NORTHERN

Bachelor of Science
ENVIRONMENTAL SCIENCE

GENERAL EDUCATION (58 CRS)

Area I: Communications (9 crs)

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Choose one of the following two courses:

ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)

Area II: Mathematics (10 crs)

MATH 145 Introduction to Probability and Statistics (3)
MATH 150 College Algebra (3)
MATH 162 Calculus I (4)

Area III: Laboratory Sciences (24 crs)

BIOL 202/L Genetics with Lab (4)
BIOL 203/L Ecology and Evolution with Lab (4)
BIOL 210/L Microbiology with Lab (4)
CHEM 121/L General Chemistry I with Lab (4)
CHEM 210/L Integrated Organic & Biochemistry with Lab (4)
Choose one of the following:
ES 201L Environmental Physical and Chemical Processes with Lab (4)
CHEM 122/L General Chemistry II with Lab (4)

Area IV: Social and Behavioral Sciences (6-9)*

Electives from page 25-26 (6-9 crs)*

Area V: Humanities and Fine Arts (6-9)*

PHIL 220 Ethics (3)
Electives from pages 26-27 (3-6).

Health, Physical Education & Recreation (1 cr)

Electives (1)

PROGRAM REQUIREMENTS (33 CRS)

ES 112/L Introduction to Environmental Sciences I with Lab (4)
ES 125 Principles of Physical Hydrology (3)
ES 203 Introduction to GIS/GPS and Cartography (2)
ES 307 Atmospheric Science (3)
ES 320 Environmental Ethics (3)
ES 338 Environmental Law and Regulations (3)
ES 350 Watershed Hydrology and Management (3)
ES 401 Community Participation in Environmental Planning (3)
ES 412 Environmental Health and Toxicology (3)
ES 415 Energy and Resource Development (3)
ES 480 Senior Capstone—Field Experience (3)

YOU MUST CHOOSE ONE OF THE FOLLOWING MAJORS (33–34 CRS):

Agriculture (35 crs)

BIOL 360/L Botany with Lab (4)

ES 225 Principles of Agricultural Ecology (3)
ES 308 Invasive Species (3)
ES 311 Plant Pathology (3)
ES 340 Principles in Crop Production (3)
ES 365 Principles of Sustainable Agriculture (3)
ES 410 Soil Testing and Interpretation (3)
ES 410L Soil Testing and Interpretation Lab (1)
ES 411 Soil Management and Fertility (3)
ES 416 Irrigation and Drainage (3)
ES 457 Economics, Food, and Agriculture in Industrial Development (3)
Electives (3 crs) Upper-division courses (as approved by dept. advisor)

Environmental Science and Monitoring (35 crs)

ES 121 Environmental Air Monitoring (3)
ES 330 Principles of Environmental and Occupational Health (3)
RAD 234L Introduction to Radiation Science and Technology (4)
ES 315 Technology and the Environment (3)
ES 333 Radiation Biology (3)
ES 336 Environmental Sampling and Instrumentation (3)
ES 336L Environmental Sampling and Instrumentation Lab (3)
ES 400 Environmental Management (3)
ES 402 Environment, Economics, and Sustainability (3)
ES 410 Soil Testing and Interpretation (3)
ES 410L Soil Testing and Interpretation Lab (1)
Electives (3 crs) Upper-division courses (as approved by dept. advisor)

Concentration Area: Natural Resources Science and Management (37 crs)

ES 308 Invasive Species (3)
ES 103 Introduction to Natural Management (3)
FOR 113 Dendrology (3)
ES 310 Mensuration and Biometrics (3)
ES 317 Rangeland Management (3)
ES 318 Silviculture (3)
ES 404 Forest Health, Restoration, and Management (3)
ES 410/L Soil Testing and Interpretation (4)
ES 411 Soil Management and Fertility (3)
ES 414 Wildland Fire Management (3)
Electives (3 crs) Upper-division courses (as approved by dept. advisor)

TOTAL CREDITS 128