

WILDLIFE ECOLOGY AND MANAGEMENT (B.S.)



The B.S. in Wildlife Ecology and Management is for students interested in understanding and managing terrestrial habitats and animals including game, non-game, and endangered species.

All of the following courses (30 credits):

- CSS 210 Fundamentals of Soil Science (3 cr.)
- FW 101 Fundamentals of Fisheries and Wildlife Ecology and Management (3 cr.)
- FW 101L Fundamentals of Fisheries and Wildlife Ecology and Management Lab (2 cr.)
- FW 102 Fundamentals of Fisheries and Wildlife – New Student Seminar (1 cr.)
- FW 293 Undergraduate Seminar in Fisheries and Wildlife (1 cr.)
- FW 334 Human Dimensions of Fisheries and Wildlife Management (3 cr.)
- FW 364 Ecological Problem Solving (3 cr.)
- FW 410 Upland Ecology and Management (3 cr.)
- FW 413 Wildlife Research and Management Techniques (3 cr.)
- FW 417 Wetland Ecology and Management (3 cr.)
- FW 417L Wetland Ecology and Management Lab (1 cr.)
- FW 424 Wildlife Population Analysis and Management (3 cr.)
- FW 497 Capstone: Conservation and Management Decision Making (W) (3 cr.)
- IBIO 355 Ecology (3 cr.)

One of the following groups (6 or 9 cr):

- BS 161 Cell and Molecular Biology (3 cr.)
and BS 162 Organismal and Population Biology (3 cr.)
- LB 144 Biology I: Organismal Biology (4 cr.) **and** LB 145 Biology II: Cellular and Molecular Biology (5 cr.)

One from each group (5 cr):

- CEM 141 General Chemistry (4 cr.) **or** LB 171 Principles of Chemistry (4 cr.)
- CEM 161 Chemistry Lab (1 cr.) **or** LB 171L Principles of Chemistry Lab I (1 cr.)

***One of the following courses (2 cr):**

- BS 171 Cell & Molecular Biology Lab (2 cr.)
- BS 172 Organismal and Population Biology Lab (2 cr.)

*This requirement is waived if student completes LB 144 or LB 145

One of the following courses (3 or 4 cr):

- MTH 124 Survey of Calculus I (3 cr.)
- MTH 132 Calculus I (3 cr.)
- LB 118 Calculus I (4 cr.)

One of the following courses (3 or 4 cr):

- STT 201 Statistical Methods (4 cr.)
- STT 224 Introduction to Probability and Statistics for Ecologists (3 cr.)
- STT 231 Statistics for Scientists (3 cr.)
- STT 421 Statistics I (3 cr.)

One of the following courses (3 or 4 cr):

- CSUS 310 History of Environmental Thought and Sustainability (3 cr.)
- FW 439 Conservation Ethics (3 cr.)
- HST 391 Environmental History of North America (3 cr.)
- PHL 214 Indigenous Philosophy (3 cr.)
- PHL 340 Ethics (3 cr.)
- PHL 342 Environmental Ethics (3 cr.)
- PHL 380 Nature of Science (3 cr.)
- PHL 442 Ethics and Animals (3 cr.)
- PHL 480 Philosophy of Science (4 cr.)

One of the following courses (3 or 4 cr):

- FOR 204 Forest Vegetation (3 cr.)
- PLB 218 Plants of Michigan (3 cr.)
- PLB 418 Plant Systematics (3 cr.)

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Department of Fisheries & Wildlife
MICHIGAN STATE UNIVERSITY

Two of the following courses (6 or 7 cr):

- COM 100 Human Communication (3 cr.)
- COM 225 Intro to Interpersonal Communication (3 cr.)
- COM 240 Intro to Organizational Communication (4 cr.)
- COM 275 Effects of Mass Communication (3 cr.)
- CSUS 433 Grant Writing and Fund Development (3 cr.)
- JRN 472 Environmental, Science and Health Reporting (3 cr.)
- WRA 331 Writing in the Public Interest (W) (3 cr.)
- WRA 333 Writing in Corporate Contexts (3 cr.)
- WRA 335 Writing in Scientific Contexts (3 cr.)
- WRA 337 Writing and Public Policy (3 cr.)
- WRA 453 Grant and Proposal Writing (3 cr.)

One of the following courses (3 cr):

- CSUS 464 Environmental and Natural Resource Policy in Michigan (3 cr.)
- CSUS 465 Environmental and Natural Law (3 cr.)
- FOR 466 Natural Resource Policy (3 cr.)
- FW 445 Biodiversity Conservation Policy and Practice (3 cr.)
- FW 481 Global Issues in Fisheries and Wildlife (3 cr.)
- IBIO 446 Environmental Issues in Public Policy (3 cr.)
- MC 450 International Environmental Law and Policy (3 cr.)

Two of the following courses (8 cr):

- FW 471 Ichthyology (4 cr.)
- IBIO 360 Biology of Birds (4 cr.)
- IBIO 365 Biology of Mammals (4 cr.)
- IBIO 384 Biology of Amphibians and Reptiles (4 cr.)

One of the following courses (3 or 4 cr):

- CSS 350 Intro to Plant Genetics (3 cr.)
- FOR 340 Forest Ecology (3 cr.)
- GEO 201 Intro to Plant Geography (3 cr.)
- IBIO 485 Tropical Biology (3 cr.)
- PLB 105 Plant Biology (3 cr.)
- PLB 301 Intro to Plant Physiology (3 cr.)
- PLB 402 Biology of Fungi (4 cr.)
- PLB 441 Plant Ecology (3 cr.)
- PLB 443 Restoration Ecology (3 cr.)

One of the following courses (3 or 4 cr):

- CSS 411 Fire and Environmental Quality (3 cr.)
- FOR 413 Wildland Fire Ecology and Management (3 cr.)
- FOR 419 Applications of Geographic Information Systems to Natural Resources Management (4 cr.)
- FW 423 Principles of Fish and Wildlife Disease (3 cr.)
- FW 463 Wildlife Disease Ecology (3 cr.)
- GEO 221 Introduction to Geographic Information (3 cr.)
- and GEO 221L Introduction to Geographic Information Laboratory (1 cr.)
- IBIO 313 Animal Behavior (3 cr.)
- IBIO 328 Comparative Anatomy and Biology of Vertebrates (4 cr.)
- IBIO 341 Fundamental Genetics (4 cr.)
- IBIO 483 Environmental Physiology (3 cr.)
- SOC 452 Advanced Seminar in Environmental Sociology (3 cr.)

One of the following courses (3 cr):

- FOR 360 Forest Ecosystems, Carbon and Climate Change (3 cr.)
- GEO 409 Global Climate Change & Variability (3 cr.)
- IBIO 357 Global Change Biology (W) (3 cr.)
- SOC 478 Climate Change & Society (3 cr.)

Complete a minimum of 3 credits from the following courses:

- FW 480 International Studies in Fisheries and Wildlife (1 to 3 cr.)
- FW 490 Independent Study in Fisheries and Wildlife (1 to 3 cr.)
- FW 493 Professional Internship in Fisheries and Wildlife (1 to 3 cr.)
- FW 494 Marine Biology and Ecosystem Experience (1 to 3 cr.)
- FW 499 Senior Thesis in Fisheries and Wildlife (4 cr.)

