## About This Plan

- This plan is not a contract. Curriculum can change. The APAS is the official method for tracking completion of University degree requirements.
- Shaded courses are only offered in the indicated semester.
- Course pre-requisites and co-requisites (designated by &) are listed below the course number and title. Upper Division (UD) requires admission to the major prior to enrollment.
- Students can take either the CSE-only or University-wide versions of the math course (Math 1371/1271, 1372/1272, 2373/2243, 2374/2263).
- AEM 2011 can substitute for AEM 2021, students must then take an alternative course for AEM 2011; students must then take an alternative course for AEM 2012 (choose from: EE 2001, MatS 2001, CSci 1113, ME 3331, Chem 2301).

## Applying to your Major

Students who have completed the required courses for admission to this major (indicated with double boxes on plan) and have a 3.2 UM-TC technical GPA at the end of the fall semester will be guaranteed admission. All other students who have completed the required courses will be considered for admission on a space-available basis. Admission following the spring semester is only based on space availability. The major application database is available at z.umn.edu/csemajorapp.

## Total Credits Needed for Degree: 125

## University Degree Requirements

All students must complete the following Writing & Liberal Education requirements, as noted on their APAS report. See link for full Core & Theme names: z.umn.edu/liberaleducation

### Writing Requirements:

- **University Writing:**
  - Writ 1301/1401 or equivalent

- **Writing Intensive (WI):**
  - Two: 1xxx or 2xxx level **
  - One: 3/4/5xxx level (in major)*
  - One: 3/4/5xxx level (any dept.)*

Requirements with an (*) will be fulfilled by taking courses at UM-TC required for this major.

### Liberal Education

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<th>CORES:</th>
<th>THEMES:</th>
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<td>Bio</td>
<td>Hist</td>
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<td>Phy*</td>
<td>DSJ</td>
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### Department Contact Information

- Website: [http://z.umn.edu/cegeundergradhandbook](http://z.umn.edu/cegeundergradhandbook)
- Main Phone: 612-625-5522
- Main Office: 122 Civil Engineering Building
- Director of Undergraduate Studies: Professor Catherine French
- Email: cfrench@umn.edu
Civil Engineering

POSSIBLE POSITIONS

- **Civil engineer**: Plan, design, and oversee construction and maintenance of building structures, and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, and water and sewage systems.
- **Design engineer**: Study, research and develop ideas for new products and the systems used to make them.
- **Field engineer**: Work with project personnel and clients to ensure that work complies with all engineering standards, codes, and specifications. Perform testing and observations on commercial construction projects.
- **Geotechnical engineer**: Analyzes the properties of soil and rock that support and affect the behavior of structures, pavements, and underground facilities.
- **Project engineer/manager**: In addition to the technical knowledge of a civil engineer, project management positions organize and direct workers and materials.
- **Structural engineer**: Analyzes and designs structures such as stadiums, arenas, office buildings, and bridges to ensure they safely and satisfactorily perform their purpose.
- **Transportation engineer**: Designs and maintains all types of transportation components, including highways and streets, mass transit systems, railroads, airports, ports, and harbors.

**Some of these positions may require an advanced degree.**

INDUSTRIES

- Asphalt production
- Community development
- Concrete producer
- Construction/building
- Food processing
- Geological
- Highway design and planning
- Leasing, zoning, and construction
- Municipal transportation
- Pollution control
- Public works projects
- Railroads
- Solid waste and recycling
- State/local government
- Surveying
- Telecommunications
- Transportation
- Urban planning and development
- Water resources

EMPLOYERS

- Alliant Engineering
- American Engineering Testing
- Barr Engineering
- BKBM Engineers
- Black & Veatch
- Bolton & Menk
- Braun Intertec
- City of Minneapolis
- Kimley-Horn & Associates
- MN Dept of Transportation
- Parsons Brinkerhoff
- Short Elliott Hendrickson
- SRF Consulting
- Stantec
- TKDA
- Wenck
- Westwood Professional Services
- WSB & Associates

CSE Career Outcomes

**Average Starting Salary:**

$55,471*

**Post-graduation Outcomes:**

- Employed: 79.6%
- Grad School: 18.5%
- Other: 1.9%

**Post-graduation outcomes reflect the percentage of students who were employed full-time in their field or were enrolled in a graduate program.**

*Salary and Career Outcomes gathered from the 2016-2017 CSE Graduation Survey

**More Information**

Career Center: cse.umn.edu/career
Salary Information: z.umn.edu/csesalary
More Information on Undergraduate Majors: cse.umn.edu/majors

Please visit the Career Center to continue exploring this major.

*Salary and Career Outcomes gathered from the 2016-2017 CSE Graduation Survey
Post-graduation outcomes reflect the percentage of students who were employed full-time in their field or were enrolled in a graduate program.