ENGINEERING EDUCATION B.S.

ACADEMIC ADVISING

Partnering with students to successfully navigate college
Location: Main Hall 208
Phone: 719.255.3260
Website: www.uccs.edu/advising

Connect With Your Advisor

Current UCCS Students
- Appointments: www.uccs.edu/advising/current-students
- Drop In Advising: Most Wednesdays, 1:00pm - 4:00pm
Prospective Students: www.uccs.edu/admissions/contact

GENERAL ACADEMIC INFORMATION

Minimum Graduation Requirements
1. 128 credit hours
2. 2.0 CU cumulative GPA
3. Residency: Last 30 credit hours of degree must be completed while registered in the College of Letters, Arts, and Sciences at UCCS

Student Responsibilities
Students are required to know and follow:
1. All academic policies set forth by the University, College, and academic department in the UCCS Catalog: catalog.uccs.edu
2. All course prerequisites designated by the University. Failure to meet course pre-requisites may result in an administrative drop of the course from a student’s schedule: see degree audit for list of course prerequisites within academic major.

MAJOR INFORMATION

The Engineering Education degree prepares secondary teachers with a STEM education degree (science, technology, engineering, and math). This 4-year multi-disciplinary degree program includes background in engineering and technology, exposure to teaching experiences throughout and culminates in student teaching in a local classroom. Graduates completing this degree will be eligible for educator licensing in Colorado in both math and science.

Major Requirements

<table>
<thead>
<tr>
<th>Course/Area</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAE 1503</td>
<td>Introduction to Engineering Design</td>
<td>3</td>
</tr>
<tr>
<td>MAE 2200</td>
<td>Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 3610</td>
<td>Engineering Probability and Statistics</td>
<td>3</td>
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<tr>
<td>Introductory Course</td>
<td>Complete one additional introductory course from the following:</td>
<td>3</td>
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<tr>
<td></td>
<td>CS 1120, CS 1150, ECE 1001, ECE 1021, MAE 1502</td>
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<tr>
<td>Engineering Foundations</td>
<td>Complete 6 hours of Engineering Foundation courses from the following:</td>
<td>6</td>
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<tr>
<td></td>
<td>CS 1450, CS 2060, CS 2160, CS 3020, ECE 1411, ECE 2411, ECE 2205, ECE 2610, MAE 2103, MAE 2104, MAE 2301</td>
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</tr>
<tr>
<td>ENGR 3300</td>
<td>Software Engineering</td>
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<tr>
<td>AND</td>
<td>Computer Science Education Seminar</td>
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<tr>
<td>MAE 4000</td>
<td>Mechanical Engineering Seminar (optional)</td>
<td>3</td>
</tr>
<tr>
<td>AND</td>
<td>Project Design I</td>
<td></td>
</tr>
<tr>
<td>ENGR 4510</td>
<td>AND Project Design II</td>
<td>5-6</td>
</tr>
<tr>
<td>AND</td>
<td>Senior Seminar</td>
<td></td>
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<tr>
<td>ENGR 4890</td>
<td>AND Senior Design Project</td>
<td>4</td>
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<tr>
<td>AND</td>
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</tbody>
</table>

UCCS Teach Courses (32 hours)
- A grade of "B-" or better must be earned in all Education courses.

Courses should be taken in the appropriate semester. See the four-year plan for details.

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTED 1010</td>
<td>Step I: Inquiry Approaches to Teaching</td>
<td>1</td>
</tr>
<tr>
<td>UTED 1020</td>
<td>Step II: Inquiry-Based Lesson Design</td>
<td>1</td>
</tr>
<tr>
<td>UTED 2010</td>
<td>Knowing and Learning in Mathematics and Science</td>
<td>3</td>
</tr>
<tr>
<td>UTED 3020</td>
<td>Classroom Interactions</td>
<td>3</td>
</tr>
<tr>
<td>UTED 4710</td>
<td>Project-Based Instruction</td>
<td>3</td>
</tr>
<tr>
<td>UTED 4720</td>
<td>Reading in the Content Area</td>
<td>3</td>
</tr>
<tr>
<td>UTED 4730</td>
<td>Apprentice Teaching UCCS Teach and Seminar</td>
<td>12</td>
</tr>
<tr>
<td>UTLS 3030</td>
<td>Perspectives on Science and Math</td>
<td>3</td>
</tr>
<tr>
<td>UTLS 3480</td>
<td>Functions and Modeling</td>
<td>3</td>
</tr>
</tbody>
</table>
## General Education and Elective Requirements

### Composition (6 hours)
1. ENGL 1310
2. ENGL 2090
3. PORT 3000 (0 Credits) – Writing Portfolio

### Mathematics (21 hours)
**NOTE:** Math courses require a grade of C or better to progress through the Math sequence.
1. MATH 1350
2. MATH 1360
3. MATH 2150
4. MATH 2350
5. MATH 3130
6. MATH 3210

### Basic Science (23 hours)
1. BIOL 1300/1310 AND BIOL 1350/1360
2. CHEM 1401/1402
3. ENSC 1600
4. GEOL 1010 OR PES 1050
5. PES 1110

### Hum/Social Sci. Electives (9 hours)
See the degree audit for course options.

### General Electives (12-16 hours)
Complete courses of your choosing to fulfill the total minimum hour requirement (128) for the degree program. The chosen course(s) can be selected from any discipline but may not include any math course below MATH 1350. Only 3 credit hours of CS course work numbered below CS 1150 may count towards Electives.

### Compass Curriculum (3 hours)
- Explore and Navigate courses must be outside major requirements
- Writing Intensive, Inclusiveness, and Sustainability courses can count towards other requirements within degree

#### Gateway
- Engineering Intro Course
  - Hours: 3
  - Semester: FALL
  - Course: ENGR Capstone

#### Explore
1. Arts, Humanities and Cultures
   - Course: ECE 3610
   - Semester: SPRING

#### Writing Intensive Courses (WIC)
1. BIOL 1300/1310 AND BIOL 1350/1360
2. CHEM 1401/1402
3. ENSC 1600
4. GEOL 1010 OR PES 1050
5. PES 1110

#### Inclusiveness
- MAE 1503

#### Sustainability
- ENSC 1600

### Four-Year Degree Plan
Please note that this is an example degree program and your program may vary. Students are responsible for completing all course prerequisites.

#### Year One
- Engineering Intro Course
  - Hours: 3
  - Semester: FALL
- UTED 1010
  - Hours: 1
  - Semester: SPRING
- MATH 1350
  - Hours: 4
  - Semester: SPRING
- GPS 1010
  - Hours: 3
  - Semester: FALL
- ENGL 1310
  - Hours: 3
  - Semester: FALL
- Open Elective
  - Hours: 3
  - Semester: FALL

#### Year Two
- Engineering Foundation course
  - Hours: 3
  - Semester: FALL
- UTED 2010
  - Hours: 3
  - Semester: FALL
- MATH 2350
  - Hours: 4
  - Semester: SPRING
- CHEM 1401
  - Hours: 4
  - Semester: SPRING
- CHEM 1402
  - Hours: 1
  - Semester: SPRING
- ENSC 1600
  - Hours: 3
  - Semester: SPRING

#### Year Three
- ENGR Capstone
  - Hours: 3
  - Semester: FALL
- UTLS 3480 (Fall Only)
  - Hours: 3
  - Semester: FALL
- UTED 4720
  - Hours: 3
  - Semester: FALL
- MATH 2150
  - Hours: 3
  - Semester: SPRING
- PES 1050 OR GEOL 1010
  - Hours: 3-4
  - Semester: SPRING

#### Year Four
- CURR 4800
  - Hours: 3
  - Semester: SPRING
- UTED 4710
  - Hours: 3
  - Semester: SPRING
- BIOL 350
  - Hours: 4
  - Semester: SPRING
- BIOL 360
  - Hours: 1
  - Semester: SPRING
- Open Elective
  - Hours: 3
  - Semester: SPRING

## 2019-2020