**Attachment to Program of Study**

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| **EXPOSURE AREAS REQUIREMENT** | |
| 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. | |
| **Organismal Biology Area:** | |
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| **Population/Habitat Dynamics and Management Area:** | |
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| **Human Dimensions/Policy Area:** | |
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| **OUTREACH EXPERIENCE PROGRAM** | | | |
| **Semester & Year Admitted:** |  | **Outreach Experience Plan abstract due by (date):** |  |

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| ***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.

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| **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 |

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| **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 |  |  |  |

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| **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 |
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**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*.