

**Wildlife Ecology**
**Certificate | 25 credits**

Campus: Vermilion

**Required Coursework**

<b>FALL SEMESTER – 10 credits (or more)</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
BIOL(NRT) 1255 – Dendrology and Plant Ecology (MnTC Goal 3)	(CLR, CLW)	3	(2/2)
<b>NSCI(NRT) 1265 – Natural Resource Issues and Policies (MnTC Goal 10)</b>	(CLR, CLW)	3	
<u>OR</u> WILD 1265 – Intro to Wilderness and Park Management	(CLR, CLW)		
NRT 1211 – Forest Field Skills	(CLR, MATH 0100)	3	(2/2)
NRT 1221 – Fire Training and Mechanical Skills 1	(Concurrent NRT 1211)	1	(0/2)

<b>SPRING SEMESTER – 7 credits (or more)</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
NRT 1226 – Principles of Wildlife Management	(BIOL/NRT 1255; NSCI 1265 or WILD 1265; NRT 1211)	3	(1/2)
NRT 2252 – Wildlife Measurements	(NRT 1212, 1226, 2238**)	2	(1/2)
NRT 2315 – Intro to Geographic Information Systems	(NRT 1211 or WQAL/WSHD 1656)	2	(1/2)

(\*\*or instructor approval for WEC-only students)

**Restricted Electives in Biology/Research**

<b>4 credits (minimum)</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
BIOL(NRT 1445) – Mammal Tracking (spring)		1	
<b>BIOL(NRT 1446) – Field Biology*</b> (fall)		2	(1/2)
<b>BIOL(NRT 1448) – Wolf Research Practicum*</b> (alternate springs)	(BIOL/NRT 1465)	2	(1/2)
<b>BIOL(NRT 1476) – Intro to Ethology/Wolf Behavior*</b> (alternate springs)	(BIOL/NRT 1465)	2	(1/2)
<b>BIOL(NRT 2449) – Ecology and Management of Northern Fishes*</b> (fall)	(BIOL 1200 or BIOL 1561)	2	(1/2)
BIOL 2710 – Student Research Project	(with instructor and dean approval)	1-3	
<u>OR</u> NRT 2710 – Independent Study in Natural Resources	(with instructor and dean approval)		

**Restricted Electives in Ecology/Behavior**

<b>4 credits (minimum)</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
<b>BIOL(NRT) 1448 – Wolf Research Practicum*</b> (alternate springs)	(BIOL/NRT 1465)	2	(1/2)
<b>BIOL(NRT) 1465 – Intro to Wolf/Deer Ecology</b> (fall)		1	
<b>BIOL(NRT) 1466 – Intro to Black Bear Ecology*</b> (spring)		1	
<b>BIOL(NRT) 1467 – Beaver Ecology*</b> (fall)		1	
<b>BIOL(NRT) 1468 – Moose Ecology*</b> (fall)	(CLR, CLW)	1	
<b>BIOL(NRT) 1476 – Intro to Ethology/Wolf Behavior*</b> (alternate springs)	(BIOL/NRT 1465)	2	(1/2)
BIOL 2710 – Student Research Project	(with instructor and dean approval)	1-3	
<u>OR</u> NRT 2710 – Independent Study in Natural Resources	(with instructor and dean approval)		

**Notes:**

The credits earned in BIOL(NRT) 1448 and/or BIOL(NRT) 1476 can be applied toward either category, Biology/Research or Ecology/Behavior, or the credits from one of the courses can be split, with one credit counting toward one category and one toward the other. (The credits only count once in the certificate.)

Students completing the Fisheries and Wildlife Management A.S. and this certificate are eligible for accreditation from the North American Wildlife Technology Association, as long as the introduction course and restricted elective courses chosen for the certificate are those from above in **bold** and marked with an asterisk (\*).

Students are encouraged to take more courses than required above for the certificate in order to broaden their areas of knowledge and skills, and students are welcome to complete the Wildlife Ecology Certificate without seeking accreditation. Students should see their program coordinator for details.

### Program Description

The Wildlife Ecology Certificate recognizes specialization in subjects related to wildlife resources. It is a combination of 25 credits in the area of wildlife management and ecology. Students can choose from a variety of courses unique to Vermilion.

The certificate does not replace a natural resource degree program for employment in the wildlife field. This certificate has been designed as a sub-credential of the Natural Resource Technology (NRT)-Forestry/Wildlife AAS degree program at Vermilion. With 19 of the certificate's 25 required credits included in that program, it allows the NRT students to also earn this certificate by taking only six additional credits. With 14 of the 25 credits built into the Fisheries and Wildlife Management A.S. degree program, completing this certificate can be achieved with only nine additional credits of coursework by those students. Generally, an Associate's Degree is required to gain employment as an entry-level wildlife technician.

Students enrolled in any number two-year programs on the Vermilion campus can enhance their resume and gain additional ecology, behavior, and animal identification skills through the coursework of the Wildlife Ecology Certificate. Additionally, it is a good way to get involved in the field and gain skills while preparing to enter either the Natural Resource Technology-Forestry/Wildlife AAS degree program or Fisheries and Wildlife Management AS degree program.

Transfer students may be interested in earning the certificate to strengthen their field skills and for exposure to environmental issues they will encounter throughout their professional careers. These field-based courses may give any student an edge and the experience needed to succeed in a competitive field. Students that complete both the Fisheries and Wildlife Management AS and the Wildlife Ecology Certificate qualify for North American Wildlife Technician Association accreditation ([www.nawta.org](http://www.nawta.org)). Please notify your program coordinator if you intend to seek the NAWTA accreditation.

### Occupational Titles

Students completing this certificate may find positions as Laborers, Animal Caretakers, or Biological Science Trainees.

### Program Learning Outcomes

Graduates of this program will:

1. Demonstrate competence in Land Navigation and the Public Land Survey System.
2. Understand and demonstrate the use of basic terminology, principles, equipment, and skills required for land, wildlife, and timber measurements.
3. Be able to identify wildlife and vegetative species by use of taxonomic key.
4. Develop an understanding of ecological principles and component processes.
5. Demonstrate awareness of historical, political, economic, and social factors in fish and wildlife management.

### Program Faculty Contact

**Rita Koch** ([rita.koch@minnesotanorth.edu](mailto:rita.koch@minnesotanorth.edu) or 218-235-2160)

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