classroom or laboratory instruction, supervision of students, grading papers and examinations, research, developing curricular materials, administrative duties, etc. Graduate Associates may be Teaching Associates (GTA), Research Associates (GRA) or Administrative Associates (GAA) according to the duties assigned. Graduate Associate duties are determined by the employer.

Graduate Associate positions and the duties fulfilled under a faculty or staff supervisor may or may not be connected to a graduate student’s academic program, though they may certainly complement one another. In other words, GAs are expected to be graduate students making adequate progress academically within their graduate program (overseen by the advisor, Advisory/Examination Committee, Graduate Studies Committee, and the Graduate School) while simultaneously being employed by SENR (overseen by a faculty or staff supervisor who is often an instructor and/or principal investigator) in teaching, administrative, or research duties that can be related to (but are not the same as) their academic development.

Combined undergraduate/graduate students “may hold GA appointments that do not involve teaching of other students provided all other eligibility criteria are met” (Graduate School Handbook VIII.1). Therefore, combined undergraduate/graduate students may be offered funding from their faculty advisor as a GRA or a GAA with their advisor, SENR, or another unit at the university and not as a GTA.

Normally, Graduate Associates are on 50 percent appointments with a service expectation of 20 hours per week. Under certain circumstances, appointments ranging between 25 percent (10 hours per week) and 75 percent (30 hours per week) are possible. Graduate Associates on appointment at the 50 percent level or higher who are considering additional employment outside the university must consult their graduate advisor. A careful evaluation of the impact of the additional commitments on the student’s academic progress, and on his or her GA responsibilities should be made. If an appointment other than 50 percent is required or concurrent outside employment is planned, permission must be requested in writing from the Graduate Studies Committee (Graduate School Handbook, IX).

Concurrent (or split) appointments run during the same time as the usual GA appointment whether both appointments are on SENR funds, funds administered by SENR, or funds unrelated to SENR. These appointments should be approved by the School Associate Director before the GA commits to the project(s). Occasionally students will be asked to accept a combined teaching, research, or administrative duties or a teaching overload. Appointments for these extra duties will vary up to an additional 25 percent and require pre-approval from the Graduate School. In accordance with Graduate School rules (Graduate School Handbook, section IX), “A GA may not hold an appointment for more than 75 percent time, whether as a single appointment or a combination of appointments.” The funding source(s) will compensate students fully for the expected amount of work by adjusting the appointment percent time to increase the monthly stipend. GAs are strongly discouraged from concurrent employment outside the University, since additional employment is likely to jeopardize academic performance and impede normal progress.

## **8.1 GRADUATE ASSOCIATE NEEDS**

Faculty members should make known their needs for Graduate Teaching, Administrative, or Research Associates as soon as possible preceding the academic year in which the demand will occur. They are also encouraged to assume advocacy positions with the Graduate Studies Committee and the School of Environment and Natural Resources administration in promoting the appointment of their advisees and other deserving students.

Priority for assignment of Teaching Associates will be:

1. School Core, GEC, courses with labs or recitations
2. Major required courses, with labs or recitations that meet enrollment minimums (undergraduate enrollment minimums for 5000 U/G courses)
3. Other undergraduate and 5000 undergraduate/graduate-level courses with labs or recitations that meet undergraduate enrollment minimums
4. When undergraduate enrollment minimums are not met for a single course, multiple courses in the same topic area may share one TA.

## **8.2 PROCEDURES FOR SELECTING GRADUATE ASSOCIATES**

Each year, before April 15, the Graduate Studies Committee will review the credentials of all admitted MS and PhD applicants for Graduate Associate appointments and provide the administration of the School of Environment and Natural Resources with a recommendation in the form of a ranked list of Graduate Associate candidates. Criteria used in making this recommendation will be grade point average, GRE scores, the student's statement of purpose and letters of recommendation, and the amount/duration of funding requested by the faculty advisor using the Faculty Request for SENR Graduate Associate (GTA, GRA, GAA) Funding form (on the SENR website under Faculty and Staff, Faculty and Staff Resources). The ranked list will include each student's GPA, GRE scores, area of specialization, potential advisor, and ranking score. Under normal conditions, the administration will make appointments according to the rank recommendations of the Graduate Studies Committee, selecting the top student from the list who has the knowledge and skills needed in a particular position (see Appendix B.8).

While April 15 is the date by which the ranked list must be delivered to the administration, the faculty advisor should provide the Associate Director with the names and credentials of outstanding graduate students he or she wants to recruit at the earliest possible date by using the Faculty Request for SENR Graduate Associate (GTA, GRA, GAA) Funding form, so the Associate Director can determine whether an early funding offer can be made.

## **8.3 TERM OF APPOINTMENT**

Normally, Graduate Associates are appointed for autumn and spring semesters (September through May). As long as a student remains in good standing, is making reasonable progress toward his or her degree, and if funds are available, GA appointment for additional semesters may be offered. Summer support may be available, but summer appointments are made on a case-by-case basis.

Students who have received two years of Graduate Associate support while in the MS program may be eligible for additional support if admitted to the PhD Program, but it is not automatic or guaranteed unless specific arrangements are made. The faculty advisor for such students should submit a new Faculty Request for SENR Graduate Associate (GTA, GRA, GAA) Funding form for the student's doctoral program.

#### **8.4 DEADLINES**

The Associate Director of the School of Environment and Natural Resources will make offers of Graduate Associate positions involving SENR funds in writing as early as possible. A student receiving an offer must respond in writing to the Associate Director of the School before April 15 or within two weeks after receiving the offer if that offer is made after April 1, indicating his or her decision to accept or decline the offer. If no response is received from the student within this period, it will be assumed that the student has declined the offer.

#### **8.5 APPOINTMENTS AND REAPPOINTMENTS**

Once offers have been made and accepted, a Graduate Associate Appointment Document will be provided each semester describing the terms of employment in greater detail. Subsequent reappointments will be based on satisfactory performance of assigned duties (such as participation in the TA Development and Enhancement program), good standing and reasonable progress, and availability of funds, and will be in conformity with the rules of the Graduate School.

Students may not be appointed or reappointed to Graduate Associateships if they are on academic probation at the time the appointment becomes effective. A student holding a letter of appointment promising support for more than one semester may continue to hold the Graduate Associateship during the appointment period even if he or she is on probation after the initial appointment semester only upon approval by the Graduate Studies Committee and the Graduate School (V.3, XII). Waiver of minimum eligibility requirements may be petitioned in writing and requires the approval of the Graduate Studies Committee and the Graduate School.

The Associate Director of the School of Environment and Natural Resources will notify the graduate student as soon as possible if a reappointment is not to be made and will indicate the reasons for the non-reappointment. In such cases, the student has two weeks to appeal the decision to the Director.

#### **8.6 STIPENDS**

Stipends offered to Graduate Associates will be consistent with policies adopted by the Graduate School and the School of Environment and Natural Resources. Master of Science and Regular PhD Graduate Associates are paid on the appropriate stipend level according to their degree program. Direct-Admit PhD Graduate Associates are paid at the MS stipend level until passing candidacy and at the PhD stipend level for the remainder of the doctoral program. General practice has been to affect any raises on September 1 or when funds are available. An effort will be made to equalize Teaching, Research, and Administrative Associate stipend levels. Graduate faculty who are supporting graduate students on Research Associateships are urged to follow the pay scales used by the School to minimize stipend differentials between School-supported and grant- or contract-supported Graduate Associates.

#### **8.7 FEE AUTHORIZATIONS**

Every graduate associate (GTA, GRA, and GAA) appointed for at least 50 percent of full time receives a full

tuition and fee authorization. Students holding GA appointments receive fee authorizations that include Instructional and General fees and nonresident fees. Other fees, including parking and late penalties, as well as college computing fees, student activity fee, and the mandatory COTA fee, must be paid by the student. GAs appointed on various grants and special projects also receive a fee authorization, although in their case the fees may be charged back to the grant or appointing unit through a complex formula that takes into account indirect costs to the university. Notice of fee authorizations appears on the student's Statement of Account. A GA on a 50 percent appointment who holds a concurrent appointment at 25 percent or less receives the fee authorization from the unit supporting the 50 percent appointment. Fee authorizations for concurrent appointments of equal FTE (e.g., two 25 percent appointments) are split equally between appointing units. A GA may not be denied a fee authorization. In order to be eligible for the tuition and fee authorization, the student must be enrolled in at least eight (8) graded credit hours in autumn and spring (undergraduate or graduate credit; audits do not count).

Graduate students holding a 50 percent or greater GA appointment for two consecutive semesters are entitled to a full fee authorization during the immediately following summer term without being on appointment. Students holding a 25 percent or less GA appointment for two consecutive semesters are entitled to a Summer Fee Authorization at half the full fee authorization rate. Students using the Summer Fee Authorization must be registered for at least four hours of credit. Doctoral students in candidacy must register for at least three hours of credit. A graduate student who elects not to enroll during the summer term may not defer the use of the Summer Fee Authorization. In order to receive the Summer Fee Authorization, the Graduate Associate must inform the School of Environment and Natural Resources Human Resources representative in writing or by email that he or she intends to use the Summer Fee Authorization and will adhere to the registration requirement associated with receiving that waiver. Students may not hold a Graduate Associate position during the semester they receive the Summer Fee Authorization. By using the Summer Fee Authorization, tuition and general fees will be paid by the last employing unit and funding source, e.g. the School of Environment and Natural Resources, and either School funds or the advisor's external grant funds. The student will be responsible to pay the remaining fees and student health insurance.

## **8.8 ADDITIONAL EMPLOYMENT BENEFITS**

Student health insurance coverage includes autumn semester (mid-August to end-December) and spring semester and summer term (January to mid-August). If a student is a GA for spring, student health insurance is covered for both spring and summer (see the Student Health Insurance Program website for more details on coverage and selection/waiver deadlines).

Graduate Associates will be provided with a desk and file space when available, are eligible for staff parking privileges, faculty library privileges, and credit in the Public Employees Retirement System (Graduate School Handbook, IX.5). Graduate Associates do not accrue sick or vacation leave. See Graduate School Handbook Appendix E on policies related to leaves of absence.

## **8.9 WORKING DAYS**

Graduate Associates appointed for the academic year are expected to be available for duty 20 hours per week beginning the Monday of the week classes begin in August and until the end of the day grades are due that semester.

Graduate Associates will receive all legal holidays as identified in the university calendar. Other arrangements can be made for special religious days not recognized by the calendar by consulting with the immediate supervisor and the Associate Director of the School of Environment and Natural Resources. Additional rescheduling of work load may be accomplished by consulting in a timely manner with the immediate supervisor and the Associate Director of the School. See Graduate School Handbook Appendix E on policies related to leaves of absence. Questions about leaves of absence may be directed to the SENR graduate program office, Associate Director, or the Graduate School.

### **8.10 LEAVES OF ABSENCE AND RESIGNATION**

Students are eligible for paid leaves of absence to attend to serious personal or family matters (see Graduate School Handbook, sections IX and Appendix E) and complete the Short-Term Absences and Leaves of Absence - Request for Leave form (on the Graduate School website). Such personal or family matters include: (1) serious illness of the student or an immediate family member, i.e. parents, dependents, or a permanent partner; (2) death or impending death of an immediate family member including parents, a permanent partner, or other dependents; (3) paternity and maternity leave and child care responsibilities; and (4) other similar situations requiring intensive care or responsibilities on the part of the student.

Such personal or family matters do not include requests for leave to pursue job opportunities, to make decisions concerning career choices or continuation in the program, personal/family vacation, weddings, etc. These latter types of concerns will be handled on an individual basis, preferably by a written agreement between the supervisor and the student, e.g. working additional hours prior to the absence, working remotely, or being employed on an hourly basis instead of as a GA. Students are strongly encouraged to also consult with the SENR graduate program coordinator and Graduate Studies Committee chair of their academic unit to determine if there are any academic progress considerations or tuition/statement of account issues that may be affected by the absence from the GA appointment.

If a GA needs to resign, a letter or email of resignation including the last day worked or to be worked must be submitted to the SENR graduate program coordinator and Associate Director if the Graduate Associate is resigning before the contract time is over. GAs are expected to complete current term duties before the resignation becomes effective. Temporary leaves of absence should be arranged in advance. Timely submission of such a resignation letter will ensure due processes are followed. Depending on the time of resignation and the desire of the student to continue coursework, tuition fees might be assessed by the University for which the student will be responsible. This is done in accordance with the "Important Dates posted" on the Registrar and Graduate School websites.

### **8.11 TERMINATION OF APPOINTMENT**

The appointment of a Graduate Associate may be terminated if:

- a. he or she is no longer enrolled as a graduate student or is carrying fewer than the required minimum number of credits,
- b. he or she completes the graduate program before his or her appointment expires,
- c. his or her performance is determined to be unsatisfactory, or

d. there are insufficient funds to support the position (Graduate School Handbook, IX.2).

## **8.12 RIGHTS AND PRIVILEGES**

The constitutional rights of each graduate student, including Graduate Associates, are protected by due process. The Grievance Process has been established to protect those rights. Students should consult Appendix D of the Graduate School Handbook for a description of the Grievance Process. Grievances should be resolved at the lowest administrative level. The Graduate Studies Committee chair is the initial point of contact for academic grievances and should be consulted for assistance with such problems. Each student also has the right to consult with the Director or Associate Director of the School of Environment and Natural Resources and the Graduate School.

## **8.13 FINANCIAL ASSISTANCE**

Financial assistance to graduate students comprises three general types:

- a. Fellowships and traineeships, national and local, administered through the Graduate School;
- b. Endowed fellowships assigned to the School of Environment and Natural Resources or to an individual faculty member; and
- c. Graduate Administrative, Research, and Teaching Associateships administered by the School of Environment and Natural Resources or other departments or units on campus.

Each student who applies for admission to the Graduate School may simultaneously apply for a Graduate Associateship and a Fellowship by checking the appropriate box on the application to indicate that financial assistance is requested. Students are also encouraged to write directly to faculty members for advice and information on the availability of research funds and other assistance.

### **8.13.1 Fellowships**

Fellowships are reserved for entering graduate students and the selection process is highly competitive. Successful candidates usually have overall grade point averages above 3.6 on a 4.0 scale and high scores on the Graduate Record Examination. Fellows pursue a full-time schedule of courses or research 12 graded graduate credits in autumn and spring (six in summer) and are not required to teach or provide other services. Further, they must maintain scholastic standards required to be in “good standing” and may not work on or off campus during the period of the fellowship. More than one fellowship may not be held simultaneously. Students on University Fellowships may not hold any other appointment, such as a GA, or outside employment during the term of appointment as a Graduate School fellow unless specifically petitioned and approved by the Graduate School (Graduate School Handbook, X.1).

### **8.13.2 International Student Finances**

The U.S. Immigration and Naturalization Service (INS) requires the Graduate Admissions Office to certify the following for every international student:

- a. student costs for educational expenses and year-round maintenance; and

- b. funds available to the student through bank accounts (statements are required), affidavits of support or financial awards made by the university.

When financial awards are to be made to international students, either as fellowships, traineeships, or associateships, such information is to be communicated to the SEVIS Liason and Financial Review, International Graduate Admissions, Student Academic Services Building, 6th Floor, 281 West Lane Ave., Columbus, OH 43210; email [gradadmissions@osu.edu](mailto:gradadmissions@osu.edu); phone 614.292.9444; fax 614.688.3593.

The letter of award should clearly state the terms and duration of the award and whether or not it is renewable. Until the international student applicant can provide documentation of sufficient funds either from personal resources or from the university, the Office of Graduate and Professional Admissions cannot send the official letter of admission. The Graduate Studies Committee may send the applicant a letter of offer for admission and/or funding awards, but the official letter of admission will not be sent until the financial review is approved.

### 8.13.3 Other Financial Assistance

The Student Financial Aid Office administers student employment, the work–study program, and loans. The Student Financial Aid Office serves only registered students. Students in need of financial assistance should contact a counselor at the Student Service Center, Student Academic Services Building, 281 West Lane Ave., Columbus, OH 43210; email [ssc@osu.edu](mailto:ssc@osu.edu); phone 614.292.0300; fax 614.292.9264. Specific programs include:

- a. The College Work–Study Program under the Economic Opportunity Act of 1964 provides financial aid through employment to college students who, without such assistance, would not be able to attain a higher education. Detailed information and applications are available from Student Academic Services Building, 4th Floor, 281 West Lane Ave., Columbus, OH 43210 and online at <http://sfa.osu.edu/jobs>.
- b. Veteran's Administration Educational Benefits are available to veterans and their dependants. Interested students should contact the Office of Military and Veteran Services to learn more about the process of registering for benefits. Information on the Office of Military and Veteran Services can be found at: <http://veterans.osu.edu> or students can contact them at [milvets@osu.edu](mailto:milvets@osu.edu) or 614-247-VETS (8387).

## **9. POLICY AND ADMINISTRATION**

### **9.1 RELATIONSHIP BETWEEN THE GRADUATE COUNCIL AND THE ENVIRONMENT AND NATURAL RESOURCES GRADUATE PROGRAM**

The Graduate Council is the legislative body of the Graduate School of The Ohio State University. Among its functions, the Graduate Council establishes rules governing all graduate programs and may revise such rules from time to time. These rules are published in The Ohio State University Graduate School Handbook. The Environment and Natural Resources Graduate Studies Committee administrates the Environment and Natural Resources Graduate Program according to these rules.

### **9.2 STRUCTURE OF THE GRADUATE PROGRAM**

The Environment and Natural Resources Graduate Program comprises seven faculty tracks: Ecological Restoration, Ecosystem Science, Environmental Social Sciences, Fisheries and Wildlife Science, Forest



Science, Rural Sociology, and Soil Science. All faculty members in the program belong to one or more tracks. Admission of new faculty to the SENR graduate faculty is contingent upon acceptance of the new member into at least one of the tracks. Faculty members in each track must approve, by majority vote, new members wishing to join the track.

Each track offers an Area of Specialization for training MS and PhD students. Areas of Specialization and associated graduate faculty are provided in Appendix A of this Handbook.

### **9.3 THE GRADUATE STUDIES COMMITTEE AND THE GRADUATE FACULTY**

The conduct and administration of the Environment and Natural Resources Graduate Program is the responsibility of the Graduate Studies Committee. Actions taken by the Graduate Studies Committee are subject to approval, modification, or reversal by the graduate faculty of the Environment and Natural Resources Graduate Program. The graduate faculty in Environment and Natural Resources is an interdisciplinary body of research scientists and scholars in the School of Environment and Natural Resources and other academic units throughout the university.

The Graduate Studies Committee comprises six faculty members representing specializations who serve staggered, three-year terms, the MENR Director, and two graduate students who serve one-year terms. The Committee members represent and are elected by the faculty in the specialization tracks of the Environment and Natural Resources Graduate Program: Ecological Restoration and Ecosystem Science are represented by a single faculty member, while Environmental Social Sciences, Fisheries and Wildlife Science, Forest Science, Rural Sociology, and Soil Science are each represented by a single faculty member. Student members include one master's and one doctoral student elected by the Environment and Natural Resources Graduate Program graduate students. Both serve as voting members of the Graduate Studies Committee. Graduate students will also elect one master's and one doctoral student who are non-voting alternates. Alternates are eligible to vote when replacing voting members who are absent. Both voting and alternate members are urged to attend all meetings to ensure continuity in the deliberations of the Graduate Studies Committee.

Faculty members are elected for three-year terms, with two new members elected each year. Terms begin on July 1. The chair is elected by the Graduate Studies Committee from among its faculty members, serves for one year, and may be re-elected.

Elections to replace faculty members whose terms have expired are to be held during the spring semester of each year. In early April, the Graduate Studies Committee chair will inform the appropriate track faculties that their representatives' terms are ending and that they must elect a member by the end of the spring semester to serve on the Graduate Studies Committee. A nomination must be accompanied by a statement from the nominee that he or she is willing to serve. Voting will be by email ballot sent to all members of the graduate faculty, who will have a minimum of one week to return their ballots by replying to email ballot. The nominee receiving the largest number of votes will be elected. In the case of a tie, a runoff will be conducted.

Openings on the Graduate Studies Committee at other times for track faculties are to be filled by an election by the appropriate track faculty. The new track faculty representative will complete the term of the vacated position. The appointee will complete the term of the vacated position, which will then be filled by the regular election.

Calls for volunteers/nominations of student members and alternates are solicited each year by GradRoots (the SENR graduate student organization). Graduate student members serve one year terms beginning January 1 and may not be re-elected. Alternates, however, may volunteer or be nominated to serve an additional year as voting members.

To be eligible to volunteer or be nominated to the Graduate Studies Committee, graduate students must be seeking either the master's or doctoral degree in the Environment and Natural Resources Graduate Program. Elected students must be able to complete their terms before they graduate.

A quorum exists when at least four voting members of the Graduate Studies Committee are present, at least three of whom must be faculty members. The Graduate Studies Committee chair is a voting member but votes only to break ties.

The Graduate Studies Committee Chair and faculty members reserve the right to meet in executive session for the purpose of addressing issues deemed to be worthy of such a session, e.g., cases of personal, professional, or academic misconduct; and other cases where sensitive information may need to be kept within the "family of the ENRGP graduate faculty." Such executive sessions are presumed to be rarely convened and shall not be substituted for regular meetings of the Graduate Studies Committee, nor will votes for action be taken.

#### **9.4 DUTIES OF THE GRADUATE STUDIES COMMITTEE**

The Graduate Studies Committee will carry out all duties and responsibilities designated in the Graduate School Handbook, XIV, including:

- a. establishing admission and program policy, standards, and procedures;
- b. screening applications for admission to the master's and doctoral programs, and make final determinations on admission;
- c. nominating candidates for fellowships and ranking students for appointment to graduate teaching, research, and administrative associateships (GTA, GRA, and GAA) in the School of Environment and Natural Resources;
- d. overseeing the maintenance of all graduate files and records;
- e. establishing rules and guidelines for master's and doctoral students' Advisory/Examination Committees, Programs of Study, and theses and dissertation proposals;
- f. reviewing and approving master's and doctoral students' Advisory/Examination Committee members and theses and dissertation proposals;
- g. monitoring student progress toward their degrees, consulting with students and advisors where problems are identified, and making recommendations to the Graduate School for dismissal for failure to meet conditions or when "reasonable progress" is not being made;

- h. receiving and acting on petitions from graduate students for changes in their Program of Study, Advisory/Examining Committee members, and theses, projects, or dissertation topics;
- i. hearing and responding to graduate student grievances;
- j. developing standards for graduate faculty membership categories and nominating qualified faculty members to the Graduate School; and
- k. reviewing, commenting on, approving, or disapproving all School of Environment and Natural Resources courses that would carry graduate credit, including the times ENR graduate courses are offered so as not to conflict with the ENR 8980 Seminar requirement (see Sections 2.6.1 and 3.8.2). No proposal for a course that would carry graduate credit will be forwarded to the Graduate Council without prior approval of both the Graduate Studies Committee and the School's Academic Affairs Committee.

## **9.5 COUNCIL OF GRADUATE STUDENTS REPRESENTATIVES**

Representatives from the Environment and Natural Resources Graduate Program to the Council of Graduate Students (CGS) are nominated each September by the student organization, GradRoots, and appointed by the Graduate Studies Committee. To be eligible for appointment, graduate students must be seeking either the master's or doctoral degree in the Environment and Natural Resources Graduate Program. CGS representatives are encouraged to attend Graduate Studies Committee meetings and to report on CGS activities.

## **9.6 ENVIRONMENT AND NATURAL RESOURCES GRADUATE PROGRAM HANDBOOK**

It is the responsibility of the Graduate Studies Committee to compile and maintain an Environment and Natural Resources Graduate Program Handbook. This Handbook lists rules and procedures by which the Environment and Natural Resources Graduate Program is to be managed.

The Graduate Studies Committee will update the Environment and Natural Resources Graduate Program Handbook to incorporate changes in the rules and procedures of the Environment and Natural Resources Graduate Program, the Graduate School Handbook, or other university policies, and can make additions and emendations for the purpose of clarification at any time. A current copy will be kept on file in the SENR graduate program office and on the [School website](#).

## **9.7 APPEALS FOR RECONSIDERATION OF GRADUATE STUDIES COMMITTEE DECISIONS**

Any member of the graduate faculty in the Environment and Natural Resources Graduate Program may request a reconsideration of any decision made by the Graduate Studies Committee.

## **9.8 PETITIONS AND GRIEVANCE PROCEDURES AND GUIDELINES**

### **9.8.1 Petitions**

A student may petition for modification to any rules by submitting a written petition to the Graduate Studies Committee. Such a petition should contain the signature of the advisor; a letter of support from the advisor would strengthen the petition. If the Graduate Studies Committee does not approve the petition, the student may make use of the petition procedures of the Graduate School (Graduate School Handbook, XII).

### 9.8.2 Grievance Procedures

Should any graduate student, advisor or supervisor of a Graduate Associate have a complaint, a thorough attempt should be made to resolve the problem through informal discussions. Thereafter, the following grievance procedure should be implemented (see also Graduate School Handbook, Appendix D):

- a. If a problem remains after exhausting the informal process between the parties involved, the person having the unresolved complaint may file a grievance with the Graduate Studies Committee by submitting a statement to the Graduate Studies Committee chair describing the grievance. The Graduate Studies Committee will then serve as the Graduate Studies Grievance Committee. The Graduate Studies Committee chair will be the Graduate Studies Grievance Committee chair unless personally involved, in which case the chair will be excluded from all deliberations on the matter and the Graduate Studies Grievance Committee will select a chair from among its remaining faculty members. Similarly, members of the Graduate Studies Committee directly involved in the case will be disqualified from sitting on the panel for that specific case. In such circumstances, the Director of the School of Environment and Natural Resources will designate an alternate, when possible from the same area of expertise as the disqualified member. Student members will continue to serve as voting members of any grievance hearing and vote as prescribed for members of the Graduate Studies Committee.

The Graduate Studies Grievance Committee chair will set a hearing date not later than two weeks after the grievance statement is received. All parties involved will be notified in writing of both the nature of the grievance and the date of the hearing.

- b. At least 72 hours prior to a hearing, the Graduate Studies Grievance Committee chair will provide the following to all parties involved:
  - i. a written statement of the particular grievance,
  - ii. a written notification of the time and place of the hearing, and
  - iii. a copy of documents relevant to the grievance hearing.
- c. Each party will appear in person to present his or her case. Each party is entitled to active representation by counsel and may call witnesses in his or her behalf.
- d. All parties will be entitled to an expeditious hearing. In emergency situations, as agreed upon after case review by the Graduate Studies Committee, hearings will be as immediate as possible.

### 9.8.3 Graduate Studies Grievance Committee Decisions and Actions

The final decision of the Grievance Committee will be reported in writing to the parties involved and the Director of the School of Environment and Natural Resources not later than two weeks after the hearing. This report will detail the grievance and the subsequent findings, including a finding of either:

- a. No Probable Cause: There having been established no probable cause to credit the grievance, or
- b. Probable Cause: There having been established probable cause to credit the grievance.

The Director of the School of Environment and Natural Resources will direct the implementation of the resolution stipulated by the Graduate Studies Grievance Committee.

#### 9.8.4 Appeals of Decisions

Any appeal statement should be filed with the Director of the School of Environment and Natural Resources, the Graduate Studies Grievance Committee chair and the Graduate School not later than two weeks following the issuance of the decision of the Graduate Studies Grievance Committee. The appeal hearing will then be conducted in accordance with the rules and procedures of the Graduate School.

#### 9.8.5 Scholarly and Academic Misconduct

- a. Scholarly Misconduct: Falsification of research, deliberate misuse of facilities and data, plagiarism, and abuse of confidentiality within the context of research are examples of scholarly misconduct. The context is understood to include but not be limited to: dissertation research, thesis research, and research pursued as part of a fellowship while employed as a Graduate Associate or while funded on any grant or contract.

Rules covering scholarly misconduct by graduate students have been developed by the University Research Committee (Senate Committees, <http://senate.osu.edu>) in coordination with the Graduate Council and Graduate Studies. Students working as Graduate Research Associates on projects using state or federal resources should be extremely attentive to the ideals and ethical principles of their disciplines and never put themselves into compromising positions which later might call into question their ethics and potentially result in the ruination of their careers.

Accusations of “scholarly misconduct” by graduate students will be resolved according to the Guidelines for Review of Scholarly Misconduct by Graduate Students.

- b. Academic Misconduct: Includes but is not limited to cheating in a course(s) and on examinations, plagiarism in course work, violation of course rules, and the altering of course grades within the context of classroom and course work activities. Academic misconduct may occur in the following contexts: taking classes as a student, employment as a Graduate Teaching Associate (including teaching classes and grading tests/papers, etc.), and while completing the written section of Final Master’s and Candidacy Examinations.

Graduate Associates are obliged to report formally all incidents of academic misconduct in accordance with established university procedures. It is against the Rules of the University Faculty for anyone to issue failing grades for academic misconduct or to impose any other sanction before the full review process as required by Faculty Rules has been followed to completion. Accusations of academic misconduct by graduate students will be resolved according to the rules of the Committee on Academic Misconduct (University Faculty Rules 3335-5-48.7).

There is some overlap between these two areas of misconduct. The student is advised to consult the Guidelines for Review of Scholarly Misconduct by Graduate Students and/or the Rules of the University Faculty (Graduate School Handbook, Appendix C; and Resources & Policies, Code of Student Conduct, <http://www.studentaffairs.osu.edu/resources/>). In cases not fitting the definitions of the two areas and their contexts or where there is a question of jurisdiction, the Graduate School and the chair of the Committee on Academic Misconduct will consult to determine the appropriate body to hear the case.

## **9.9 STUDENT RECORDS**

The School of Environment and Natural Resources, acting on behalf of the Graduate Studies Committee, will maintain application files for all applicants to the Environment and Natural Resources Graduate Program and the official academic files of all students in the program. Student files may not be removed from the program office, but materials from application files may be scanned and emailed as a pdf document to assist in the review process. While measures are taken to keep applicant information secure, faculty and Graduate Studies Committee members are reminded to treat all applicant materials as confidential.

Access to application files is open to all members of the graduate faculty. Academic files for admitted students, however, are closed and access is restricted to members of the Graduate Studies Committee, the student's advisor, and others with permission of the Graduate Studies Committee chair. Students may examine any item in their files except letters of recommendation for which they have signed waivers of access.

The School will maintain the academic files of students admitted to the program and who officially register for six years. However, the file of any admitted student who does not begin attending classes in the designated semester of acceptance may be destroyed one year after the beginning of that semester. The Graduate Studies Committee chair is responsible for all aspects of student file maintenance.

## **9.10 OFFICE FOR DISABILITY SERVICES**

Students with any disabilities who may require special assistance are encouraged to contact the Office for Disability Services, 150 Pomerene Hall, 1760 Neil Avenue, Columbus, OH 43210; phone 614.292.3307, or online at <http://ods.osu.edu>. This office coordinates physical and academic support services and accommodations for individuals who have special needs as a result of a permanent or temporary disability. Individuals eligible for this service include but are not limited to those with mobility, hearing, visual, speech, or learning disabilities.

## **9.11 NONDISCRIMINATION POLICY**

The policy of The Ohio State University, both traditionally and currently, is that discrimination against any individual for reasons of race, color, creed, religion, sex, sexual orientation, national origin, age, handicap, or Vietnam–era veteran status is specifically prohibited.

This Handbook is a compilation of the policies, procedures, and requirements of the Environment and Natural Resources Graduate Program as determined by the graduate faculty through its Graduate Studies Committee. Nothing in this Handbook will be interpreted as replacing or superseding regulations set forth by the Graduate Council and Graduate Studies as published in the Graduate School Handbook.

## **10. GRADUATE FACULTY**

A list of current graduate faculty members is maintained in the Graduate School.

### **10.1 FUNCTIONS**

The graduate faculty in environment and natural resources are appointed and serve according to the rules stipulated in the Graduate School Handbook, XV, and are responsible for educating graduate students according to the rules and procedures set forth in this Handbook of the Environment and Natural Resources

Graduate Program.

## **10.2 ELIGIBILITY FOR MEMBERSHIP**

Only Regular Research/Clinical faculty members of The Ohio State University are eligible to be members of the graduate faculty in any of the University's graduate programs. Current graduate faculty members who are not Regular Faculty may have been grandfathered in and may continue to serve, but no new appointments of individuals who are not Regular Faculty may be made.

To be appointed to the Environment and Natural Resources graduate faculty, Regular Faculty members in the School of Environment and Natural Resources or in other units at The Ohio State University must qualify for Category P status according to the rules published in the Graduate School Handbook, XV. All new appointments to the Environment and Natural Resources graduate program shall be at the Category P level. Graduate faculty members are reviewed every five years for continuation according to criteria and procedures in Section 11.4 below.

## **10.3 NOMINATION TO GRADUATE FACULTY**

Regular and Research/Clinical faculty members in the School of Environment and Natural Resources or Regular faculty members in other academic units wishing to be appointed to the Environment and Natural Resources graduate faculty must submit a letter and a current curriculum vitae to the Graduate Studies Committee chair indicating the Area(s) of Specialization in which they desire to become a member. Once these materials are received in the SENR graduate program office, they are emailed to the appropriate track(s) for faculty review, acceptance or rejection. If the track faculty deems the candidate acceptable by majority vote, his or her credentials are forwarded to the Graduate Studies Committee for a final decision. If the Graduate Studies Committee approves the appointment, the SENR graduate program office will prepare the Nomination to a Graduate Faculty Appointment form for the chair's signature and submit all materials to the Graduate School for final approval. The Graduate Studies Committee will act on all membership applications within two months of receipt. All new faculty members will be awarded Category P membership and will be expected to train doctoral students.

## **10.4 QUALIFICATIONS AND EXPECTATIONS FOR CATEGORY P AND M FACULTY**

Category P: The training of doctoral students is a critical objective of the Environment and Natural Resources Graduate Program. All regular faculty admitted to membership in the graduate faculty in Environment and Natural Resources should be qualified to hold Category P appointments. The minimum Category P qualifications are that the faculty member:

- a. holds appointment as a regular, tenure-track faculty member,
- b. holds an earned PhD or equivalent, and
- c. is engaged in an active program of research or scholarship or demonstrates significant promise of establishing such a program.

Faculty holding Category P appointments are expected to:

- a. maintain an active research program leading to regular publication in refereed journals,

- b. act as the advisor for master's and doctoral students,
- c. co-author research papers and studies with their students,
- d. participate in the governance of graduate education at all levels within the University,
- e. serve on doctoral advisory and examining committees including serving as the Program Representative on doctoral committees within the Environment and Natural Resources Graduate Program,
- f. serve as Graduate Faculty Representative on Final Oral Examinations, and
- g. contribute to the graduate program by teaching courses at the 6000, 7000, and 8000 levels.

Category M: This category is reserved for members of the Environment and Natural Resources graduate faculty who, for any reason, do not qualify for Category P membership. The minimum qualifications for Category M status are that the faculty member:

- a. holds a regular, tenure-track or research/clinical appointment,
- b. holds an earned PhD or equivalent degree

Faculty holding Category M appointments are expected to:

- a. maintain an active research program leading to regular publication in refereed journals,
- b. act as the advisor for master's students,
- c. serve on master's advisory and examining committees and on doctoral advisory and examining committees at the discretion of the Graduate Studies Committee,
- d. co-author research papers and studies with their students,
- e. participate in the governance of graduate education at all levels within the University, and
- f. contribute to the graduate program by teaching courses at the 6000 level.

Category M faculty are encouraged to work toward attaining Category P status by building an active master's education program, serving on doctoral committees throughout the university, and coauthoring research papers and studies with their students.

## **10.5 EMERITUS AND ADJUNCT FACULTY**

Emeritus faculty who held Category M or P appointments at the time of their retirement may apply for continued Graduate Faculty status. All such cases must submit a letter and updated curriculum vitae to the chair of the Graduate Studies Committee. Requests must be reviewed and approved by the Graduate Studies



Committee and Director of the School of Environment and Natural Resources before being sent to the Graduate School for final approval.

Adjunct faculty may not be appointed to the graduate faculty but may serve on master's and doctoral Advisory/Examination Committees with the approval of the Graduate Studies Committee and the Graduate School (see Section 2.5, 3.7, and 4.3 Graduate School Handbook, XV.1).

## **10.6 REVIEW OF FACULTY MEMBERS**

The Graduate Studies Committee will review faculty members holding Category M or P status every five years to determine their qualification for continuation in their current status. Such review will be initiated by the Graduate Studies Committee chair during the fifth year of appointment. The faculty member is responsible for providing the Graduate Studies Committee with appropriate documentation of performance. As a result of the review, faculty members may be continued in a Category for an additional five years. If, however, the Graduate Studies Committee determines that performance does not meet the standards for continuation in a Category, appropriate steps will be taken to reassign the faculty member to an appropriate Category. Reassignment from Category P to M requires the approval of the Graduate School.

Special reviews to address grievances or other matters may be initiated by a majority vote of the Graduate Studies Committee, by a request from five members of the graduate faculty, or by the Graduate Studies Committee upon request from the Director of the School of Environment and Natural Resources or the Graduate School.

Faculty members may request a review of an adverse decision by the Graduate Studies Committee and may subsequently appeal to the graduate faculty and the Graduate School.

## **10.7 GRADUATE FACULTY MEETINGS**

Meetings of the graduate faculty will be called from time to time to amend this document and to carry out such business as may need the faculty's attention. The Graduate Studies Committee chair will also chair meetings of the graduate faculty. Robert's Rules of Order will prevail. A quorum will be deemed present when at least twenty percent of the graduate faculty are present and voting. The graduate faculty may also conduct its business by email ballot.

## **APPENDIX A**

### **AREAS OF SPECIALIZATION**

#### **ECOLOGICAL RESTORATION**

Human domination of ecosystems worldwide has rendered vast areas of land and many water bodies degraded to the point that they cannot support any plant and animal growth. The new field of ecological restoration has as its goal the restoration, revitalization, and reuse of disturbed, disrupted and contaminated sites, based on ecological principles. The goal is not to duplicate exactly what was there before disturbance, but to restore the ecological processes that will enable the ecosystem to change and adapt as environmental conditions change. The focus is on function more than form.

## Faculty

Nicholas Basta	Professor	P
Jerry Bigham*	Professor	P
Peter Curtis	Professor	P
Konrad Dabrowski	Professor	P
Matt Davies	Assistant Professor	P
Craig Davis*	Professor	P
M. Scott Demyan	Assistant Professor	P
Warren Dick*	Professor	P
Stacey Fineran	Assistant Professor	M
Charles Goebel*	Professor	P
David Hix	Professor	P
Rattan Lal	Professor	P
Brian Lower	Associate Professor	P
William Mitsch*	Professor	P
Richard Moore*	Professor	P
Brian Slater	Associate Professor	P
Mazeika Sullivan	Associate Professor	P
Mohan Wali*	Professor	P

\*Emeriti faculty members may serve on Advisory/Examination Committees but may not serve as advisors (Sections 2.3, 2.5, 3.5, 3.7 and 4.3).

## Courses

EEOB 5450	Population Ecology, 3 credits
EEOB 5460	Physiological Ecology, 3 credits
EEOB 5470	Community and Ecosystem Ecology, 3 credits
EEOB 6210	Ecotoxicology, 2 credits
ENR 5250.01	Wetland Ecology and Restoration, 3 credits

ENR 5250.02	Wetland Field Laboratory, 1 credit
ENR 5261	Environmental Soil Physics, 3 credits
ENR 5268	Soils and Climate Change, 3 credits
ENR 5273	Environmental Fate and Impact of Contaminants in Soils and Water, 3 credits
ENR 5279	Urban Soil and Ecosystem Services: Assessment and Restoration, 3 credits
ENR 5280	Stream Ecology, 4 credits
ENR 5345	Methods in Aquatic Ecology, 4 credits
ENR 5350.01	Taxonomy and Behavior of Aquatic Invertebrates, 3 credits
ENR 5560	Rehabilitation/Restoration of Ecosystems, 2 credits
ENR 7333	Successional Dynamics of Forests, 3 credits
ENR 8120	Spatial Modeling in Environment and Natural Resources, 3 credits
ENR 8150	Quantitative Methods for Natural Resources, 3 credits
ENR 8350	Ecosystem Management Policy, 3 credits
ENR 8780	Quantitative Methods for Environment and Natural Resources, 3 credits
ENR 8890.02	Ecological Restoration Seminar, 1-12 credits
ENVENG/FABE 5310	Ecological Engineering and Science, 4 credits
MOLGEN 5630	Plant Physiology, 3 credits
STAT 5301	Intermediate Data Analysis I, 4 credits
STAT 5302	Intermediate Data Analysis II, 3 credits

## **ECOSYSTEM SCIENCE**

Ecosystem science is the study of biotic and abiotic components and their interaction within an ecosystem. Ecosystem science is firmly grounded in ecological theory, and theory is a significant component of our research efforts. But, this program also has an applied focus that examines how ecosystem functions produce and maintain products and services of importance to human societies, e.g. water purification in wetlands. In this context, ecosystem science provides a powerful framework for identifying ecological mechanisms underlying environmental problems such as: problems of land degradation, water pollution, and loss of species and habitat.

## **Faculty**

Peter Curtis	Professor	P
Konrad Dabrowski	Professor	P
Matt Davies	Assistant Professor	P
Craig Davis*	Professor	P
M. Scott Demyan	Assistant Professor	P
Ronald Hendrick*	Professor	P
Rattan Lal	Professor	P
Brian Lower	Associate Professor	P
William Mitsch*	Professor	P
Richard Moore*	Professor	P
William Peterman	Assistant Professor	P
Lauren Pintor	Assistant Professor	P
Mazeika Sullivan	Associate Professor	P
Mohan Wali*	Professor	P
Kaiguang Zhao	Assistant Professor	P

\*Emeriti faculty members may serve on Advisory/Examination Committees but may not serve as advisors (Sections 2.3, 2.5, 3.5, 3.7 and 4.3).

## Courses

EEOB 5410	Aquatic Ecosystems - Ocean Ecology, 1.5 credits
EEOB 5420	Aquatic Ecosystems - Ecology of Inland Waters, 1.5 credits
EEOB 5450	Population Ecology, 3 credits
EEOB 5460	Physiological Ecology, 3 credits
EEOB 5470	Community and Ecosystem Ecology, 3 credits
EEOB 6210	Ecotoxicology, 2 credits
ENR 5250.01	Wetland Ecology and Management, 3 credits
ENR 5250.02	Wetland Field Laboratory, 1 credit

ENR 5261	Environmental Soil Physics, 3 credits
ENR 5263	Biology of Soil Ecosystems, 3 credits
ENR 5280	Stream Ecology, 4 credits
ENR 5340	Forest Ecosystem Management, 3 credits
ENR 5345	Methods in Aquatic Ecology, 4 credits
ENR 5560	Rehabilitation/Restoration of Ecosystems, 2 credits
ENR 8120	Spatial Methods in Environment and Natural Resources, 3 credit
ENR 8890.03	Ecosystem Science Seminar, 1-12 credits

## ENVIRONMENTAL SOCIAL SCIENCES

A productive society is marked by its harmony with a sustainable and healthy environment: changing climate, energy policies, global food and water distribution, economic and social development to conserve habitat and biodiversity. In this world of unprecedented environmental challenges the common core is inextricably linked to human values.

Within the Environmental Social Sciences (ESS) Graduate Specialization, students learn how to build scientific understanding of these issues, identify potential responses and evaluate their consequences, and, ultimately, decide how and when to take action. Students work with faculty who study how people value and use the environment and natural resources, make decisions about, and design policies to address environmental and natural resources issues.

### Faculty

Kerry Ard	Assistant Professor	P
Ramiro Berardo	Assistant Professor	P
Jeremy Brooks	Assistant Professor	P
Jeremy Bruskotter	Associate Professor	P
Alia Dietsch	Assistant Professor	P
Jeffrey Jacquet	Assistant Professor	P
Joseph Donnermeyer*	Professor	P
Earl Epstein*	Professor	P
John Heywood*	Associate Professor	P

Kristi Lekies	Associate Professor	P
Linda Lobao	Professor	P
Richard Moore*	Professor	P
Cathy Rakowski	Associate Professor	P
Jeff Sharp	Professor	P
Nicole Sintov	Assistant Professor	P
Eric Toman	Associate Professor	P
Robyn Wilson	Associate Professor	P

\*Emeriti faculty members may serve on Advisory/Examination Committees but may not serve as advisors (Sections 2.3, 2.5, 3.5, 3.7 and 4.3).

## Courses

ENR 5451	Water Law, 3 credits
ENR 5640	Natural Resources Program Planning, 3 credits
ENR 5649	Wildlife Conservation and Policy, 3 credits
ENR 7380	Climate and Society, 3 credits
ENR 7400	Communicating Environmental Risk, 2 credits
ENR 7500	Resolving Social Conflict, 3 credits
ENR 7520	Environmental Science and Law, 3 credits
ENR 8150	Advanced Environment, Risk and Decision Making, 3 credits
ENR 8350	Ecosystem Management Policy, 3 credits
ENR 8400*	Human Dimensions of Ecosystem Management, 2 credits
ENR 8510*	Research Design for Environmental Social Sciences, 3 credits
ENR 8890.06*	Environmental Social Sciences Seminar, select as 1 credit (MS required enrollment for 2 semesters, PhD required enrollment for 3 semesters)

\*Required core course for MS and PhD programs of study

## FISHERIES AND WILDLIFE SCIENCE

Fisheries and wildlife science integrates a wide range of disciplines, including biology, ecology, behavior, conservation biology, natural resource management, aquaculture, and the social sciences, and works across individual, population, community, and landscape scales. Students engage in basic and applied research that

informs the conservation and management of animals in terrestrial and aquatic systems.

## Faculty

Jeremy Bruskotter	Associate Professor	P
Konrad Dabrowski	Professor	P
Robert Gates	Associate Professor	P
Stanley Gehrt	Professor	P
Suzanne Gray	Assistant Professor	P
David Johnson*	Professor	P
Stephen Matthews	Assistant Professor	P
William Peterman	Assistant Professor	P
Lauren Pintor	Assistant Professor	P
Mazeika Sullivan	Associate Professor	P
Christopher Tonra	Assistant Professor	P

\*Emeriti faculty members may serve on Advisory/Examination Committees but may not serve as advisors (Sections 2.3, 2.5, 3.5, 3.7 and 4.3 ).

## Courses

EEOB 5430	Fish Ecology, 1.5 credits
EEOB 5470	Community and Ecosystem Ecology, 3 credits
EEOB 6340	Biodiversity Informatics, 4 credits
EEOB 7220	Modeling in Evolutionary Ecology 4 credits
ENR 5280	Stream Ecology, 4 credits
ENR 5342	Principles of Fisheries Ecology and Management, 3 credits
ENR 5345	Methods in Aquatic Ecology, 4 credits
ENR 5350.01	Taxonomy and Behavior of Aquatic Invertebrates, 3 credits
ENR 5350.02	Taxonomy and Behavior of Fishes, 3 credits
ENR 5355	Aquaculture, 3 credits
ENR 5360	Principles of Wildlife Ecology and Management, 3 credits

ENR 5362	Wildlife Ecology Methods, 3 credits
ENR 5364.01	Mammalian Wildlife Biology and Management, 3 credits
ENR 5364.02	Avian Wildlife Biology and Management, 3 credits
ENR 5370	Management of Wildlife Habitat, 2 credits
ENR 5375	Ecology and Management of Wetland Birds, 3 credits
ENR 5649	Wildlife Conservation and Policy, 3 credits
ENR 8120	Spatial Methods in Environment and Natural Resources, 3 credits
ENR 8780	Quantitative Methods in Environment and Natural Resources, 3 credits
ENR 8890.01	Fisheries and Wildlife Science Seminar, 1-12 credits
STAT 5301	Intermediate Data Analysis I, 4 credits
STAT 5302	Intermediate Data Analysis II, 3 credits

## FOREST SCIENCE

Forest science is a well-recognized and long-standing academic discipline. The forest science graduate area of specialization in SENR is the only graduate program in forest science in the state of Ohio. Our program brings together foresters, ecologists, hydrologists, and social scientists to conduct fundamental research on forest ecosystems, social systems, and their interactions. We endeavor to educate the next generation of scientists, managers, and users of forest resources who seek to develop innovative and integrative approaches to sustainably manage and protect forest ecosystems and the important ecosystem services they provide.

### Faculty

Peter Curtis	Professor	P
Matt Davies	Assistant Professor	P
Charles Goebel*	Professor	P
Ronald Hendrick*	Professor	P
David Hix	Professor	P
Andrew Londo	Professor	P
Stephen Matthews	Assistant Professor	P
Davis Sydnor*	Professor	P
Eric Toman	Associate Professor	P



Roger Williams	Associate Professor	P
Mohan Wali*	Professor	P
Kaiguang Zhao	Assistant Professor	P

\*Emeriti faculty members may serve on Advisory/Examination Committees but may not serve as advisors (Sections 2.3, 2.5, 3.5, 3.7 and 4.3).

## Courses

EEOB 4410	Conservation Biology, 3 credits
EEOB 5450	Population Ecology, 3 credits
EEOB 5460	Physiological Ecology, 3 credits
EEOB 5470	Community and Ecosystem Ecology, 3 credits
EEOB 6210	Ecotoxicology, 2 credits
ENR 5250.01	Wetland Ecology and Restoration, 3 credits
ENR 5250.02	Wetland Field Laboratory, 1 credit
ENR 5320	Forest Management, 3 credits
ENR 5325	Public Forest and Lands Policy, 3 credits
ENR 5340	Forest Ecosystem Management, 3 credits
ENR 5560	Rehabilitation/Restoration of Ecosystems, 2 credits
ENR 7333	Successional Dynamics of Forests, 3 credits
ENR 8120	Spatial Methods in Environment and Natural Resources, 3 credits
ENR 8150	Advanced Environment, Risk, and Decision Making, 3 credits
ENR 8350	Ecosystem Management Policy, 3 credits
ENR 8780	Quantitative Methods for Environment and Natural Resources, 3 credits
ENR 8890.05	Forest Science Seminar, 1-12 credits
EARTHSC 5550	Geomorphology, 3 credits
STAT 5301	Intermediate Data Analysis I, 4 credits
STAT 5302	Intermediate Data Analysis II, 3 credits

## RURAL SOCIOLOGY

Rural Sociology issues span the globe both internationally and domestically. Rural Sociologists engage in basic and applied sociological research related to the core discipline as well as meaningfully contribute to multidisciplinary research across a range of environmental, food, agricultural, community and development matters. Rural Sociology research focuses on environmental well-being, sustainable development of natural resources, social and community quality of life, and diffusion and impacts of technologies. Doctoral students can select from two tracks: Agriculture and the Environment, or Social Change and Development. Rural Sociology faculty maintain ties to Ohio State University Extension (OSUE) and the Ohio Agricultural Research and Development Center (OARDC), and form part of a larger cluster of social science faculty within SENR.

### Faculty

Kerry Ard	Assistant Professor	P
Joseph Donnermeyer*	Professor	P
Douglas Jackson-Smith	Professor	
Jeffrey Jacquet	Assistant Professor	P
Kristi Lekies	Associate Professor	P
Linda Lobao	Professor	P
Kenneth Martin	Professor	P
Richard Moore*	Professor	P
Cathy Rakowski	Associate Professor	P
Jeff Sharp	Professor	P
Eric Toman	Associate Professor	P

### Courses

#### **MS Core Courses** (in addition to ENR core courses)

6 semester credits in Sociological Theory\*

3 semester credits in Research Methodology\*

9 semester credits in Rural Sociology

(Changes and substitutions can be made to required courses where a valid reason exists and with the approval of the advisor and advisory committee)

Required (toward Sociological Theory)	
SOCIOL 7600	Concepts and Theories in Rural Sociology, 3 credits
SOCIOL 6582 or	Sociological Theory, 3 credits
SOCIOL 8547 or	Theories of Social Change, 3 credits
	other sociological theory course approved by committee
Required (toward Research Methodology)	
SOCIOL 6649 or	Intro to Quantitative Research/Multiple Regression, 3 credits
SOCIOL 6655	Sociological Research Methods, 3 credits
Choose from the following	
ENR 5600	Sustainable Agricultural and Food Systems, 3 credits
ENR 8890.07	Rural Sociology Seminar, 1-12 credits
RURLSOC 5500	Diffusion of Innovations, 3 credits
RURLSOC 5520	Amish Society, 3 credits
RURLSOC 5530**	Sociology of Agriculture and Food Systems, 3 credits
RURLSOC 5540	Population, Place and Environment, 3 credits
RURLSOC 5580	Social Impact Assessment, 3 credits
RURLSOC 6500**	Rural Poverty, 3 credits
RURLSOC 7550***	Rural Community Development in Theory and Practice, 3 credits
RURLSOC 7560**	Environmental Sociology, 3 credits
RURLSOC 8500***	Development Sociology in Theory and Practice, 3 credits

\* Students are strongly encouraged to take additional courses in theory and research methods

\*\* Required course within Agriculture and Environment focus

\*\*\* Required course within Social Change and Development focus

### **PhD Core Courses** (in addition to ENR core courses)

12 semester credits in Sociological Theory\*

12 semester credits in Research Methodology\*

12 semester credits in Rural Sociology

12 semester credits in Rural Sociology (2nd field)

12 semester credits in Rural Sociology (3rd field)

(Changes and substitutions can be made to required courses where a valid reason exists and with the approval of the advisor and advisory committee)

Required (toward Sociological Theory)	
SOCIOL 6582 or	Sociological Theory, 3 credits
SOCIOL 8547	Theories of Social Change, 3 credits
	9 semester other sociological theory courses approved by committee
Required (toward Research Methodology)	
SOCIOL 6649 or	Intro to Quantitative Research/Multiple Regression, 3 credits
9 semester other sociological methods courses approved by committee – choose from the following:	
SOCIOL 6655	Sociological Research Methods, 3 credits
SOCIOL 6608	Qualitative Methods in Sociology, 3 credits
SOCIOL 8607	Causal Modeling, 3 credits
SOCIOL 7652	Sociological Survey Research Methods, 3 credits
Required	
RURLSOC 7600	Concepts and Theories in Rural Sociology, 3 credits
9 semester other rural sociology courses approved by committee – choose from the following:	
ENR 5600	Sustainable Agricultural and Food Systems, 3 credits
ENR 8890.07	Rural Sociology Seminar, 1-12 credits
RURLSOC 5500	Diffusion of Innovations, 3 credits
RURLSOC 5520	Amish Society, 3 credits
RURLSOC 5530**	Sociology of Agriculture and Food Systems, 3 credits
RURLSOC 5540	Population, Place and Environment, 3 credits
RURLSOC 5580	Social Impact Assessment, 3 credits
RURLSOC 6500**	Rural Poverty, 3 credits
RURLSOC 7550***	Rural Community Development in Theory and Practice, 3 credits
RURLSOC 7560**	Environmental Sociology, 3 credits
RURLSOC 8500***	Development Sociology in Theory and Practice, 3 credits

\* Students are strongly encouraged to take additional courses in theory and research methods

\*\* Required course within Agriculture and Environment focus

\*\*\* Required course within Social Change and Development focus

Rural Sociology selects 2nd or 3rd field where appropriate. Courses in **bold** are required only if that field is chosen.

Sociology of Agriculture / Natural Resources	
<b>RURLSOC 7560*</b>	<b>Environmental Sociology, 3 credits</b>
<b>RURLSOC 5530*</b>	<b>Sociology of Agriculture and Food Systems, 3 credits</b>
RURLSOC 6500*	Rural Poverty, 3 credits
Social Change / Development	
<b>RURLSOC 8500**</b>	<b>Development Sociology in Theory and Practice, 3 credits</b>
RURLSOC 6550**	The Change Agent, 3 credits
RURLSOC 7550**	Rural Community Development in Theory and Practice, 3 credits
Additional courses selected as approved by advisor	
ENR 5600	Sustainable Agricultural and Food Systems, 3 credits
ENR 8890.07	Rural Sociology Seminar, 1-12 credits
RURLSOC 5500	Diffusion of Innovations, 3 credits
RURLSOC 5520	Amish Society, 3 credits
RURLSOC 5540	Population, Place and Environment, 3 credits
RURLSOC 5570	Women in Rural Society, 3 credits
RURLSOC 5580	Social Impact Assessment, 3 credits
<p>Rural Sociology (individualized field)          Requirements for this field will be decided by the student in consultation with advisor. This field may represent a social science area, an area related to the student's dissertation work, or the remaining specialization in Rural Sociology.</p>	

\* Required course within Agriculture and Environment focus

\*\* Required course within Social Change and Development focus

Additional courses selected as approved by advisor

## SOIL SCIENCE

Soil is a fundamental resource for ecosystems functioning and environmental health. It is a living filter that

provides vital ecosystem services – including carbon sequestration, recycling of nutrients, and assimilation of waste products. Soil is a key component of natural, agricultural, and wildland ecosystems that sustains all global processes.

Soil science is highly interdisciplinary; soil scientists apply biology and microbial ecology, chemistry, earth sciences, ecology, hydrology, mineralogy, mathematics, nutrition, toxicology, and physics to understand, sustain, and improve the environment. A diverse range of research tools are used, such as geospatial analysis, computer modeling, microscopy, spectroscopy, bioassays, molecular biology, and other advanced field and lab technology for soil investigation.

## Faculty

Nicholas Basta	Professor	P
Jerry Bigham*	Professor	P
Steven Culman	Assistant Professor	P
Matt Davies	Assistant Professor	P
M. Scott Demyan	Assistant Professor	P
Richard Dick	Professor	P
Warren Dick*	Professor	P
Donald Eckert*	Professor	P
Norman Fausey*	Adjunct Professor	P
Van Ryan Haden	Assistant Professor	P
Jeffory Hattey	Professor	P
Ronald Hendrick*	Professor	P
Rafiq Islam*	Adjunct Assistant Professor	M
Rattan Lal	Professor	P
Brian Lower	Associate Professor	P
Steven Lower	Professor	P
Ed McCoy	Associate Professor	P
Martin Shipitalo*	Adjunct Assistant Professor	M
Brian Slater	Associate Professor	P
Olli Tuovinen*	Professor	P

\*Adjunct and emeriti faculty members may serve on Advisory/Examination Committees but may not serve as advisors (Sections 2.3, 2.5, 3.5, 3.7 and 4.3)

Students who wish to have the Soil Science specialization designated on their transcripts must submit the Soil Science Graduate Specialization Program of Study Addendum form in addition to the ENR Program of Study form.

## Courses

ENR 5260*	Soil Landscapes: Morphology, Genesis & Classification, 3 credits
ENR 5261*	Environmental Soil Physics, 3 credits
ENR 5262*	Soil Chemical Processes and Environmental Quality, 3 credits
ENR 5263*	Biology of Soil Ecosystems, 3 credits
ENR 5268	Soils and Climate Change, 3 credits
ENR 5270	Soil Fertility, 3 credits
ENR 5272	Turfgrass Soils, 2 credits
ENR 5273	Environmental Fate and Impact of Contaminants in Soil and Water, 3 credits
ENR 5274	Ecosystems Simulation, 3 credits
ENR 5279	Soil and Ecosystem Services: Assessment and Restoration, 3 credits
ENR 6610	Soil and Environmental Biochemistry, 3 credits
ENR 8890.04	Soil Science Seminar, 1-12 credits
STAT 5301*	Intermediate Data Analysis I, 4 credits
STAT 5302*	Intermediate Data Analysis II, 3 credits

\* required core course for MS and PhD programs of study

## APPENDIX B

### STANDARD OPERATING PROCEDURES

#### 1. Teaching Responsibilities for ENR 6000 and ENR 8897

The Graduate Studies Committee has traditionally been responsible for ENR 6000 and ENR 8897 as part of its role in monitoring student progress and the quality of the Environment and Natural Resources Graduate Program. Syllabi and teaching goals for these courses must be approved annually by the Graduate Studies Committee. Instructors may be asked to submit SEIs to the Graduate Studies Committee for review.

#### 2. Purpose and Operation of the Required SENR Seminar Series (ENR 8980)

The SENR Seminar Series provides a forum for scholarly interaction among faculty, students and speakers in the highest tradition of academic life. ENR 8980 is a course that is required for all MS and PhD graduate students in this program. It is also part of the required undergraduate writing course ENR 2367. Therefore, it is the responsibility of the graduate faculty and the Environment and Natural Resources Graduate Studies Committee to ensure that the Seminar Series meets minimal standards of academic quality and educational effectiveness expected in a required advanced graduate course. In pursuit of that objective, the graduate faculty establishes the following standards and procedures for the Seminar Series.

- a. The Seminar Series shall be organized and operated by a Seminar Committee appointed by the Director of the School. Each semester the Seminar Committee will schedule up to 12 seminars depending on the number of Thursdays in the semester, excluding the first Thursday of the semester and the Thursday of finals week.

Presenters may be from the School, elsewhere in the University, or from outside of the University. The critical factor in selecting a speaker is that the speaker is suitable for this seminar format. A suitable speaker is one who can deliver a scholarly presentation that will be of interest to a broad spectrum of SENR faculty and graduate students. Narrow topics of interest to only one sector of the faculty and student body will not be acceptable, nor will presentations of a non-scholarly nature, such as program descriptions, travelogues, and descriptions or promotions of other institutions or research opportunities. Further, the expectation that the seminar topic should be of broad interest should not be interpreted as requiring that the presentation be overly simplified. The Seminar Committee members desire speakers who can present significant scholarly topics that will attract and maintain the interest of a broad spectrum of SENR faculty and graduate students.

- b. The procedures for reserving slots shall be:
  - Each ENRGP Area of Specialization shall nominate suitable presenters for each semester. The nomination must be provided to the co-chairs of the Seminar Committee not later than the beginning of the semester before the semester in which the presenter would speak. The specialization representatives on the Graduate Studies Committee shall be responsible for collecting possible nominations from their specialization constituents and submitting the information to the Seminar Committee.
  - The ENR graduate students, through GradRoots, shall have the opportunity to nominate one or more suitable speakers for each semester. The nomination must be provided to the co-chairs of the Seminar



Committee not later than the beginning of the semester before the semester in which the speaker would speak.

- c. Seminar presentations shall not exceed 40 minutes in length, and all speakers are to be apprised of this restriction well in advance so they can plan appropriately. This restriction will allow time for questions and discussion that will foster active participation of both faculty and students. Graduate students are encouraged to submit feedback forms for speakers for future reference of the Graduate Studies and Seminar Committees.
- d. Student attendance shall be taken each week. Requests for waivers of the ENR 8980 attendance requirement for any semester must be submitted by the student to the Graduate Studies Committee chair prior to the beginning of the semester to be waived. If a student is absent from attending a particular seminar, the absence may be “made up” by submitting a summary of another seminar attended to the “instructor” or Seminar coordinator for the given semester.

### **3. Procedures for Handling Project, Thesis or Dissertation Proposals That Do Not Meet Standards of Scholarship or Disciplinary Guidelines**

Occasionally, Thesis or Dissertation Proposals may be challenged by the Graduate Studies Committee as being deficient in meeting one or both of two fundamental requirements. (1) Thesis and dissertation research shall fall within the generally recognized bounds of the fields of environment and natural resources, and (2) thesis and dissertation research shall adhere to the standards of scholarship set forth by the graduate faculty and listed in the front of this Handbook.

If the proposed research is deemed deficient in either of these areas, the Graduate Studies Committee may delay accepting the proposal until appropriate modifications are made. In such cases, the student and his or her advisor shall be asked to provide a revised proposal that directly addresses concerns in these two areas. A reasonable amount of time for completing and submitting that revisions shall be set by the Graduate Studies Committee. If the advisor believes that the judgment of deficiency is in error, he or she may appeal directly to the Graduate Studies Committee.

Once the revised proposal is returned to the Graduate Studies Committee, the chair shall send it to all members of the Graduate Studies Committee for review. If, after this second review, the Graduate Studies Committee is satisfied that the two fundamental requirements fit within the fields of environment and natural resources and quality of scholarship have been satisfied, the Graduate Studies Committee chair will sign the proposal title page and the proposal form and place the approved proposal in the student's file. If, however, after the second review, the Graduate Studies Committee does not deem the proposal acceptable on the basis of one or both of the fundamental requirements, the student's advisor shall be asked to meet with the Graduate Studies Committee to seek a satisfactory resolution to the problem.

If a satisfactory resolution is negotiated between the advisor and the Graduate Studies Committee, the student will be expected to comply within a time period set by the Graduate Studies Committee. If a satisfactory solution is not found during this meeting, the Graduate Studies Committee will set the conditions and time deadline that the student must meet to reestablish reasonable progress. This will be reported to the advisor and the student. If the student does not satisfy these conditions on time, the Graduate Studies Committee will report a finding of not making reasonable progress to the Graduate School. This could lead to the student

being denied further enrollment in the Graduate School.

## **4. MENR Admission Procedures**

### **4.1 Metrics to guide admission decisions regarding applicants with undergraduate GPA's below 3.0.**

A decision on admission of an applicant whose undergraduate GPA falls below 3.0 includes three factors: undergraduate GPA, GRE scores, and years of professional experience. Applicants with an undergraduate GPA below 3.0 on a 4-point scale must take the GRE General Test no matter how many years of professional experience he or she may have, and must have official results submitted to the Graduate Admissions Office. ([Graduate School Handbook II.2](#))

### **4.2 Procedures for Requesting Transfer to the MENR Degree Program from the MS or PhD Degree Programs**

Students admitted to a Master of Science (MS) or Doctor of Philosophy (PhD) degree program wishing to transfer to the MENR may request a transfer pending review and approval by the Graduate Studies Committee. Master of Science and PhD students who transfer to the MENR must meet all of the course and credit hour requirements for the MENR degree. Students requesting a transfer must submit an updated statement of purpose and résumé to the graduate program office, which will contact the Graduate School to update the student's record if the transfer is approved.

### **4.3 Procedures for Requesting Transfer to the MS or PhD Degree Programs from the MENR Degree Program**

Students admitted to the Master of Environment and Natural Resources (MENR) degree program may request a transfer to the Master of Science or Doctor of Philosophy degree programs if all admission requirements are met (see ENRGP Handbook 8) and with the written support of the potential faculty advisor. Master of Environment and Natural Resources students who transfer to the MS or PhD must meet all of the course and credit hour requirements for the requested degree. Credit hours from the previous MENR study at OSU or other institutions may be applied to the MS or PhD degree, if taken within the past five years (see ENRGP Handbook 7.4) and with the review and approval of the Advisory/Examination Committee and the Graduate Studies Committee. Students requesting a transfer to the MS must submit an updated statement of purpose and resume to the Graduate Program Coordinator, who will notify the Graduate School to update the student's record if the transfer is approved. If transferring to the PhD, students must complete the Intra-University Graduate Transfer Application (found at [gpadmissions.osu.edu](http://gpadmissions.osu.edu)) and attach an updated statement of purpose and resume to this. The graduate program coordinator will contact the Graduate School to update the student's record if the transfer is approved.

## **5. Continuing from the MS to the PhD**

If an MS student wishes to request continuing on to the Regular PhD in the Environment and Natural Resources Graduate Program at Ohio State University, the following information should be taken into consideration by the student and the advisor.

- a. courses listed on the MS program of study cannot be double-counted for the PhD degree, especially in an Area of Specialization. The MS Program of Study should be planned to include only the courses that count toward the MS so that any additional courses taken before admission to the PhD program that are

not listed on the Program of Study can be counted toward the PhD.

- b. most university and OARDC fellowships are only available for new, incoming students; options are limited in number and are still competitive. Continuing students may consider the Graduate School Presidential Fellowship (semi-annual competition, materials due October and March) as well as the FLAS (annual competition, materials due early February) and other options both within and outside OSU.
- c. SENR GTA or GRA funds are only available for a maximum of five years (two years for MS, three years for the PhD), so students should coordinate with the advisor to make sure either OSU or external fellowships or research grants are awarded or available throughout the graduate career at OSU so that any available SENR funding is used within five years and other funding sources are anticipated or available for any time beyond five years. For more GA funding information, see Section 9.

## **6. Annual Feedback Sessions from Students in Each Degree Program**

The Environment and Natural Resources Graduate Program is committed to student satisfaction and success both during and at the end of students' graduate careers at OSU as an important measure of program quality. The ENR Graduate Studies Committee recognizes the need to address satisfaction and feedback during a student's career in order for action, if necessary, to benefit the student. Annual Feedback Sessions will be scheduled by the SENR graduate program office and the Graduate Studies Committee chair with students in each degree program (MENR, MS, Regular PhD, and Direct-Admit PhD) in order facilitate any degree requirement questions, satisfaction comments, and constructive feedback or concerns that need to be addressed. Feedback Sessions are not mandatory but are strongly recommended for students to attend and participate not only to contribute their feedback but also to know students from other specializations/labs within the ENRGP. For degree programs which also have students in a Dual Degree Program, the partner graduate program may be invited to participate for a portion of the Feedback Session in order to facilitate specific questions and as an opportunity for other students interested in the dual degree to receive information. The SENR graduate program office and ENR Graduate Studies Committee chair will endeavor to alternate annual session times for each degree program, e.g. even years during an autumn semester month and odd years during a spring semester month, to accommodate various fieldwork schedules.

## **7. The Doctoral Annual Review Document**

Due to the Graduate School's regular review of all doctoral programs in the university, in 2010 the ENR Graduate Studies Committee developed the Doctoral Annual Review Document to serve as documentation of all doctoral students' (active and inactive, funded and unfunded) progress toward the degree, as well as tracking accomplishments and "output" while students are in ENRGP for various college and university program reviews.

The purposes of the Annual Doctoral Review Document are to:

- a. help students make timely progress through their programs, including dissertation writing
- b. allow students to directly share their accomplishments with multiple faculty members, including those who do not serve on their doctoral committees. We hope that this sharing of accomplishments may lead to identification of new opportunities for teaching and research, including assisting those who may soon be out on the job market.
- c. assisting students in assembling the material needed to prepare their CVs for positions and other

competitions.

- d. allowing faculty to peruse student material for the purposes of providing letters of recommendation for various positions.
- e. benchmarking the progress of the ENRGP as a whole, a requirement of both the College of Food, Agricultural, and Environmental Sciences and the Graduate School.

Near the midpoint of each autumn semester, a customized Doctoral Annual Review Document will be emailed to each doctoral student and his/her advisor to complete for the current calendar year: e.g. sent October 2014 to complete for December 2014 to January, with all information complete and submitted to the SENR graduate program office by January 15 of the next calendar year (e.g., 2014 review submitted by January 15, 2015). Students are encouraged to meet with their advisor prior to completing the report because there are sections that require joint agreement as to future progress. Students are requested to type in the document and email to the SENR graduate program office along with a current CV. After submitting the electronic copy, the students are asked to print, sign, have the advisor sign, and turn in the hard copy to the SENR graduate program office for the student's graduate file.

After the Documents are submitted, the Graduate Studies Committee chair will review them and identify any "red flags" to bring to the Graduate Studies Committee's attention. If necessary, the Graduate Studies Committee will communicate specific recommendations for making progress to the student, the advisor, and The Ohio State University Graduate School. If a doctoral student does not submit the Annual Doctoral Review Document, it will be assumed that no progress has been made.

## 8. SENR-funded GTA/GRA Program Support Policies

Status	Months of Support	
<b>Fellowship Commitments</b>		
<ul style="list-style-type: none"> <li>• University MS (first year)</li> </ul>	9 months 2 <sup>nd</sup> year	
<ul style="list-style-type: none"> <li>• University Regular / Direct-Admit PhD (first year)</li> </ul>	9 months 2 <sup>nd</sup> year, 9 months 3 <sup>rd</sup> year*	
<ul style="list-style-type: none"> <li>• Distinguished Regular / Direct-Admit PhD (first year + dissertation year)</li> </ul>	9 months 2 <sup>nd</sup> year, 9 months post candidacy* (none after dissertation year)	
<ul style="list-style-type: none"> <li>• Dean's Regular / Direct-Admit PhD (first 2 years + dissertation year)</li> </ul>	9 months 3 <sup>rd</sup> year, 9 months post candidacy* (none after dissertation year)	
<b>GSC Ranked</b>		
	<b>Faculty Match</b>	<b>Course Subsidy Generated</b>
<ul style="list-style-type: none"> <li>• MS</li> </ul>	12 months over 2 years^	16 months over 2 years^

Status	Months of Support	
• Regular PhD	18 months over 3 years <sup>^</sup>	24 months over 3 years <sup>^</sup>
• Direct-Admit PhD	21 months over 4 years <sup>*^</sup>	32 months over 4 years <sup>^</sup>
<b>GSC Ranked</b> with no faculty match or course subsidy generated		
• MS	Any support depends on sufficient SENR funds <sup>#</sup>	
• Regular PhD	Any support depends on sufficient SENR funds <sup>#</sup>	
• Direct-Admit PhD <sup>+</sup>	9 months 1st year, 9 months 2nd year <sup>*</sup>	
* 21 months of SENR support <sup>^</sup> Dependent on sufficient SENR funds <sup>#</sup> Usually unlikely to receive appointment <sup>+</sup> Limited to one student every four years		

## APPENDIX C

### MASTER OF SCIENCE THESIS & DOCTORAL DISSERTATION PROPOSAL GUIDELINES

Theses and dissertations are scholarly efforts that consist of the three components of scholarship set forth in this Handbook. Proposals should be grounded in one of the disciplines in environment and natural resources, should creatively address an applied or conceptual/theoretical problem for that discipline, describe how the study will be conducted, and what the expected results might be. The development of a thesis or dissertation proposal involves two different but complementary activities – 1) the intellectual development of insights and ideas about a problem, and 2) the organization and presentation of a formal proposal for approval by the student's Advisory/Examination Committee and the Environment and Natural Resources Graduate Studies Committee.

The goal is to expand the body of knowledge in a given field. Scholarly work, therefore, consists of the a) acquisition of significant and extensive knowledge in an area or areas of study, b) synthesis and description of the diverse aspects of knowledge, and c) creative proposition and investigation of a novel aspect or new idea which purports to expand, alter, or clarify the status of knowledge.

Pursuit of scholarly research demands timeliness and focus. It is essential that students select their research topics as soon as possible and begin the scholarly process. Selection of Advisory/Examination Committee members and of the program of study coursework should be guided by the demands of that research topic. The requirements and guidelines provided here are designed to set forth the scholarly expectations of the Environment and Natural Resources Graduate Program and provide the student with a format for demonstrating that they are prepared to pursue their research topic.

**Master's Thesis:** All MS students must prepare a thesis proposal during their nine months in the program. This should be a collaborative effort between the student, the advisor, and the Advisory/Examination Committee. It is not expected that the student will be fully conversant in all aspects of the research topic before completing the thesis proposal. The thesis proposal will guide the selection of coursework needed in order to be able to complete the proposed research. A draft of the thesis proposal, approved by the advisor and Advisory/Examination Committee, must be submitted to the Graduate Studies Committee by the second semester in the master's program.

**Doctoral Dissertation:** All Regular PhD students must prepare a dissertation proposal during the first year in the PhD program; all Direct-Admit PhD students must prepare their proposal during the second year. This should be a collaborative effort between the student, the advisor, and the Advisory/Examination Committee. A draft of the dissertation proposal, approved by the advisor and Advisory/Examination Committee, must be submitted to the Graduate Studies Committee by the end of the second year in the Regular PhD program and by the third year in the Direct-Admit PhD program.

#### I. Intellectual Development of Insights and Ideas

##### A. Scholarly development of problems and questions

1. The best resource for starting your intellectual quest is your advisor. This should involve reading and reviewing the important literature in your discipline or field of study and discussing this with your advisor. The purpose of intellectual development is to identify important gaps in our understanding of phenomena or concepts/theories, and problems with approaches or methodologies, or some

combination of both of these.

2. Conducting literature reviews is an important component in the development of insights and ideas. You will need to be able to identify the literature (i.e., scientific journals, books, proceedings, manuscripts, etc.), and the individual scientists who have contributed to a body of knowledge in your discipline.

#### B. Designing a study

1. What will you observe and/or measure?
2. How will you do this?
  - a. Will you conduct an experiment with a control and treatments, a quasi-experiment with treatments but no control?
  - b. Will you observe and measure phenomena (characteristics of plants, animals, natural systems, human behaviors) and/or concepts (social surveys, case studies)?
3. What are the hypothesized relationships between the observations/measurements, or what are the objectives for observing/measuring the specified phenomena?
4. What do you expect to find from the study?
5. Realistically, what can you expect to accomplish in 2 years (master's thesis) or in 3 to 4 years (doctoral dissertation)?

## II. The Proposal

A. Format - not all proposals look the same. Your advisor, together with your Advisory/Examination Committee, will determine the appropriate form for your thesis or dissertation proposal.

1. Traditional Format: The traditional format includes three sections (introduction, literature review, and methods).
2. Thematic or Chapter Format: Some disciplines might produce a series of manuscripts or chapters on separate but interrelated experiments, or a narrative about a case study.

#### B. Important components

1. Regardless of the format the proposal should address the following questions:
  - a. What is the intellectual/disciplinary context of the study, e.g. a theory, a conceptual model, or an applied disciplinary problem? (Introduction)
  - b. Why is this an issue that needs to be addressed? (Introduction)
  - c. What are your long-term goals, specific short-term objectives, the question(s) you are asking, and/or the hypotheses guiding your study? (Introduction)
  - d. What is known and what is not known about the theory, conceptual model, applied disciplinary problem? (Literature Review) Your challenge is not simply to summarize what is known/unknown, but synthesize the state of knowledge into a narrative that supports the issue you are addressing and why its important.
  - e. How will you conduct your study? (Methodology) This may also include variable transformations and statistical analyses.
  - f. What do you expect to find, and how will this add to the body of knowledge or help close gaps in our understanding of phenomena or concepts/theories, and applied problems? (Introduction or Literature Review)
  - g. What schedule or timeline will you follow to complete your study within 2 years for master's thesis or 3 to 4 years for Doctoral dissertation? (Appendix)
  - h. A list of references cited in your proposal. Your advisor can give you the correct format for citations, in the body of your proposal, and the reference list that is used in your discipline.