

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

Academic Year 2023-24

Associate of Applied Science (67 credits)

First Year

FALL SEMESTER 2023 – 15 credits (or more)	Prerequisites	Credits	Hr Lc/Lb
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; MATH 0100)	3	(2/2)
<i>NRT 1221 – Fire Training and Mechanical Skills 1</i>	(Concurrent NRT 1211)	1	(0/2)
<i>NRT 1222 – Fire Training and Mechanical Skills 2</i>	(Concurrent NRT 1211; NRT 1221)	1	(0/2)

SPRING SEMESTER 2024 – 16 credits (or more)	Prerequisites	Credits	Hr Lc/Lb
ENGL 1231 – College Composition 1 (MnTC Goal 1)	(CLW)	4	
MATH 1200 – Liberal Arts Math (MnTC Goal 4)	(MATH 0200)	3	
<u>OR</u> MATH 1220 – College Algebra (MnTC Goal 4)	(MATH 0300)		
NRT 1212 – General Forestry	(BIOL 1255; NSCI 1265; NRT 1211)	2	(1/2)
NRT 1223 – Fire Training and Mechanical Skills 3	(NRT 1222 or WILD 1271)	1	(0/2)
NRT/FORT 1214 – Natural Resource Careers	(BIOL 1255; NSCI 1265; NRT 1211)	1	
<i>NRT 1226 – Principles of Wildlife Management</i>	(BIOL 1255; NSCI 1265 or WILD 1265; NRT 1211)	3	(2/2)
<i>NRT 2315 – Introduction to Geographic Information Systems</i>	(NRT 1211 or WQAL/WSHD 1656)	2	(1/2)

SUMMER TERM 2024 – 1 credit	Prerequisites	Credits	Hr Lc/Lb
NRT 2220 – Forestry and Wildlife Management Internship	(NRT/FORT 1214; 2.0 GPA)	1	

Second Year

FALL SEMESTER 2024 – 16 credits (or more)	Prerequisites	Credits	Hr Lc/Lb
BIOL/NRT 2449 – Ecology and Management of Northern Fishes	(BIOL 1200 or BIOL 1561)	2	(1/2)
NRT 2236 – Land Surveying	(NRT 1211 or NRT 2315)	3	(1/4)
NRT 2238 – Natural Resources Measurements and Remote Sensing	(NRT 1212, 1226, 2220)	4	(2/4)
NRT 2241 – Forest Ecology and Silviculture	(NRT 1212)	3	(1/4)
NRT 2248 – Forest Products	(NRT 1212, 2220)	1	(0/2)
WSHD 2258 – Soils and Hydrology	(BIOL 1200 or BIOL 1561)	3	(2/2)

SPRING SEMESTER 2025 – 16 credits (or more)	Prerequisites	Credits	Hr Lc/Lb
BIOL 1562 – General Biology of Organisms (MnTC Goals 3 & 10)	(BIOL 1561)	4	(3/2)
NRT 2242 – Silviculture 2	(NRT 2238, 2241, 2248, 2315; WSHD 2258)	4	(2/4)
NRT 2251 – Forest Measurements	(NRT 2238, 2241, 2248, 2315)	2	(1/2)
<i>NRT 2252 – Wildlife Measurements</i>	(NRT 1212, 1226, 2238*)	2	(1/2)
NRT 2256 – Surveying and Mapping Techniques	(NRT 2236, 2241, 2315)	2	(0/4)
NRT 2257 – Wildland Fire Control and Management	(NRT 1222, 2236, 2241)	2	(0/4)

(*or instructor approval for Wildlife Ecology Certificate-only students)

Additional Requirements (to be taken any semester offered)

MnTC Course – 3 credits (minimum)	Prerequisites	Credits	Hr Lc/Lb
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)

Mission

Minnesota North College prepares lifelong learners and engaged citizens through inclusive, transformative experiences reflecting the character and natural environment of the region.



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