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DEPARTMENT

Students enrolling in the Construction Engineering program should make note of the following Department and degree titles:

Department Name: Civil & Environmental Engineering

Degrees offered: Bachelor of Science in Civil Engineering
               Bachelor of Science in Construction Engineering

Minor offered: Nuclear Engineering

VISION STATEMENT: Pursuit of excellence in preparing engineers to provide innovative solutions to the world’s challenges in sustaining the environment and the infrastructure.

MISSION STATEMENT: Provide high quality education in engineering and leadership, life-long learning opportunities, and innovation for the benefit of the State of Utah and the world.
# B.S. Construction Engineering – Engineering Math 2020

## Freshman

### Fall (17 hrs)
- **CVEEN 1000** Intro to Civil & Environmental Engineering (2)
- **CVEEN 1400** Computer-Aided Design (3)
- **F/SP/SU**
- **MATH 1050 & 1060** or **MATH 1080**  (3)
- **MATH 1310**  (4)
- **CHEM 1215** Lab (1)
- **PHYS 2210** Physics for Sci & Engineers I (4)
- **WRTG 1010** Intermediate Writing (3)
- **CHEM 1212** Gen Chemistry II Lab (4)
- **CHEM 1215** Lab (1)
- **F/SP/SU**
- **ECON 2010** Microeconomics (BF) (3)

### Spring (16 hrs)
- **CVEEN 2000** Seminar (F)
- **CVEEN 2010** Strength of Materials (F/SP) (3)
- **F/SP/SU**
- **MATH 1310 & PHYS 2210**  (3)
- **MATH 1310**  (3)
- **PHYS 2215** Physics for Sci & Engineers II Lab (4)
- **MG EN 2400** Surveying (3)
- **MATH 2250** Diff Equations & Linear Algebra (3)
- **ARCH 1615** Intro to Architecture (FF) (3)
- **ECON 2010** Microeconomics (BF) (3)
- **WRTG 2010**  (3)
- **CVEEN 3210** Design Capstone (SP) (3)
- **F/SP/SU**
- **F/SP/SU**
- **F/SP/SU**

## Sophomore

### Fall (16.5 hrs)
- **CVEEN 3000**  (3)
- **CVEEN 3010** Structural Loads & Analysis (QI)  (3)
- **F/SP/SU**
- **MATH 1310 & PHYS 2210**  (3)
- **MATH 1310**  (3)
- **PHYS 2215** Physics for Sci & Engineers II Lab (4)
- **MG EN 2400** Surveying (3)
- **MATH 2250** Diff Equations & Linear Algebra (3)
- **ARCH 1615** Intro to Architecture (FF) (3)
- **ECON 2010** Microeconomics (BF) (3)

### Spring (16 hrs)
- **CVEEN 3210** Design Capstone (SP) (3)
- **F/SP/SU**
- **F/SP/SU**
- **F/SP/SU**

## Junior

### Fall (14 hrs)
- **CVEEN 3700** Principles of Construction Eng. (3)
- **F/SP/SU**
- **MATH 1310 & PHYS 2210**  (3)
- **MATH 1310**  (3)
- **PHYS 2215** Physics for Sci & Engineers II Lab (4)
- **MG EN 2400** Surveying (3)
- **MATH 2250** Diff Equations & Linear Algebra (3)
- **ARCH 1615** Intro to Architecture (FF) (3)
- **ECON 2010** Microeconomics (BF) (3)

### Spring (15 hrs)
- **CVEEN 3700** Principles of Construction Eng. (3)
- **F/SP/SU**
- **F/SP/SU**
- **F/SP/SU**

## Senior

### Fall (15 hrs)
- **CVEEN 3700** Principles of Construction Eng. (3)
- **F/SP/SU**
- **F/SP/SU**
- **F/SP/SU**

### Spring (15 hrs)
- **CVEEN 3700** Principles of Construction Eng. (3)
- **F/SP/SU**
- **F/SP/SU**
- **F/SP/SU**

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**Recommended General Education Courses**

- LEAP 1501 Social & Ethical Engineering (BF) - Fall only
- LEAP 1500 Humanities for Engineers (HFDV) - Spring only

- ^ GEO 1100 can be substituted with GEO 1110 & 1115—Earth Systems & Lab (4)

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**Have you completed 3 of the 4 shaded courses? Is your EGPA 2.50? If yes, apply for Full Major Status!**

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**Total Required Credit Hours: 124.5**
TECHNICAL ELECTIVE COURSES

Students must complete three technical elective courses.

To graduate with a Bachelor of Science Degree in Construction Engineering you must:

1. Complete at least one course from the Primary section.
2. Complete at least one Design course from the Secondary Section. These are designated by a shaded box. Example: CVEEN 5510

As long as these requirements are satisfied, you may take the remaining one technical elective from either section.

PRIMARY TECHNICAL ELECTIVES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVEEN 5710</td>
<td>Cost Estimation &amp; Proposal Writing</td>
<td>F 20/22</td>
<td>3</td>
</tr>
<tr>
<td>CVEEN 5730</td>
<td>Project Management &amp; Contract Admin.</td>
<td>SP 20/22</td>
<td>3</td>
</tr>
<tr>
<td>CVEEN 5750</td>
<td>Engineering Law &amp; Contracts</td>
<td>SU 20/22</td>
<td>3</td>
</tr>
</tbody>
</table>

SECONDARY TECHNICAL ELECTIVES

<table>
<thead>
<tr>
<th>Section</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structures</td>
<td>CVEEN 4222</td>
<td>Steel I</td>
<td>SP</td>
<td>3</td>
</tr>
<tr>
<td>Transportation</td>
<td>CVEEN 5510</td>
<td>Highway Design</td>
<td>SP</td>
<td>3</td>
</tr>
<tr>
<td>Geotech &amp; Materials</td>
<td>CVEEN 5305</td>
<td>Introduction to Foundations</td>
<td>F</td>
<td>3</td>
</tr>
<tr>
<td>Architecture</td>
<td>ARCH 6371</td>
<td>Intensive Materials &amp; Construction</td>
<td>F</td>
<td>3</td>
</tr>
<tr>
<td>Other (Max 1)</td>
<td>CVEEN 3210</td>
<td>Reinforced Timber/Masonry</td>
<td>F</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CVEEN 5240</td>
<td>Sustainable Materials</td>
<td>SP</td>
<td>3</td>
</tr>
</tbody>
</table>

Caveat: Semester availability is subject to change at the discretion of the department and does not create a binding contractual nexus or obligation between the student and the University of Utah.
COMPUTER REQUIREMENT
All incoming undergraduate students in the Department of Civil and Environmental Engineering are required to have a laptop. It is the student’s responsibility to ensure that his or her laptop meets the following minimum requirements:

HARDWARE

Processor
Intel® Core™ i5, or i7 or equivalent AMD processors

Memory
8.0 GB RAM or greater

Hard Drive
512 GB or greater

Graphics
Minimum: Integrated video card
Recommended: Dedicated video card

Network Card
Integrated Wireless 802.11ac

SOFTWARE

Operating System
Windows 10

Microsoft Office
https://software.utah.edu/microsoft.php
(free to download for students)

AutoCAD & Revit
http://www.autodesk.com/education/home
(student version free to download)

*Additional software may be required for other classes.

*Tablets are not recommended.

MATH AND SCIENCE ACCREDITATION HOUR REQUIREMENT
All students must complete a minimum of 30 credit hours of math and science courses. If students do not meet this requirement, they will need to take additional math and science courses to meet the required hours.

COURSE GRADE REQUIREMENTS
In order to progress within the program and graduate, the Department requires the following grades:

A grade of “C” or higher must be met for the following courses:

- All Mathematics (MATH 1210/1310, 1220/1320, 2210, 2250)
- All Chemistry (CHEM 1210, 1215, 1220, 1225)
- All Physics (PHYS 2210, 2215, 2220, 2225)
- CVEEN 2010, 2140, 2300, and 2310

For all other CVEEN courses, a grade of “C-“ or higher is required.
**GPA AND ENGINEERING GPA**
The University requires all students to maintain a cumulative GPA of 2.00 or higher. The Department requires all students to maintain an engineering GPA (EGPA) of 2.50 or higher. Engineering GPA is defined as courses counted towards the major with the exception of the following:

- All general education courses (e.g., LEAP 1500/1501)
- All seminars (e.g., CVEEN 1000/2000)

For repeated EGPA courses, the second letter grade received will be counted as the official grade for the EGPA calculation. Please see the policy on repeated courses.

**UPPER-DIVISION TRANSFER CREDIT POLICY**
A maximum of 3 courses (and their accompanying labs) at the 3000-level may be transferred into the program (9-12 credits max). No technical electives or additional upper-division credits will be accepted.

**REPEAT POLICY**
A student can take an engineering GPA (EGPA) course for grade only twice at the University. Students withdrawing from an EGPA course are allowed three attempts, including the withdrawal. Any student who takes a required class twice and does not have a satisfactory grade the second time, will be removed from major status and will not be allowed to take any new CVEEN classes until they meet with an academic advisor, develop a plan, and petition the Undergraduate Committee requesting that a third attempt at the class be allowed. The Undergraduate Committee, after reviewing the petition and other relevant facts, shall make the final decision to allow or not allow the further attempt and shall communicate that decision to the student in writing.

Attempts of courses taken at transfer institutions count as one attempt. This means a student may take the course only one time at the University of Utah.

When retaking an EGPA course, if the course was taken at the University of Utah, it must be retaken at the University of Utah. For example, students cannot count a grade obtained in a class taken at another institution to replace a low grade obtained in a class previously taken at the University of Utah.

**ACADEMIC PROBATION**
A student who fails to maintain an engineering grade point average (EGPA) of 2.50 or higher will be removed from major status and will be placed on academic probation. While on probation, students will not be allowed to take any new CVEEN classes and will have three consecutive semesters to retake courses or take additional non-CVEEN courses to bring their EGPA to 2.50 or higher. While on academic probation, the student will meet with an academic advisor at the end of every semester to review their progress. If after the three semesters (e.g., fall, spring, summer), the student fails to raise their EGPA to 2.50 or higher, their progress will be evaluated by the Undergraduate Committee and, if no progress is shown, the student will be dismissed from the program. Students that have been placed on probation.
for more than 3 semesters, even if non-consecutive, will also be evaluated by the Undergraduate Committee to determine if they should be allowed to remain in the program.

A student who fails to maintain a cumulative grade point average of 2.00 or higher will also be on probation with the Department.