

**Minnesota North College – Vermilion Campus**  
**Natural Resource Technology – Forestry/Wildlife**

**Academic Year 2022-23**

**Associate of Applied Science (67 credits)**

**First Year**

<b>FALL SEMESTER 2022 – 15 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)
BIOL 1561 – General Biology of Cells (MnTC Goal 3)	(CLR)	4	(3/2)
<i>NRT/NSCI 1265 – Natural Resource Issues and Policies (MnTC Goal 10)</i>	(CLR, CLW)	3	
<i>NRT 1211 – Forest Field Skills</i>	(CLR; MATH0100)	3	(2/2)
<i>NRT 1221 – Fire Training and Mechanical Skills I</i>	(Concurrent NRT1211)	1	(0/2)
<i>NRT 1222 – Fire Training and Mechanical Skills II</i>	(Concurrent NRT1211; NRT1221)	1	(0/2)

<b>SPRING SEMESTER 2023 – 16 credits (or more)</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
ENGL 1231 – College Composition 1 (MnTC Goal 1)	(CLW)	4	
MATH 1200 – Liberal Arts Math (MnTC Goal 4)	(MATH0200)	3	
<u>OR</u> MATH 1220 – College Algebra (MnTC Goal 4)	(MATH0300)		
NRT 1212 – General Forestry	(BIOL1255; BIOL1265; NRT1211)	2	(1/2)
NRT 1223 – Fire Training and Mechanical Skills III	(NRT1222 or WILD1271)	1	(0/2)
NRT ##### (was 1225) – Natural Resource Careers	(BIOL1255; BIOL1265; NRT1211)	1	
<i>NRT 1226 – Principles of Wildlife Management</i>	(BIOL1255; BIOL1265 or WILD1265; NRT1211)	3	(2/2)
<i>NRT 2315 – Introduction to Geographic Information Systems</i>	(NRT1211 or WQAL/WSHD1656)	2	(1/2)

<b>SUMMER TERM 2023 – 1 credit</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
NRT 2220 – Forestry and Wildlife Management Internship	(NRT1225; 2.0 GPA)	1	

**Second Year**

<b>FALL SEMESTER 2023– 16 credits (or more)</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
BIOL/NRT 2449 – Ecology and Management of Northern Fishes	(BIOL1541 or BIOL1545)	2	(1/2)
NRT 2236 – Land Surveying	(NRT2315)	3	(1/4)
NRT 2238 – Natural Resources Measurements and Remote Sensing	(NRT1212/1226/2220)	4	(2/4)
NRT 2241 – Forest Ecology and Silviculture	(NRT1212)	3	(1/4)
NRT 2248 – Forest Products	(NRT1212/2220)	1	(0/2)
WSHD 2258 – Soils and Hydrology	(BIOL1541 or BIOL1545)	3	(2/2)

<b>SPRING SEMESTER 2024 – 16 credits (or more)</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)
NRT 2242 – Silviculture II	(NRT2238/2241/2248/2315; WSHD2258)	4	(2/4)
NRT 2251 – Forest Measurements	(NRT2238/2241/2248; NRT2315)	2	(1/2)
<i>NRT 2252 – Wildlife Measurements</i>	(NRT1212/1226/2238*)	2	(1/2)
NRT 2256 – Surveying and Mapping Techniques	(NRT2236/2241/2315)	2	(0/4)
NRT 2257 – Wildland Fire Control and Management	(NRT 1222/2236/2241)	2	(0/4)

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

**Additional Requirements (to be taken any semester offered)**

<b>MnTC Course – 3 credits (minimum)</b>	<b>Prerequisites</b>	<b>Credits</b>	<b>Hr Lc/Lb</b>
Any MnTC course that enhances specific career goals. (Confer with program coordinator on selection; refer to catalog for options.)	(see catalog)	3	

**Additional Recommended Courses:**

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

## Natural Resource Technology-Forestry/Wildlife A.A.S.

### Program Description

The Natural Resource Technology (NRT)-Forestry /Wildlife AAS degree program is designed to qualify graduates for positions at the technical level in forestry, wildlife, and other related natural resource disciplines. The program is accredited by the Society of American Foresters with core content emphasizing the skills necessary to be a forestry technician. This program is also accredited by the North American Wildlife Technician Association (NAWTA), for skills necessary to be a wildlife technician. Please notify your program coordinator if you intend to seek the NAWTA accreditation. An application to receive NAWTA accreditation must be completed with supporting documentation provided prior to graduation. The NRT program is designed to maximize technical skills in natural resources, allowing students the best opportunity to work in the field of natural resources after two years of education.

### Occupational Titles

Graduates of the Natural Resource Technology-Forestry/Wildlife program may apply for positions in Forest, Wildlife, Biological Science, Surveying, or Soil Technician job classes.

### Program Learning Outcomes

Graduates of this program will:

1. Be able to identify herbaceous and woody vegetation and wildlife species by use of taxonomic key and remote sensing techniques.
2. Develop an understanding of ecological principles and component processes.
3. Demonstrate competence in land navigation and Public Land Survey Systems.
4. Demonstrate proficiency in map and photo use and interpretation.
5. Develop an understanding of basic silvicultural terms, concepts, and techniques and demonstrate their application toward management goals.
6. Understand and demonstrate the use of basic terminology, principles, equipment, and skills required for land, wildlife, and timber measurements.
7. Utilize the basic functions of digital tools for data collection, analysis and presentation (GPS/GIS/PowerPoint/Excel/graph functions).
8. Demonstrate awareness of historical, political, economic, and social factors in Natural Resource Management.
9. Develop an awareness of current issues in Natural Resource Management, with a focus on the issues and roles played by agencies, landowners and other stakeholders.
10. Demonstrate safe and efficient use of both hand tools and power equipment.
11. Develop the quantitative mathematical skills necessary to measure, monitor, analyze and manage all aspects of natural resources.
12. Develop an understanding of human behavior as it relates to group dynamics, individual motivations, leadership, teambuilding and the influence on planning and decision making.
13. Demonstrate an ability to communicate through both written and verbal formats.

### Transfer and Articulation Agreements

Specific Transfer Guides are in the works with the University of Wisconsin–Stevens Point, Michigan Technological University, and the University of Minnesota Crookston to facilitate transfer of this degree program to one of several related programs.

### Program Faculty Contact

Rita Koch (rita.koch@minnesotnorth.edu or 218-235-2160)



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