

**Minnesota North College – Vermilion Campus**  
**Fisheries and Wildlife Management**

**Academic Year 2022-23**  
**Associate of Science (60 credits)**

**First Year**

<b>FALL SEMESTER 2022– 17 credits</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
<i>BIOL/NRT 1255 – Dendrology and Plant Ecology (MnTC Goal 3)</i>	(CLR, CLW)	3	(2/2)
BIOL 1561 – General Biology of Cells (MnTC Goal 3)	(CLR)	4	(3/2)
ENGL 1231 – College Composition 1 (MnTC Goal 1)	(CLR, CLW)	4	
<i>NRT/NSCI 1265 – Natural Resource Issues and Policies (MnTC Goal 10)</i>	(CLR, CLW)	3	
<i>NRT 1211 – Forest Field Skills</i>	(MATH0100; CLR)	3	(2/2)

<b>SPRING SEMESTER 2023 – 14 credits</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
BIOL 1562 – General Biology of Organisms (MnTC Goals 3 & 10)	(BIOL1561)	4	(3/2)
MATH 1300 – Precalculus (MnTC Goal 4)	(MATH0300)	5	
NRT 1212 – General Forestry	(BIOL/NRT1255; BIOL/NRT1265; NRT1211)	2	(1/2)
<i>NRT 1226 – Principles of Wildlife Management</i>	(BIOL/NRT1255; BIOL/NRT1265 or WILD1265; NRT1211)	3	(1/2)

**Second Year**

<b>FALL SEMESTER 2023 – 16 credits</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
<i>BIOL/NRT 2449 – Ecology and Management of Northern Fishes</i>	(BIOL1200 or BIOL1561)	2	(1/2)
SOC 1200 – Introduction to Sociology (MnTC Goals 5 & 7)	(CLR)	3	
MATH 1311 – Calculus 1 (MnTC Goal 4)	(MATH 1300)	5	
NRT/WSHD 2258 – Soils and Hydrology	(BIOL1200 or BIOL1561)	3	(2/2)
SPEECH (or POLITICAL SCIENCE)		3	

<b>SPRING SEMESTER 2024 – 13 credits (minimum)</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
BIOL/NRT 2455 – Limnology* (MnTC Goal 3)	(BIOL1200 or 1561)	3	(2/2)
<u>OR</u>		<u>OR</u>	
BIOL 2325 – Ecology (option, available odd years)* (MnTC Goal 3)	(BIOL1562)	4	(3/2)
ENGL 1232 – College Composition 2 (MnTC Goal 1)	(ENGL1231)	3	
<u>OR</u>			
ENGL 1240 – Technical Report Writing (MnTC Goal 1)	(ENGL1231)		
MATH 1215 – Statistics (MnTC Goal 4)	(MATH0200)	4	
POLITICAL SCIENCE (or SPEECH)		3	

\*Fisheries students are encouraged to take BIOL 2455 Limnology versus BIOL 2545 Ecology (note that only one or the other, BIOL 2455 or BIOL 2545, is required for the degree, not both courses).

**Additional Requirements (to be taken as listed above)**

<b>Speech</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
COMM 1215 – Public Speaking (MnTC Goal 1)		3	
<u>OR</u>			
COMM 1220 – Interpersonal Communication (MnTC Goal 1)			
<b>Political Science</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
POLS 1215 – American Government and Politics (spring) (MnTC Goals 5 & 9)	(CLR)	3	
<u>OR</u>			
POLS 1320 – State and Local Government (fall) (MnTC Goals 5 & 9)	(CLR)		

**Additional Recommended Courses**

Related field skills courses, NRT 2315 Introduction to Geographic Information Systems and NRT 1222 Fire Training and Mechanical Skills III, can also be resume enhancers.

Courses listed in Italics can also be applied toward completion of the Wildlife Ecology Certificate (WEC). Successful completion of the WEC requires completion of nine additional elective credits and can enhance a resume when applying for wildlife field positions. Please see your program coordinator for details.

When students complete the Fisheries and Wildlife Management AS degree and the Wildlife Ecology Certificate, they receive accreditation from the North American Wildlife Technology Association. Students are strongly encouraged to take additional wildlife ecology courses that are considered biology electives when transferring.

## Fisheries and Wildlife Management AS

### Program Description

The Fisheries and Wildlife Management AS is designed as a transfer program with a strong component of field based courses early in the academic schedule, preparing students to be wildlife managers and biologists. Courses included focus on basic field skills, knowledge of plant communities, wildlife species habitat requirements, and biological and ecological concepts. This mix of field based courses, along with the mathematic and scientific rigor of this academic program, will allow students an opportunity to gain summer employment in the field, while continuing to make progress toward a 4-year degree.

Students that complete both the Fisheries and Wildlife Management AS degree program 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

For students who choose to enter the work force following completion of the Fisheries and Wildlife Management AS degree program, job titles may include Fisheries Technician, Fish Hatchery Laborer, Wildlife Technician, Biological Science Technician, and others.

### Program Learning Outcomes

Graduates of this program will:

1. Be able to identify wildlife and vegetative species by use of taxonomic key.
2. Develop an understanding of ecological principles and component processes.
3. Demonstrate competence in Land Navigation and the Public Land Survey System.
4. Understand and demonstrate the use of basic terminology, principles, equipment, and skills required for land, wildlife, and timber measurements.
5. Utilize the basic functions of digital tools for data collection, analysis and presentation. (GPS/GIS/PowerPoint/Excel/Graph functions)
6. Demonstrate awareness of historical, political, economic, and social factors in fish and wildlife management.
7. Develop the mathematical skills necessary to measure, monitor and manage wildlife populations and their habitat.
8. Demonstrate effective communication skills, both written and verbal, to ensure open lines of communication with resource stakeholders.

### Transfer and Articulation Agreements

Students may wish to transfer to a four-year college or university following completion of the Fisheries and Wildlife Management AS degree program. Specific transfer guides are in the works with the University of Minnesota Crookston, the University of Wisconsin-Stevens Point, and Michigan Technological University to facilitate transfer of this Vermilion degree program to one of several related programs at each institution.

### Program Faculty Contact

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



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