## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020-2021 Civil Engineering Flowchart Engineering Math (Fall)</td>
<td>4</td>
</tr>
<tr>
<td>2020-2021 Civil Engineering Flowchart Engineering Math (Spring)</td>
<td>5</td>
</tr>
<tr>
<td>2020-2021 Technical Elective Page</td>
<td>6</td>
</tr>
<tr>
<td>Computer Requirement</td>
<td>7</td>
</tr>
<tr>
<td>Math and Science Accreditation Hour Requirement</td>
<td>7</td>
</tr>
<tr>
<td>Course Grade Requirements</td>
<td>7</td>
</tr>
<tr>
<td>GPA and Engineering GPA</td>
<td>8</td>
</tr>
<tr>
<td>Upper-Division Transfer Credit Policy</td>
<td>8</td>
</tr>
<tr>
<td>Repeat Policy</td>
<td>8</td>
</tr>
<tr>
<td>Academic Probation</td>
<td>8</td>
</tr>
</tbody>
</table>
DEPARTMENT

Students enrolling in the Civil 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.

*The Bachelor of Science Degree in Civil Engineering at the University of Utah is accredited by the Engineering Accreditation Commission of ABET (www.abet.org).*
# B.S. Civil Engineering - UAC 2020-2021 (Fall Admission)

## Freshman
- **Fall (18 hrs)**
  - MATH 1050 ↓
  - MATH 1310 ↓
  - CHEM 1210 ↓
  - CHEM 1220 ↓
  - CHEM 1215 ↓
  - WRTG 1010 ↓
  - MATH 1050 ↓
  - CHEM 1210 ↓
  - CHEM 1220 ↓
  - CHEM 1215 ↓
  - WRTG 1010 ↓
  - MATH 1050 ↓
  - CHEM 1210 ↓
  - CHEM 1220 ↓
  - CHEM 1215 ↓
  - WRTG 1010 ↓
  - MATH 1050 ↓
  - CHEM 1210 ↓
  - CHEM 1220 ↓
  - CHEM 1215 ↓
  - WRTG 1010 ↓
  - MATH 1050 ↓
  - CHEM 1210 ↓
  - CHEM 1220 ↓
  - CHEM 1215 ↓
  - WRTG 1010 ↓

## Sophomore
- **Fall (15 hrs)**
  - MATH 1320 ↓
  - MATH 2250 Diff Equations & Linear Algebra
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓

## Junior
- **Fall (17 hrs)**
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools
  - CVEEN 2140 Statics
  - CVEEN 2750 Computer Tools

## Senior
- **Fall (16 hrs)**
  - MATH 1320 ↓
  - MATH 2250 Diff Equations & Linear Algebra
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓
  - MATH 1310 ↓
  - WRTG 2010 ↓
  - MATH 1310 ↓

## Prerequisite, Corequisite, Full Major Status
- **Prerequisite**
- **Corequisite**
- **Full Major Status Required**

---

### 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.

---

Updated July 8, 2020

Total Required Credit Hours: 126.5
# B.S. CIVIL ENGINEERING - UAC 2020-2021 (Spring Admission)

## Freshman

**Spring (15.5 hrs)**
- MATH 1050 ↓
- CVEEN 1000 intro to Civil & Environmental Engineering (HF)
- CHEM 1210 Gen Chemistry I (HF)
- CHEM 1215 Lab 1
- MATH 1310 ↓
- MATH 1320 Engineering Calculus II (QR)
- WRTG 1010 Introduction to Writing 3

**Fall (17 hrs)**
- MATH 1310 & PHYS 2210 ↓
- CHEM 1210 Gen Chemistry II (HF)
- CHEM 1215 Lab 1
- MATH 1310 ↓
- MATH 2250 Diff Equations & Linear Algebra 4
- WRTG 2010 Intermediate Writing 3

## Sophomore

**Spring (16 hrs)**
- MATH 1320 ↓
- MATH 2250 Diff Equations & Linear Algebra 4
- CHEE 2010 Statics (F/SP)
- CHEE 2014 Statics (F/SP)
- CHEE 2030 Structural Loads & Analysis (F/SP)
- CHEE 2050 Structural Loads & Analysis (F/SP)
- MATH 2250 Diff Equations & Linear Algebra 4
- WRTG 2010 Intermediate Writing 3

**Fall (17 hrs)**
- MATH 1310 ↓
- MATH 2250 Diff Equations & Linear Algebra 4
- CHEE 2010 Statics (F/SP)
- CHEE 2014 Statics (F/SP)
- CHEE 2030 Structural Loads & Analysis (F/SP)
- CHEE 2050 Structural Loads & Analysis (F/SP)
- MATH 2250 Diff Equations & Linear Algebra 4
- WRTG 2010 Intermediate Writing 3

## Junior

**Spring (15 hrs)**
- CHEE 2010 Statics (F/SP)
- CHEE 2030 Structural Loads & Analysis (F/SP)
- CHEE 2050 Structural Loads & Analysis (F/SP)
- MATH 1310 ↓
- MATH 1320 Engineering Calculus II (QR)
- WRTG 2010 Intermediate Writing 3

**Fall (16 hrs)**
- CHEE 2010 Statics (F/SP)
- CHEE 2030 Structural Loads & Analysis (F/SP)
- CHEE 2050 Structural Loads & Analysis (F/SP)
- MATH 1310 ↓
- MATH 1320 Engineering Calculus II (QR)
- WRTG 2010 Intermediate Writing 3

## Senior

**Spring (15 hrs)**
- CHEE 2010 Statics (F/SP)
- CHEE 2030 Structural Loads & Analysis (F/SP)
- CHEE 2050 Structural Loads & Analysis (F/SP)
- MATH 1310 ↓
- MATH 1320 Engineering Calculus II (QR)
- WRTG 2010 Intermediate Writing 3

**Fall (15 hrs)**
- CHEE 2010 Statics (F/SP)
- CHEE 2030 Structural Loads & Analysis (F/SP)
- CHEE 2050 Structural Loads & Analysis (F/SP)
- MATH 1310 ↓
- MATH 1320 Engineering Calculus II (QR)
- WRTG 2010 Intermediate Writing 3

### General Education Requirements

**General Ed. Requirement (HF)**
- 3

### Corequisites

**CHEE 2010 Statics (F/SP)**
- 3

### Prerequisites

**CHEE 2010 Statics (F/SP)**
- 3

### Total Required Credit Hours: 126.5

---

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

Congratulations on reaching the Technical Electives! These delve deeper into the various areas covered in the 3000-level courses. A total of 6 Technical Electives, with the exception of Fastrax students, are required. While you are able to take courses in your areas of interest, further specialization is achieved by pursuing Graduate School.

Primary Technical Electives

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

1. Take at least one course from 3 of the 5 emphasis areas in the Primary section. Three different checkboxes must be marked to fulfill this requirement.
2. Complete at least two Design courses from different emphasis areas. These are designated by a shaded box. Example: CVEEN 4221 and CVEEN 5420

As long as these requirements are satisfied, you may take the remaining 3 technical electives in either section.

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Structures</th>
<th>Geotech &amp; Materials</th>
<th>Transportation</th>
<th>Water Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVEEN 5605 Water and Wastewater Treatment</td>
<td>CVEEN 4221 Concrete I</td>
<td>CVEEN 5305 Introduction to Foundations</td>
<td>CVEEN 5500 Sustainable Materials</td>
<td>CVEEN 5410 Engineering Hydrology</td>
</tr>
<tr>
<td>CVEEN 3610 &amp; 3615</td>
<td>CVEEN 3210</td>
<td>CVEEN 3510, 3515 &amp; 3520</td>
<td>CVEEN 3510 Highway Design</td>
<td>CVEEN 3410 &amp; 3415</td>
</tr>
<tr>
<td>CVEEN 4222 Steel I</td>
<td>CVEEN 5570 Pavement Design</td>
<td></td>
<td>CVEEN 3520 Transportation Planning</td>
<td></td>
</tr>
<tr>
<td>SP 3</td>
<td>F 3</td>
<td>SP 3</td>
<td>SP 3</td>
<td>SP 3</td>
</tr>
</tbody>
</table>

Secondary Technical Electives

With the exception of Construction, where only one course may be taken, you may take multiple courses in a single emphasis area — up to a total of 3 courses.

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Structures</th>
<th>Construction Management (Max 1)</th>
<th>Nuclear Engineering</th>
<th>Other (Max 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVEEN 5610 Water Chemistry</td>
<td>CVEEN 5210 Structural Analysis II</td>
<td>CVEEN 5710 Cost Estimation &amp; Proposal Writing</td>
<td>NUCL 3000 Nuclear Principles in Engineering &amp; Science</td>
<td>Any 3000+ level course from the College of Engineering or an ABET accredited program</td>
</tr>
<tr>
<td>CVEEN 3610 &amp; 3615</td>
<td>CVEEN 3210</td>
<td>CVEEN 3100</td>
<td>CHEME 1220, PHYS 2220, MATH 1220</td>
<td></td>
</tr>
<tr>
<td>CVEEN 4220 Concrete II</td>
<td>CVEEN 3210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F 3</td>
<td>F 3</td>
<td></td>
<td></td>
<td></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

Mac users can use Boot Camp, VMware, VirtualBox, or Parallels, however, these options may require more powerful machines to run.

**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.