

2023-24 Applied Ecology & Env Science (Plant Eco & Wetlands) Course Plan College of Forest Resources & Environmental Science-Michigan Tech

| Semester | Course 1 | Course 2 | Course 3 | Course 4 | Course 5 | Course 6 | Course 7 | Total Credits (128 + 3 co-curriculars) |
|---|--|---|---|--|---|--------------------------------------|---|---|
| First Year Fall | FW2010 Vegetation of North America (4) | FW2051 Field Techniques (2) | BL1400 Principles of Biology Lecture (3) | BL1410 Principles of Biology Lab (1) Co-req: BL1400 | UN1015 Composition (3) | HASS Gen Ed Requirement (3) See list | | 16 |
| First Year Spring | MA1135 Calculus for Life Sciences (4) Prereq: MA1031 or MA1032 | CH1150 University Chemistry Lecture (3) Coreq: MA1031 or MA1032 or MA1135 | CH1151 University Chemistry Lab (1) Coreq: CH1150 | FW1050 Natural Resources Professional (2) | HASS Gen Ed Requirement (3) See list | UN1025 Global Issues (3) | | 16 |
| Second Year Fall | FW3020 Forest Ecology (3) Coreq: FW2010 and FW2051 | FW3330 Soil Science (4) Prereq: CH1150 & CH1151 | MA2720 Statistical Methods (4) Prereq: MA1030 or MA1032 | Critical and Creative Thinking Gen Ed (3) Requirement See list | Free Elective (3) | Co-curricular (1) See list | | 18 |
| Second Year Spring | FW3110 Natural Resource Policy (3) | FW3200 Biometrics and Data Analysis (4) Prereq: FW2051 and MA2720 | FW3540 Introduction to Geographic Information Systems (4) Coreq: MA2720 | Directed Elective (3) List below | Social Responsibility and Ethical Reasoning Gen Ed Requirement (3) See list | | | 17 |
| Third Year Fall (Courses are taken as a block) | FW3012 Survey of Silviculture (2) Prereq: FW2010 and FW2051 | FW3800 Insect Ecology (2) | FW3170 Land Measurements/GPS (1) Co-req: FW3190 Prereq: FW3540 | FW3190 Multi-Resource Assessment (3) Prereq: FW2051, FW3020, FW3200 & MA2720 | FW3600 Wildlife Habitat (3) | FW3840 Forest Health (3) | FW3180 Geomorphology, Landscapes & Ecosystems (2) | 16 |
| Third Year Spring | FW3410 Conservation Science (3) | FW4380 Landscape Ecology and Planning (3) | HASS Gen Ed Requirement (3) See list | HASS Gen Ed Requirement (3) See list | Free Elective (3) | Co-curricular (1) See list | | 16 |
| Fourth Year Fall | FW4220 Wetlands (4) | FW4800 Communication for Natural Resources (2) Prereq: FW3190 | FW4811 Integrated Resources Data Collection (2) Prereq: FW3190 | Directed Elective (3) List below | Free Elective (6) | | | 17 |
| Fourth Year Spring | FW4830 Integrated Natural Resource Assessment (2) Prereq: FW4811 | FW4370 Forest and Landscape Hydrology (3) | Directed Elective (3) List below | Free elective (6) | Co-curricular (1) See list | | | 15 |

| Directed Electives Choose at least 9 credits | | |
|---|---|-----------------------|
| Course # | Course Title & Credits | Semester |
| BL2160 | Botany (4) | Spring |
| BL3490 | Principles of Ecology and Evolution (4) Prereq: BL1400 & 1410 | Fall |
| FW3075 | Plant Biotechnology (3) | Spring |
| FW3320 | Forest Genetics and Genomics (3) | Spring |
| FW4120 | Tree Physiology (3) | Spring |
| FW5115 | Restoration Ecology (3) | Spring-alt even years |

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2023-24 Applied Ecology & Env Science (Communicating NR) Course Plan
College of Forest Resources & Environmental Science-Michigan Tech

| Semester | Course 1 | Course 2 | Course 3 | Course 4 | Course 5 | Course 6 | Course 7 | Total Credits (128 + 3 co-curriculars) |
|---|--|---|---|--|---|--------------------------------------|---|---|
| First Year Fall | FW2010 Vegetation of North America (4) | FW2051 Field Techniques (2) | BL1400 Principles of Biology Lecture (3) | BL1410 Principles of Biology Lab (1) Co-req:1400 | UN1015 Composition (3) | HASS Gen Ed Requirement (3) See list | | 16 |
| First Year Spring | MA1135 Calculus for Life Sciences (4) Prereq: MA1031 or MA1032 | CH1150 University Chemistry Lecture (3) Coreq: MA1031 or MA1032 or MA1135 | CH1151 University Chemistry Lab (1) Coreq: CH1150 | FW1050 Natural Resources Professional (2) | HASS Gen Ed Requirement (3) See list | UN1025 Global Issues (3) | | 16 |
| Second Year Fall | FW3020 Forest Ecology (3) Coreq: FW2010 and FW2051 | FW3330 Soil Science (4) Prereq: CH1150 & CH1151 | MA2720 Statistical Methods (4) Prereq: MA1030 or MA1032 | Critical and Creative Thinking Gen Ed (3) Requirement See list | Free Elective (3) | Co-curricular (1) See list | | 18 |
| Second Year Spring | FW3110 Natural Resource Policy (3) | FW3200 Biometrics and Data Analysis (4) Prereq: FW2051 and MA2720 | FW3540 Introduction to Geographic Information Systems (4) Coreq: MA2720 | ED3510 Communicating Science (3) Prereq: UN1015 and UN1025 | Social Responsibility and Ethical Reasoning Gen Ed Requirement (3) See list | | | 17 |
| Third Year Fall (Courses are taken as a block) | FW3012 Survey of Silviculture (2) Prereq: FW2010 and FW2051 | FW3800 Insect Ecology (2) | FW3170 Land Measurements/GPS (1) Co-req: FW3190 Prereq: FW3540 | FW3190 Multi-Resource Assessment (3) Prereq: FW2051, FW3020, FW3200 & MA2720 | FW3600 Wildlife Habitat (3) | FW3840 Forest Health (3) | FW3180 Geomorphology, Landscapes & Ecosystems (2) | 16 |
| Third Year Spring | FW3410 Conservation Science (3) | ACC2000 Accounting Principles 1 (3) | HASS Gen Ed Requirement (3) See list | Free elective (7) | Co-curricular (1) See list | | | 17 |
| Fourth Year Fall | FW4800 Communication for Natural Resources (2) Prereq: FW3190 | FW4811 Integrated Resources Data Collection (2) Prereq: FW3190 | FW3760 Human Dimensions of Natural Resources (3) | MGT2000 Team Dynamics and Decision Making (3) | HASS Gen Ed Requirement (3) See list | Free Electives (3) | | 16 |
| Fourth Year Spring | FW4830 Integrated Natural Resource Assessment (2) Prereq: FW4811 | FW4370 Forest and Landscape Hydrology (3) | Directed Elective (3) List below | Free elective (6) | Co-curricular (1) See list | | | 15 |

| Course # | Course title & credits | Prerequisite |
|----------|-------------------------------------|-------------------------|
| HU2840 | Interpersonal Communication (3) | |
| HU3694 | Grant Writing (3) | UN1015 & UN1025 |
| HU3832 | Adv Digital Presentation (3) | UN1015 & UN1025 |
| HU3871 | New Media Theory (3) | UN1015 & UN1025 |
| HU4625 | Risk Communication (3) | UN1015 & UN1025 |
| HU4628 | Usability and Instructional Writing | HU3120, UN1015 & UN1025 |

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2023-24 Applied Ecology & Env Science (Biotechnology) Course Plan College of Forest Resources & Environmental Science-Michigan Tech

| Semester | Course 1 | Course 2 | Course 3 | Course 4 | Course 5 | Course 6 | Course 7 | Total Credits (128 + 3 co-curriculars) |
|---|--|---|---|--|---|--------------------------------------|---|--|
| First Year Fall | FW2010 Vegetation of North America (4) | FW2051 Field Techniques (2) | BL1400 Principles of Biology (3) | BL1410 Principles of Biology Lab (1) Co-req: BL1400 | UN1015 Composition (3) | HASS Gen Ed Requirement (3) See list | | 16 |
| First Year Spring | MA1135 Calculus for Life Sciences (4) Prereq: MA1031 or MA1032 | CH1150 University Chemistry Lecture (3) Coreq: MA1031 or MA1032 or MA1135 | CH1151 University Chemistry Lab (1) Coreq: CH1150 | CH1153 University Chemistry Recitation (1) Coreq: CH1150 | FW1050 Natural Resources Professional (2) | HASS Gen Ed Requirement (3) See list | UN1025 Global Issues (3) | 17 |
| Second Year Fall | FW3020 Forest Ecology (3) Coreq: FW2010 and FW2051 | FW3330 Soil Science (4) Prereq: CH1150 & Ch1151 | MA2720 Statistical Methods (4) Prereq: MA1030 or MA1032 | Critical and Creative Thinking Gen Ed (3) Requirement See list | Social Responsibility and Ethical Reasoning Gen Ed Requirement (3) See list | | | 17 |
| Second Year Spring | FW3110 Natural Resource Policy (3) | FW3200 Biometrics and Data Analysis (4) Prereq: FW2051 and MA2720 | FW3540 Introduction to Geographic Information Systems (4) Coreq: MA2720 | FW3075 Intro to Biotechnology (3) | FW2100 Introduction to Biochemistry (3) Prereq: CH1150 | | | 17 |
| Third Year Fall (Courses are taken as a block) | FW3012 Survey of Silviculture (2) Prereq: FW2010 and FW2051 | FW3800 Insect Ecology (2) | FW3170 Land Measurements/GPS (1) Co-req: FW3190 Prereq: FW3540 | FW3190 Multi-Resource Assessment (3) Prereq: FW2051, FW3020, FW3200 & MA2720 | FW3600 Wildlife Habitat (3) | FW3840 Forest Health (3) | FW3180 Geomorphology, Landscapes & Ecosystems (2) | 16 |
| Third Year Spring | FW3410 Conservation Science (3) | FW3320 Forest Genetics and Genomics (3) | FW4120 Tree Physiology (3) | HASS Gen Ed Requirement (3) See list | Free Elective (3) | Co-curricular (1) See list | | 16 |
| Fourth Year Fall | FW4800 Communication for Natural Resources (2) Prereq: FW3190 | FW4811 Integrated Resources Data Collection (2) Prereq: FW3190 | HASS Gen Ed Requirement (3) See list | BL3300 Introduction to Genomics (3) Prereq: FW3320 | Free elective (6) | Co-curricular (1) See list | | 17 |
| Fourth Year Spring | FW4830 Integrated Natural Resource Assessment (2) Prereq: FW4811 | FW4370 Forest and Landscape Hydrology (3) | FW4128 Conservation Genetics (3) BL1400 & BL1410 | Free elective (6) | Co-curricular (1) See list | | | 15 |

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