

Attachment to Program of Study

EXPOSURE AREAS REQUIREMENT
<p>Successful completion of the Program of Study is deemed by Advising Committee and the undersigned as fulfillment of the requirement for background/education in exposure areas. Background in each area has been or will be demonstrated as indicated. If waiver is sought for a specific area, specify reason.</p>
<p>Organismal Biology Area:</p>
<p>Population/Habitat Dynamics and Management Area:</p>
<p>Human Dimensions/Policy Area:</p>

OUTREACH EXPERIENCE PROGRAM	
<p>Semester & Year Admitted:</p>	<p>Outreach Experience Plan abstract due by (date):</p>

Signatures:

Graduate Student	Date	Print Name
Major Advisor	Date	Print Name
Graduate Committee Chair or Department Chair	Date	Print Name

Graduate Program Curriculum Requirement (Exposure Areas)

Students must provide evidence of background and/or education in the following areas: (a) organismal biology related to the area of research/study, (b) population/habitat dynamics and management, and (c) human dimensions/policy. Typically, this background or education will be in the form of successful completion of one or more semester-long courses in each of these areas. Course work taken prior to entering the graduate program can be used to satisfy this requirement. This requirement is satisfied by successful completion of an approved Program of Study, certified by the student's Guidance Committee, and the Exposure Areas Requirement Form (see Appendix A), approved by the Graduate Committee Chair or Department Chair. Waiver of this requirement requires review by the Graduate Committee and approval by the Department Chair, or by delegation, the Graduate Committee Chair; typically, such waivers would be used to improve a student's overall career development program, e.g., to allow a student to take advantage of course timing and sequences when pursuing a combined M.S. and Ph.D. program within the Department.

Examples of courses offered at MSU that might be used to meet the exposure areas requirement follow. These examples are non-exclusive and must correspond to the student's overall research, educational, and career goals.

EXAMPLES of Organismal Biology Area:

ENT 422 Aquatic Entomology	PLB 423 Wetland Plants and Algae
FW 462 Ecology and Management of Invertebrates	ZOL 360 Biology of Birds
FW 471 Ichthyology	ZOL 365 Biology of Mammals
FW 873 Plantkon Biology	ZOL 384 Biology of Amphibians and Reptiles

EXAMPLES of Population/Habitat Dynamics and Management Area:

FW 410 Upland Ecosystem Management	FW 472 Limnology
FW 414 Aquatic Ecosystem Management	FW 479 Fisheries Management
FW 416 Marine Ecosystem Management	FW 823 Wildlife Disease Ecology and Management
FW 417 Wetland Ecosystem Management	FW 824 Analysis of Wildlife Population
FW 420 Stream Ecology	FW 860 Wildlife Nutrition
FW 424 Population Analysis and Management	FW 877 Fish Population Dynamics
FW 443 Restoration Ecology	FW 879 Advanced Limnology
FW 444 Conservation Biology	

EXAMPLES of Human Dimensions/Policy Area:

FOR 464 Natural Resource Economics and Social Science	FW 811 Fisheries and Wildlife Laws and Regulations
FOR 466 Natural Resources Planning and Policy	FW 854 Adaptive Management of Natural Resource Systems
FW 434 Human Dimensions of Fisheries and Wildlife Management	FW 858 Gender, Justice and Environmental Change: Issues and Concepts
FW 810 Human Dimensions Research in Fisheries and Wildlife	FW 885 Leadership in Natural Resources and Environmental Management

Outreach Experience Requirement

M.S. students should submit their Outreach Experience plan to the Graduate Secretary by the end of their first year at MSU. Ph.D. students should submit their plan by the end of their second year at MSU. Plans should be in the form of an abstract, not to exceed one page. The abstract should describe who will participate in the experience, what are the learning objectives of the experience, where the experience will occur, and when. The Chair of the Graduate Committee will review and approve plans and place them in the student's file.

Each student should submit an abstract (1 page) describing the outcome of their Outreach Experience to the Graduate Secretary at the time they schedule their defense (Ph.D.) or oral final exam (M.S.). Students should give a copy of their abstract to their graduate committee at least two weeks prior to their defense. Following the student's defense or oral exam, the advisor should sign the abstract and give it to the Graduate Secretary with the paperwork indicating they passed.

The extent of the Outreach Experience will vary depending upon student's educational objectives. It is recognized that substantial changes may occur between what is planned and what is conducted. Additional detail and motivating rationale for the Outreach Experience can be found in "Practicing the Scholarship of Outreach Among Graduate Students in the Department of Fisheries and Wildlife at Michigan State University (April 2004)," in the *Fisheries and Wildlife Graduate Student Handbook*.