Environmental Engineering (B.S.Env.E.)  
College of Engineering and Computer Science  
Department of Civil, Environmental, and Construction Engineering, Engineering II, Room: 211  
http://www.cece.ucf.edu  
Carol Ann Pohl, carolann.pohl@ucf.edu  
Dr. Andrew Randall, andrew.randall@ucf.edu  
Phone: 407-823-2841

Admission Requirements

- Students wanting to declare a major in an engineering discipline must be in good academic standing and must have a "C" (2.0) or better in each of the following courses or their equivalents: MAC 2311C, MAC 2312, PHY 2048C, and CHM 2045C or CHM 2040 AND CHM 2041.  
- Students wanting to declare a major in an engineering discipline must complete a change of major in the term of completion of the final pending prerequisite course(s) listed above.

Degree Requirements (128 hrs)

- The College of Engineering and Computer Science requires all engineering students to achieve a minimum 2.25 GPA in completing the courses from section 3 Basic Core Requirements, section 4 Advanced Core Requirements, section 5 Restricted Electives and section 6 Capstone Requirements listed below. Independent study courses generally do not satisfy major requirements.  
- A "C" (2.0) or better is required in each pre-requisite course in section 2 Common Program Prerequisites, section 4 Advanced Core Requirements, and section 6 Capstone Requirements.  
- Students in the Environmental Engineering major may not accumulate five or more grades of W, WP, or WF at UCF and remain enrolled in, or eligible for, any major in the College of Engineering and Computer Science (CECS) or the College of Optics and Photonics (COP). Therefore, any student majoring in Environmental Engineering who accumulates three grades of W, WP, or WF at UCF will be placed on W Probation and will remain on W Probation as long as the student is enrolled in a CECS or COP major. If a student on W Probation receives a fifth grade of W, WP, or WF, the student will be excluded from all CECS and COP majors.  
- Students in the Environmental Engineering major are expected to make consistent good progress toward their degrees to remain enrolled in, or eligible for, any major in the College of Engineering and Computer Science (CECS) or the College of Optics and Photonics (COP). Therefore, any student majoring in Environmental Engineering who repeats any UCF course and does not earn a grade of "C" (2.0) or better on the second attempt will be placed on Lack of Progress Probation and remain on Lack of Progress Probation as long as the student is enrolled in a CECS or COP major. If a student on Lack of Progress Probation does not receive a grade of "C" (2.0) or better by the third attempt in the same UCF course, the student will be excluded from all CECS and COP majors. Any student majoring in Environmental Engineering who has accumulated 7 or more unsuccessful attempts (i.e., grades below "C" (2.0) and withdrawals) over all courses taken at UCF will be placed on Lack of Progress Probation and remain on Lack of Progress Probation as long as the student is enrolled in a CECS or COP major. If a student on Lack of Progress Probation has a tenth unsuccessful attempt over all courses taken at UCF, the student will be excluded from all CECS and COP majors.

- A student who is excluded from CECS and COP majors may seek readmission to a major in CECS or COP after at least one full year has passed since exclusion. Readmission is not automatic and is dependent upon a high probability of success after readmission. Any student who is readmitted to the Environmental Engineering major will be subject to all probation conditions that applied at the time of exclusion.

1. UCF General Education Program (GEP) (38 hrs)

- The UCF General Education Program (GEP) is described in this catalog. Engineering students should closely study the requirements of the UCF GEP and the allowable substitutions detailed in paragraphs A. through E. below to minimize excess hours. Students transferring to UCF from within the Florida College System or State University System should complete the GEP and the Common Program Prerequisites before transferring.

A: Communication Foundations (9 hrs)

Required ENC 1101 Composition I 3 hrs
Required ENC 1102 Composition II 3 hrs
Suggested SPC 1603C Fundamentals of Technical Presentations 3 hrs

B: Cultural & Historical Foundations (9 hrs)

Select two courses from Historical Foundations 6 hrs
Select one class from Cultural Foundations 3 hrs

C: Mathematical Foundations (7 hrs)

Required MAC 2311C Calculus with Analytic Geometry I 4 hrs
Required STA 3032 Probability and Statistics for Engineers 3 hrs

D: Social Foundations (6 hrs)

Select one class from Social Foundations Group 1 3 hrs
Select one class from Social Foundations Group 2 3 hrs

E: Science Foundations (7 hrs)

Required PHY 2048C Physics for Engineers & Scientists I 4 hrs
Prefer GEO 1200 Physical Geography 3 hrs

2. Common Program Prerequisites (CPP) (19 hrs)

- These courses are specifically required for all engineering students of the Florida State University System. CPP courses are also available at other Florida post-secondary schools and may be transferred directly to UCF programs.

- See “Common Prerequisites” in the Transfer and Transitions Services section for more information.

- A grade of "C" (2.0) or better is required in each course in this section.

1 MAC 2311C Calculus with Analytic Geometry I GEP
MAC 2312 Calculus with Analytic Geometry II 4 hrs
MAC 2313 Calculus with Analytic Geometry III 4 hrs
MAP 2302 Ordinary Differential Equations I 3 hrs
PHY 2048C Physics for Engineers & Scientists I GEP
PHY 2049C Physics for Engineers and Scientists II 4 hrs

Select one of the following sequences of courses:

- Preferred course
CHM 2045C Chemistry Fundamentals I 4 hrs
or
CHM 2040 Chemistry Fundamentals IA and 3 hrs
CHM 2041 Chemistry Fundamentals IB 3 hrs

1 also satisfy UCF GEP sub-requirements

3. Core Requirements: Basic Level (9 hrs)

- Environmental engineering majors must complete both Earth Science and Biological Science coursework. See assigned academic advisor for list of approved courses.

EGS 1006C Introduction to the Engineering Profession 1 hr
EGN 1007C Engineering Concepts and Methods 1 hr
1 CHM 2045C Chemistry Fundamentals I CPP
1 CHM 2046 Chemistry Fundamentals II 3 hrs
1 CHM 2046L Chemistry Fundamentals Laboratory 1 hr
Earth Science 3 hrs
Biological Science 3 hrs

1 A "C" (2.0) or better is required in this course.
## 4. Core Requirements: Advanced Level (53 hrs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 3310 Engineering Analysis-Statics</td>
<td>3</td>
</tr>
<tr>
<td>ENV 3321 Engineering Analysis-Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ENV 3331 Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>ENV 3343 Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>ENV 3613 Engineering Economic Analysis</td>
<td>2</td>
</tr>
<tr>
<td>ENV 3001 Introduction to Environmental Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CEE 4003 Introduction to the Construction Industry</td>
<td>3</td>
</tr>
<tr>
<td>STA 3032 Probability and Statistics for Engineers</td>
<td>GEP</td>
</tr>
<tr>
<td>CWR 3202 Engineering Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>CEG 4011C Geotechnical Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>EES 4111C Biological Process Control</td>
<td>3</td>
</tr>
<tr>
<td>EES 4202C Chemical Process Control</td>
<td>4</td>
</tr>
<tr>
<td>ENV 4531 Environmental Engineering Operations &amp; Processes I</td>
<td>3</td>
</tr>
<tr>
<td>CWR 4632C Water Resources Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>CWR 4633C Water Resources Engineering II</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4120 Air Pollution Control</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4561 Environmental Engineering Operations &amp; Processes II</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4341 Solid &amp; Hazardous Waste Management</td>
<td>3</td>
</tr>
</tbody>
</table>

1. A "C" (2.0) or better is required in this course.

## 5. Restricted Electives (3 hrs)

- Technical electives are available in the BSEnvE program to address specific student interests in a variety of technical areas. Students should consult with their assigned academic advisor for a list of the approved technical electives and the terms when specific courses of this type are to be offered.

## 6. Capstone Requirements (6 hrs)

- Required Senior Design Courses
  - CGN 4808C CECE Capstone Design 3 hrs

**Design Specialization** 3 hrs

- Must be completed before registering for CGN 4808C - Capstone Design
- ENV 4433C Environmental Engineering Wastewater Design or
- ENV 4122C Air Pollution Control Design or
- ENV 4300C Solid Waste Facility Design or
- ENV 4562C Environmental Engineering Water Treatment Design

1. A "C" (2.0) or better is required in this course.

## 7. Foreign Language Requirements Admissions

- Two years of one foreign language in high school, or one year of one foreign language in college (or equivalent proficiency exam) prior to graduation.

**Graduation**

- None

**8. Electives**

- None

## 9. Additional Requirements

- EnvE students must take the Fundamentals of Engineering (FE) Exam during their Senior year. Applications must be received by the Florida Board of Professional Engineers approximately 6 months in advance of your exam date.

## 10. Required Minors

- None

## 11. Departmental Exit Requirements

- None

## 12. University Minimum Exit Requirements

- A 2.0 UCF GPA
- 60 semester hours earned after CLEP awarded
- 48 semester hours of upper division credit completed
- A maximum of 45 hours of extension, correspondence, CLEP, Credit by Exam, and Armed Forces credits permitted.
- Complete the General Education Program, the Gordon Rule, and nine hours of Summer credit.

**Total Semester Hours Required** 128

## Honors In Major

- None

## Related Programs

- Chemistry
- Construction Engineering
- Civil Engineering

## Certificates

- None

## Related Minors

- Chemistry
- Environmental Studies
- Mathematics
- Engineering Leadership
- Bioengineering

## Advising Notes

- Each engineering student is assigned a qualified engineering academic advisor in the department of his/her major. Each student should seek academic advisement before registering for classes each semester to minimize excess hours and to ensure that satisfactory academic progress is being maintained.

- The Environmental Engineering program offers the opportunity for exceptionally well qualified undergraduates to enter directly into the PhD program after completion of an appropriate BS degree. This option allows outstanding undergraduates to begin planning a research program with a specific faculty advisor even before finishing the BS, and may allow completion of the PhD in a shorter time period than by taking a separate Masters followed by the PhD.

## Transfer Notes

- Courses transferred must be formally evaluated for equivalency credit. The student must provide all supporting information with his/her petition for this evaluation.

- EGS 1006C and EGN 1007C are required courses for incoming freshmen only. The credits for these two courses (one hour for each) may, with prior approval of the department academic advisor, be moved to the Restricted Elective area.

## Acceptable Substitutes for Transfer Courses

- None

## Plan of Study (128 hrs)

- The tentative course schedule listed below is a guide for those students who plan on completing their degree in four years. All engineering students should meet with their departmental academic advisor to develop and maintain an appropriate plan of study.

### Freshman Year - Fall

- ENC 1101 Composition I 3 hrs
- MAC 2311C Calculus with Analytic Geometry I 4 hrs
- EnvE 1006C Introduction to the Engineering Profession 1 hr
- EGS 1050 Biology and Environment 3 hrs
- GEP 3 hrs

1. Biological Science Requirement for Major

### Freshman Year - Spring

- ENC 1102 Composition II 3 hrs
- MAC 2312 Calculus with Analytic Geometry II 4 hrs
- PHY 2048C Physics for Engineers & Scientists I 4 hrs
- EGN 1007C Engineering Concepts and Methods 1 hr
- GEO 1200 Physical Geography 3 hrs

1. Earth Science Requirement for Major - also in GEP

### Sophomore Year - Fall

- MAC 2313 Calculus with Analytic Geometry III 4 hrs
- CHM 2045C Chemistry Fundamentals I 4 hrs
- EGN 3310 Engineering Analysis-Statics 3 hrs
- EGN 3313 Engineering Economic Analysis 2 hrs
- GEP 3 hrs

### Sophomore Year - Spring

- MAP 2302 Ordinary Differential Equations I 3 hrs
- CHM 2046 Chemistry Fundamentals II 3 hrs
- CHM 2046L Chemistry Fundamentals Laboratory 1 hr
- PHY 2049C Physics for Engineers and Scientists II 4 hrs
- EGN 3321 Engineering Analysis-Dynamics 3 hrs
- ENV 3001 Introduction to Environmental Engineering 3 hrs
### Sophomore Year - Summer

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGN 3343</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>STA 3032</td>
<td>Probability and Statistics for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CWR 3201</td>
<td>Engineering Fluid Mechanics</td>
<td>3</td>
</tr>
</tbody>
</table>

**9 hrs**

### Junior Year - Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 4531</td>
<td>Environmental Engineering Operations &amp; Processes I</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3331</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EES 4202C</td>
<td>Chemical Process Control</td>
<td>4</td>
</tr>
<tr>
<td>ENV 4120</td>
<td>Air Pollution Control</td>
<td>3</td>
</tr>
<tr>
<td>CWR 4632C</td>
<td>Water Resources Engineering I</td>
<td>4</td>
</tr>
</tbody>
</table>

**17 hrs**

### Junior Year - Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 4341</td>
<td>Solid &amp; Hazardous Waste Management</td>
<td>3</td>
</tr>
<tr>
<td>EES 4111C</td>
<td>Biological Process Control</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4561</td>
<td>Environmental Engineering Operations &amp; Processes II</td>
<td>3</td>
</tr>
<tr>
<td>GEP</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**16 hrs**

**Design Specialization**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 4122C</td>
<td>Air Pollution Control Design</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4562C</td>
<td>Environmental Engineering Water Treatment Design or</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4433C</td>
<td>Environmental Engineering Wastewater Design or</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4300C</td>
<td>Solid Waste Facility Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**3 hrs**

### Senior Year - Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEG 4011C</td>
<td>Geotechnical Engineering I</td>
<td>4</td>
</tr>
<tr>
<td>CCE 4003</td>
<td>Introduction to the Construction Industry</td>
<td>3</td>
</tr>
<tr>
<td>CWR 4633C</td>
<td>Water Resources Engineering II</td>
<td>3</td>
</tr>
<tr>
<td>GEP</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**13 hrs**

### Senior Year - Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GEP</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>CGN 4808C</td>
<td>CECE Capstone Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**12 hrs**

### Program Academic Learning Compacts

- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at: [http://www.oes.ucf.edu/academiclearningcompacts.html](http://www.oes.ucf.edu/academiclearningcompacts.html)

### Equipment Fees

- Part-Time Student: $44 per term
- Full-Time Student: $87 per term