ENVIRONMENTAL ENGINEERING FLOWCHART
2012-13

This is not an official list of degree requirements. Adjustments may be required due to curriculum changes.

**NOTE:** LINEAR ALGEBRA & DIFFERENTIAL EQUATIONS CAN BE TAKEN DURING THE SAME SEMESTER (MA2321 & MA3521) OR SEPARATE SEMESTERS (MA2320 & MA3520).

---

**Fall Year 1**

- **MA1160/1161** CALCULUS I (4/5 CREDITS)
  - F, S, Su

- **MA2160** CALCULUS II (4 CREDITS)
  - F, S, Su

- **PH1100** PHYSICS LAB I (1 CREDIT)
  - F, S, Su

- **MA1160/1161 Coreq.**
  - MA2160 Co-req.

- **CH1150/1151** UNIVERSITY CHEMISTRY I (3 CREDITS)
  - F, S, Su

- **CH1155 (L)** UNIVERSITY CHEMISTRY LAB (1 CREDIT)
  - F, S, Su

- **ENG1101 INTRO TO ENV. ENGINEERING (1 CREDIT)**
  - F

---

**Spring Year 1**

- **UN1001 PERSPECTIVES** (3 CREDITS)
  - F, S, Su

- **UN1002 WORLD CULTURES** (4 CREDITS)
  - F, S, Su

- **HHSS DISTRIBUTION COURSE** (3 CREDITS)
  - F, S, Su

---

**Fall Year 2**

- **MA3160 CALCULUS III (4 CREDITS)**
  - F, S, Su

- **MA2320/2321 LINEAR ALGEBRA (2 CREDITS)**
  - F, S, Su

- **ENVE3501 ENV. ENG. FUNDAMENTALS (3 CREDITS)**
  - F

- **ENG2120 STATES/STRENGTH OF MATERIALS (4 CREDITS)**
  - S

---

**Spring Year 2**

- **MA3520/3521 DIFFERENTIAL EQ (2 CREDITS)**
  - F, S, Su

- **CH3501 PHYSICAL CHEM (3 CREDITS)**
  - (TRACK A)

- **ENVE3502 CHEM PROCESS (4 CREDITS)**
  - F

- **EC3400 EC DECISION ANALYSIS (3 CREDITS)**
  - F

---

**Fall Year 3**

- **CE3620 (L) SURFACE WATER QUALITY ENGINEERING (4 CREDITS)**
  - S

- **ENVE4504 AIR QUALITY TREATMENT (3 CREDITS)**
  - F

- **MAE3501 ENVIRONMENTAL REGULATIONS (3 CREDITS)**
  - S

---

**Spring Year 3**

- **ENVE4508 H2O/WASTEWATER TREATMENT (3 CREDITS)**
  - F

- **ENVE3501 & ENG3502 & CH3501 (3 CREDITS)**
  - F

---

**Fall Year 4**

- **ENVE4505 (L) SOIL MECHANICS (3 CREDITS)**
  - S

- **EC3400 FREE ELECTIVE (2 CREDITS)**
  - F, S, Su

---

**Spring Year 4**

- **ENVE4509 (L) ENV. PROCESS & SIMULATION (2 CREDITS)**
  - S

---

**Total Academic Credits:** 131
**Total Co-Curricular Units:** 3
## Professional Electives

<table>
<thead>
<tr>
<th>Specialty Area</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality</td>
<td>ENVE4515</td>
<td>Atmospheric Chemistry</td>
<td>3</td>
<td>Spring</td>
<td>ENVE4504, ENVE4501, SR</td>
</tr>
<tr>
<td></td>
<td>UN4000</td>
<td>Remote Sensing Seminar</td>
<td>1</td>
<td>Fall, Spring</td>
<td>Sophomore Standing</td>
</tr>
<tr>
<td>Surface Water Quality</td>
<td>BL4450</td>
<td>Limnology</td>
<td>4</td>
<td>Fall</td>
<td>CH1160, Junior Standing</td>
</tr>
<tr>
<td></td>
<td>ENVE5504</td>
<td>Surface Water Quality Modeling</td>
<td>3</td>
<td>Spring</td>
<td>ENVE4505</td>
</tr>
<tr>
<td></td>
<td>FW4220</td>
<td>Wetlands</td>
<td>4</td>
<td>Fall</td>
<td>UN2002</td>
</tr>
<tr>
<td>Groundwater</td>
<td>GE3040</td>
<td>Fund. of Applied and Environ. Geophysics</td>
<td>4</td>
<td>Spring</td>
<td>PH2200</td>
</tr>
<tr>
<td></td>
<td>GE4800</td>
<td>Groundwater Engineering</td>
<td>3</td>
<td>On Demand</td>
<td>GE3850</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>MEEM4685</td>
<td>Env Resp Design &amp; Manuf</td>
<td>3</td>
<td>Spring – alt yrs</td>
<td>Senior Standing</td>
</tr>
<tr>
<td>Water Resources</td>
<td>CE4620</td>
<td>River and Floodplain Hydraulics</td>
<td>3</td>
<td>Fall</td>
<td>CE3620</td>
</tr>
<tr>
<td></td>
<td>CE4640</td>
<td>Stormwater Management and LID</td>
<td>3</td>
<td>Spring, Su</td>
<td>CE3620</td>
</tr>
<tr>
<td></td>
<td>CE5664</td>
<td>Water Resources Modeling</td>
<td>3</td>
<td>On Demand</td>
<td>CE3620</td>
</tr>
<tr>
<td></td>
<td>ENVE4507</td>
<td>Distribution and Collection</td>
<td>3</td>
<td>Spring</td>
<td>CE3620 and ENVE3501</td>
</tr>
<tr>
<td></td>
<td>FW3540*</td>
<td>An Intro to GIS for Natural Resource Mgmt</td>
<td>4</td>
<td>Spring</td>
<td>MA3710*</td>
</tr>
<tr>
<td></td>
<td>FW4220</td>
<td>Wetlands</td>
<td>4</td>
<td>Fall</td>
<td>UN2002</td>
</tr>
<tr>
<td></td>
<td>UN4000</td>
<td>Remote Sensing Seminar</td>
<td>1</td>
<td>Fall, Spring</td>
<td>Sophomore Standing</td>
</tr>
<tr>
<td>Math/Physical Science</td>
<td>ENVE4519</td>
<td>Transport &amp; Transform. Organic Pollutants</td>
<td>3</td>
<td>Fall</td>
<td>ENVE4501</td>
</tr>
<tr>
<td></td>
<td>MA4630</td>
<td>Numerical Methods</td>
<td>3</td>
<td>Fall</td>
<td>MA3530*</td>
</tr>
<tr>
<td></td>
<td>PH1200/2200</td>
<td>Physics II</td>
<td>4</td>
<td>Fall, S, Su</td>
<td>PH2100, MA2160 (co-req)</td>
</tr>
<tr>
<td>Computer Science</td>
<td>CS1121</td>
<td>Introduction to Computer Science I</td>
<td>3</td>
<td>Fall, S, Su</td>
<td>MA1032 (Co-req)</td>
</tr>
<tr>
<td></td>
<td>CS1122</td>
<td>Introduction to Computer Science II</td>
<td>3</td>
<td>Fall, S, Su</td>
<td>CS1121</td>
</tr>
<tr>
<td>Business &amp; Construction</td>
<td>ACC2000</td>
<td>Accounting Principles I</td>
<td>3</td>
<td>Fall, S</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MKT3000</td>
<td>Principles of Marketing</td>
<td>3</td>
<td>Fall, S, Su</td>
<td>Cannot be a Freshman</td>
</tr>
<tr>
<td></td>
<td>CE3332</td>
<td>Fundamentals of Construction Engineering</td>
<td>3</td>
<td>Fall, S, Su</td>
<td>Sophomore Standing</td>
</tr>
<tr>
<td></td>
<td>EC3300</td>
<td>Industrial Organization</td>
<td>3</td>
<td>Fall, S, Su</td>
<td>EC2001</td>
</tr>
<tr>
<td>Environmental Policy</td>
<td>SS3520</td>
<td>U.S. Environmental History</td>
<td>3</td>
<td>Spring - alt yrs</td>
<td>UN2002</td>
</tr>
<tr>
<td></td>
<td>SS3630</td>
<td>Environmental Policy and Politics</td>
<td>3</td>
<td>Fall</td>
<td>UN2002</td>
</tr>
<tr>
<td>Other applicable courses</td>
<td>CE4820</td>
<td>Foundation Engineering</td>
<td>3</td>
<td>Fall</td>
<td>CE3810</td>
</tr>
<tr>
<td></td>
<td>CE4830</td>
<td>Geosynthetics Engineering</td>
<td>3</td>
<td>Spring</td>
<td>CE3810</td>
</tr>
<tr>
<td></td>
<td>CE4990</td>
<td>Special Topic (Varies by semester)</td>
<td>3</td>
<td>Fall, Spring</td>
<td>varies</td>
</tr>
<tr>
<td></td>
<td>SU2000</td>
<td>Surveying &amp; GIS Fundamentals</td>
<td>2</td>
<td>Fall, Spring</td>
<td>---</td>
</tr>
</tbody>
</table>

### Senior Design Prerequisites:
- ENVE3501 OR ENVE3503, ENVE3502, AND CE3620
- PLUS 4 OF THE FOLLOWING:
  - CE3810, ENVE4508, ENVE4504, ENVE4506 OR GE3850

*ENVE3502 SHOULD SUBSTITUTE FOR MA3710.
*CONTACT THE FW DEPT. TO GET IT WAIVED.
*FW3540 WILL BE OPEN TO FORESTRY MAJORS ONLY UNTIL THE INITIAL REGISTRATION PERIOD IS OVER
*MA3520 SHOULD SUBSTITUTE FOR MA3530

### General Education Requirements

#### A. Core "UN" Courses (13 Credits)
- [ ] UN1001 (Perspectives)
- [ ] UN2001 (Revisions)
- [ ] UN1002 (World Cultures)
- [ ] UN2002 (Institutions)

#### B. Distributions Courses (15 Credits)

1. [ ] EC3400

#### C. Co-Curricular Activities (3 Units)

#### Recommended Gen Ed Distribution Courses:
- EC2001 PRINCIPLES OF ECONOMICS
- EC3002 MICROECONOMIC THEORY
- ED3510 COMMUNICATING SCIENCE
- FA2600 THE TECHNIQUE OF ACTING
- HU2830 THE RHETORIC OF EVERYDAY TEXTS
- HU3120 TECHNICAL & SCIENTIFIC COMM.
- HU3151 THE RHETORIC OF EVERYDAY TEXTS
- HU3151 U.S. ENVIRONMENTAL HISTORY
- HU3151 MACROECONOMIC THEORY

**Note:** Other courses may be used to satisfy the professional electives requirement if approved by the department of civil and environmental engineering academic advisor.