

BACHELOR OF SCIENCE IN FOREST HEALTH

Forest Health is a multidisciplinary and collaborative field of study that involves the understanding, monitoring, and protection of the world's forest resources. Forests support biodiversity, provide immense ecosystem services including water purification and carbon sequestration, and provide essential raw materials. Forest health experts support healthy forests by managing threats caused by invasive species, poor management, climate change, fire, and other anthropogenic factors.

A foundation in forest health requires coursework in ecology, dendrology, forest management, silviculture, mycology, plant pathology, and entomology. This major was developed to address the demand for broadly trained graduates to work in wide range of professional capacities in government agencies, the private sector, and academia.

Required Courses

APM 391	Intro/Probability&Stats	3
EFB 101	Gen Bio I:Organismal Bio&Ecol	3
EFB 102	General Biology I Laboratory	1
EFB 103	Gen Bio II:Cell Bio & Genetics	3
EFB 104	General Biology II Laboratory	1
EFB 120	The Global Envirnmnt & Society	3
EFB 132	Orientation Seminar:EFB	1
EFB 202	Ecol Monitor&Bio Assessmnt	3
EFB 210	Diversity of Life I	3
EFB 211	Diversity of Life II	3
EFB 245	Forest Health Colloquium	1
OR		
EFB 344	Forest Health Seminar	1
EFB 303	Intro Envrn Microbiology	4
EFB 307	Principles Of Genetics	3
EFB 308	Prin Of Genetics Lab	1
EFB 311	Principles of Evolution	3
EFB 320	General Ecology	4

EFB 336	Dendrology I	3
EFB 340	Forest/Shade Tree Path	3
EFB 351 OR EFB 352	Forest Entomology Entomology	3
EFB 420 OR EFB 498	Prof Internship/Envrn Biology Independent Research/Envrn Bio	1 - 5
EFB 425	Forest Health Senior Synthesis	3
EFB 439	Forest Health Monitoring	3
EFB 494	Forest Health Capstone	1
EWP 190	Writing And The Envrnment	3
EWP 290	Research Writing & Humanities	3
FCH 150	General Chemistry I	3
FCH 151	General Chemistry I Lab	1
FCH 152	General Chemistry II	3
FCH 153	General Chemistry II Lab	1
FCH 210	Elements Of Organic Chem	4
FOR 344		
FOR 345	Introduction to Soils	3
FOR 110	Environmental Physics	3

NOTE: 3 credits of EFB 498 or EFB 420 are required.

Electives

Course	Codes*	Credits
General Education Course in one of the following categories: US History & Civic Engagement, The Arts, World History and Global Awareness, World Languages	G	3

General Education Course in Diversity, Equity, Inclusion and Social Justice	G	3
Directed Electives		15
Open Electives		19

Directed Electives

To ensure that Forest Health majors obtain both strength and breadth of knowledge, 15 elective credit hours must be selected from the following list, including at least one course from five of the seven categories.

1. Forest Protection and Conservation Biology

- EFB 390 Wildlife Ecology & Management (4 cr.) F
- EFB 413 Intro Conservation Biology (3 cr.) S
- EFB 502 Ecology and Management of Invasive Species (3 cr.) F

2. Forestry/Wood Products

- FOR 322 Natural Resources Measurements and Sampling (3 cr.) F
- FOR 360 Principles of Management (3 cr.) F,S
- FOR 465 Natural Resources and Policy (3 cr.) S
- FOR 480 Urban Forestry (3 cr.)
- RMS 376 Decay of Wood Products (3 cr.) S

3. Technology

- BTC 401 Molecular Biology Techniques (3 cr.) F
- BTC 425 Plant Biotechnology (3 cr.) S
- BTC 426 Plant Tissue Culture Methods (3 cr.) F
- ESF 300 Introduction to Geospatial Information Technologies (3 cr.) F,S

4. Ecology and Environmental Science

- EST 370 Introduction to Personal Environmental Interpretation Methods (3 cr.) F
- EFB 445 Plant Ecology and Global Change (3 cr.) S
- EFB 505 Microbial Ecology (3 cr.) S
- EFB 516 Ecosystems (3 cr.) S
- EFB 518 Systems Ecology (3 cr.) F
- FOR 338 Meteorology (3 cr.) F

5. Biodiversity

- EFB 326 Plant Evolution, Diversification and Conservation (3 cr.) S
- EFB 342 Fungal Ecology and Diversity (3 cr.) CLBS
- EFB 351 Forest Entomology (3 cr.) F, even years
- EFB 352 Entomology (3 cr.) F, odd years
- EFB 355 Invertebrate Zoology (4 cr.) S
- EFB 428 Mycorrhizal Ecology (3 cr.) F even years
- EFB 435 Flowering Plants: Diversity, Evolution, and Systematics (3 cr.) F
- EFB 440 Mycology (A) (3 cr.) F
- EFB 453 Parasitology (3 cr.) F
- EFB 482 Ornithology (4 cr.) S
- EFB 493 Mammal Diversity (4 cr.) F
- EFB 485 Herpetology (3 cr.) F
- EFB 486 Ichthyology (3 cr.) S
- EFB 566 Systematic Entomology (3 cr.) S, even years

6. Mathematics and Physical Science

- APM 105 Survey of Calculus and Application I (4 cr.) F,S
- APM 106 Calculus and its Applications II (A) (4 cr.) F,S
- APM 510 Statistical Analysis (3 cr.) F
- FOR 323 Forest Biometrics (3 cr.) S
- PHY 102 General Physics II (A) (4 cr.) S

7. Anatomy and Physiology

- EFB 325 Cell Biology (3 cr.) S
- EFB 427 Plant Anatomy and Development (3 cr.) F
- EFB 462 Animal Physiology: Environmental & Ecological (4 cr.) F
- EFB 530 Plant Physiology (3 cr.) S
- EFB 531 Plant Physiology Lab (2 cr.) S
- EFB 570 Insect Physiology (3 cr.) S

Total Minimum Credits For Degree: 126

