BACHELOR OF SCIENCE IN ENVIRONMENTAL HEALTH

Environmental health focuses on the study of how people interact with their environment—the air and water around us, the plants and animals we encounter, and the workplaces and homes where we spend much of our lives. The field is broad, encompassing the direct effects of the environment on human health, and the factors that adversely affect the ecological balances essential to human health and environmental quality.

Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>APM 105</td>
<td>Survey Of Calc &amp; Appl I</td>
<td>4</td>
</tr>
<tr>
<td>APM 106</td>
<td>Survey Of Calc &amp; Appl II</td>
<td>4</td>
</tr>
<tr>
<td>APM 391</td>
<td>Intro/Probability&amp;Stats</td>
<td>3</td>
</tr>
<tr>
<td>EFB 101</td>
<td>Gen Bio I:Organismal Bio&amp;Ecol</td>
<td>3</td>
</tr>
<tr>
<td>EFB 102</td>
<td>General Biology I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>EFB 103</td>
<td>Gen Bio II:Cell Bio &amp; Genetics</td>
<td>3</td>
</tr>
<tr>
<td>EFB 104</td>
<td>General Biology II Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>EFB 303</td>
<td>Intro Envrn Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>EFB 360</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>EFB 400</td>
<td>Toxic Health Hazards</td>
<td>3</td>
</tr>
<tr>
<td>EHS 250</td>
<td>Foundations/Envrn Health</td>
<td>2</td>
</tr>
<tr>
<td>EHS 320</td>
<td>Disease Prevention</td>
<td>3</td>
</tr>
<tr>
<td>EHS 350</td>
<td>Environmental Health Managemnt</td>
<td>3</td>
</tr>
<tr>
<td>EHS 360</td>
<td>Environmental Sampling Methods</td>
<td>3</td>
</tr>
<tr>
<td>EHS 420</td>
<td>Prof Internship/Env Health</td>
<td>1 - 5</td>
</tr>
<tr>
<td>EHS 440</td>
<td>Occupational Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>EHS 480</td>
<td>Hazardous Waste Management</td>
<td>3</td>
</tr>
<tr>
<td>ENS 132</td>
<td>Orientation Seminar:EnvSci</td>
<td>1</td>
</tr>
<tr>
<td>ENS 470</td>
<td>Environmental Risk Assessment</td>
<td>3</td>
</tr>
<tr>
<td>ENS 494</td>
<td>Capstone Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>
ESF 200 Information Literacy 1
EWP 190 Writing And The Environment 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 221 Organic Chemistry 1 3
FCH 222 Organic Chemistry Lab 1 1
FCG 223
FCH 224 Organic Chemistry Lab II 1
FCH 399 Intro/Atmospheric Sciences 3
NSD 114 Food Safety/Quality Assur 0 - 8
PHY 101 Major Concepts of Physics I 0 - 8
PHY 102 Major Concepts of Physics II 0 - 8

NOTE: PHY 101 and PHY 102 both include a lab.

**General Education Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Codes*</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Course in two of the following categories: US History &amp; Civic Engagement, The Arts, Social Sciences, World History and Global Awareness, World Languages</td>
<td>G</td>
<td>6</td>
</tr>
<tr>
<td>General Education Course in Diversity, Equity, Inclusion and Social Justice</td>
<td>G</td>
<td>3</td>
</tr>
</tbody>
</table>

**Focus Area Electives**

21 credits required for breadth and depth of knowledge.
Breadth: 3 credits from each of 3 focus areas (total of nine credits)

Depth: 12 credits from a fourth focus area.

**NOTE:** Some Focus Area Elective courses may have prerequisites, effectively exceeding the 126 minimum credit requirement for the B.S.

**NOTE:** Only three credits total from the 21 can be from a 200-level course or lower without prior approval of the curriculum coordinator.

### A. Built Environment

<table>
<thead>
<tr>
<th>Courses</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EST 132</td>
<td>Orientation Seminar:EST</td>
<td>1</td>
</tr>
<tr>
<td>EST 220</td>
<td>Urban Ecology</td>
<td>3</td>
</tr>
<tr>
<td>EST 231</td>
<td>Environmental Geology</td>
<td>3</td>
</tr>
<tr>
<td>LSA 311</td>
<td>Natural Proc-Design&amp;Plan</td>
<td>3</td>
</tr>
<tr>
<td>LSA 326</td>
<td>Land Arch Dsgn Studio I</td>
<td>5</td>
</tr>
<tr>
<td>LSA 451</td>
<td>Comprehensive Land Plan</td>
<td>3</td>
</tr>
<tr>
<td>LSA 470</td>
<td>Thematic Land Dsgn Studio</td>
<td>6</td>
</tr>
</tbody>
</table>

### B. Geospatial Technology

<table>
<thead>
<tr>
<th>Courses</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERE 365</td>
<td>Principles of Remote Sensing</td>
<td>4</td>
</tr>
<tr>
<td>ERE 371</td>
<td>Surveying For Engineers</td>
<td>3</td>
</tr>
<tr>
<td>ERE 553</td>
<td>Intro to Spatial Information</td>
<td>1</td>
</tr>
<tr>
<td>ERE 566</td>
<td>Intro/Global Positioning Sys</td>
<td>1</td>
</tr>
<tr>
<td>ESF 300</td>
<td>Intro/Geospatial Info Tech</td>
<td>3</td>
</tr>
</tbody>
</table>

### C. Soils

<table>
<thead>
<tr>
<th>Courses</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERE 511</td>
<td>Ecological Engr in the Tropics</td>
<td>3</td>
</tr>
<tr>
<td>FOR 332</td>
<td>Forest Ecology</td>
<td>4</td>
</tr>
<tr>
<td>FOR 345</td>
<td>Introduction to Soils</td>
<td>3</td>
</tr>
<tr>
<td>FOR 535</td>
<td>Advanced Forest Soils</td>
<td>3</td>
</tr>
</tbody>
</table>
D. Water and Wastewater

Students interested in this focus area are encouraged to take APM205 and APM206 in place of APM105 and APM106, as the higher level calculus is required for many of the courses; also students interested in this focus area are encouraged to take PHY211/221 and PHY212/222 in place of PHY101 and PHY102, as the higher level physics is required for many of the courses.

Courses
CEE 442  Treatment Proc. in Env. Eng.  0 - 8
EAR 401  Hydrogeology  0 - 8
EAR 420  
EFB 496  Topics/Envrn&Forest Bio  1 - 3
EFB 505  
ERE 275  Ecological Engineering  3
ERE 339  Fluid Mechanics  4
ERE 340  Engr Hydrology&Hydraulics  4
ERE 440  Water and Wastewater Treatment  3
ERE 480  Fate & Trnsprt of Contaminants  3
FCH 360  Physical Chemistry I  3
FCH 510  Environmental Chemistry I  3
FOR 487  Environmental Law and Policy  3

E. Solid/Hazardous Materials and Waste Management

Courses
CEE 341  Intro. to Environmental Engrng  0 - 8
EFB 496  Topics/Envrn&Forest Bio  1 - 3
ERE 275  Ecological Engineering  3
ERE 340  Engr Hydrology&Hydraulics  4
ERE 405  Sustainable Engineering  3
ERE 465  Environmental Systems Engrng  3
ERE 468  Solid & Hazardous Waste Engr  3
ERE 480  Fate & Trnsprt of Contaminants  3
FOR 487  Environmental Law and Policy  3

**F. Hydrogeology**

*Courses*
- EAR 401  Hydrogeology  0 - 8
- EAR 420
- ERE 480  Fate & Trnsprt of Contaminants  3
- ENS 496
- ERE 508  Water-An Incredible Journey  3
- FOR 340  Watershed Hydrology  3
- FOR 345  Introduction to Soils  3
- FOR 442  Watershed Ecology & Management  3

**G. Food Protection**

*Courses*
- FST 102  Contemporary Food Issues  0 - 8
- FST 307  Feeding the World: Global Agr  0 - 8
- FST 402  Urban Food Systems  0 - 8
- FST 421
- NSD 114  Food Safety/Quality Assur  0 - 8
- NSD 115  Food Science I  0 - 8
- NSD 225  Nutrition in Health  0 - 8
- NSD 427  Public Health Nutrition  0 - 8
- NSD 455  Community Nutrition  0 - 8
- NSD 481  Medical Nutr Therapy I  0 - 8
- NSD 555  Food, Culture and Environ.  0 - 8
H. Public Health

Courses
PHP 221 Community Health Promotion 0 - 8
PHP 309 Health Disparities 0 - 8
FST 403 Right to Food and Nutrition 0 - 8
PHP 302 Influencing Healthy Behavior 0 - 8
PHP 305 Community Mental Health 0 - 8
PHP 313 Issues Challenges Healthcare 0 - 8
PHP 306 Understanding Health Systems 0 - 8
PHP 318 Dynamics of Addiction 0 - 8
PHP 414 Ethics & Law Hlthcare Adm 0 - 8
PHP 415 Public Health Ethics 0 - 8
PHP 437
PHP 438
PHP 462 Culture&Reprod Health&Med 0 - 8
PHP 463 Global Health 0 - 8

I. Pre Medical Track

Students taking this track as their depth area must also select courses from 4 other focus areas, rather than three other focus areas for their breadth. This focus area does not count as one of the three breadth areas, but courses can count as Open Electives.

Courses
BTC 498 Resrch Prob/Biotechnology 1 - 9
EFB 307 Principles Of Genetics 3
EFB 308 Prin Of Genetics Lab 1
EFB 325 Cell Biology 3
EFB 385 Comparative Vert Anatomy 4
FCH 530 Biochemistry I 3
Open Electives

Six (6) Credit hours. Students can take more than the 4 hours of open electives, but need to be aware that those extra credits will not substitute for required courses. Students are encouraged but not required to use some of their open electives to do research projects either on or off campus within the EHS framework. Below are listed some courses that might be of interest to EHS students.

EST 203 Introduction to Sociology
EST 220 Urban Ecology
EST 245 Foundations of Environmental Communication
EST 321 Government and the Environment
EST 361 History of the American Environmental Movement
EST 390 Social Processes and the Environment
EST 395 Public Communication of Science and Technology
EST 426 Community Planning and Sustainability

EFB 217 Peoples, Plagues, and Pests
EFB 352 Entomology
EFB 453 Parasitology

LSA 190 Clashing Perspectives in the Built Environment

FOR 202 Introduction to Sociology
FOR 204 Natural Resources in American History
FOR 489 Natural Resources Law and Policy

Total Minimum Credits For Degree: 126

NOTE: For students considering a career in Environmental Risk Assessment or Environmental Remediation, it is strongly recommended that they that take:

ENV 165 Hazardous Waste Operations and Emergency Response (2 Credits) at Onondaga Community College over Winter Break. This course culminates with the awarding of the 40 hour HAZWOPER Certification, which is required by OSHA and many potential internship sponsors or employers.