

Civil Design and Surveying Technology, Undergraduate Certificate

Visit the Architecture and Engineering Design Department page (<https://www.uvu.edu/aed/>) for more information on the program and access to advising.

Program Description

The Undergraduate Certificate in Civil Design and Surveying Technology will be dedicated to teaching the technical and functional elements of civil design and surveying, and will educate students in the process of taking civil related projects from data obtained from ground observations and measurements made by surveying to conceptual design to completed construction documents and finally to surveying and staking the proposed design on the ground so it can be constructed. Students will be required to take civil and surveying courses currently offered in the Engineering Design Technology (EDT) department including the courses from the Drafting Technology program and the Surveying and Mapping program. From these courses students will learn the basics of surveying, civil drafting and design, and be trained in industry standard two-dimensional and three-dimensional software packages. Students will also take courses in surveying applications, land development, advanced field and office surveying, and civil design. A student with an Undergraduate Certificate in Civil Design and Surveying Technology will be prepared for an entry level job as a civil drafter/designer or survey technician. They can increase their education, training, and employability by completing the Associate of Applied Science in Engineering Design Technology, Undergraduate Certificate in Mapping Technology, Undergraduate Certificate in Surveying Technology, Associate of Applied Science in Surveying Technology (pending), Associate of Science in Surveying and Mapping and/or a Bachelor of Science in Surveying and Mapping.

Program Requirements

| Code | Title | Credit Hours |
|--|--|--------------|
| Total Credit Hours | | 18 |
| Discipline Core Requirements | | 18 |
| Choose one of the following courses: | | 3 |
| EGDT 1600 | Technical Math Algebra (3) | |
| and | | |
| EGDT 1610 | Technical Math Geometry Trig (3) | |
| or | | |
| MATH 1060 | Trigonometry (3) | |
| EGDT 1040 | Fundamentals of Technical Engineering Drawing | 3 |
| EGDT 1400 | Surveying Applications and Field Techniques I | 3 |
| EGDT 2400 | Surveying Applications and Field Techniques II | 3 |
| Electives: Choose 6 credit hours: | | 6 |
| Any course beginning with the following prefix may be taken as an elective: EGDT, SURV, GIS, ENGR, or CIVE | | |

Graduation Requirements

1. Completion of a minimum of 18 semester credits.
2. Minimum grade of C- required in all courses.
3. Overall grade point average of 2.0 (C) or above.
4. Residency hours-- minimum of 4 credit hours through course attendance at UVU.

Graduation Plan

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in Wolverine Track (<http://www.uvu.edu/wolverinetrack/>).

| First Year | | Credit Hours |
|----------------------------|---|--------------|
| Semester 1 | | |
| MATH 1060 | Trigonometry | 3 |
| Or EGDT 1600 and EGDT 1610 | | |
| EGDT 1040 | Fundamentals of Technical Engineering Drawing | 3 |
| EGDT 1400 | Surveying Applications and Field Techniques I | 3 |
| Credit Hours | | 9 |

Semester 2

| | | |
|-----------|--|-----------|
| EGDT 2400 | Surveying Applications and Field Techniques II | 3 |
| Electives | | 6 |
| | Credit Hours | 9 |
| | Total Credit Hours | 18 |

Program Learning Outcomes

1. Implement the principles and practices of the Survey Technician, Mapper, and Civil Designer.
2. Perform all common land surveys and civil engineering plans using professionally acceptable principles and practices of civil design and surveying.
3. Create maps and plans using professionally acceptable drafting, design, and cartographic principles and practices.

Cartographers and photogrammetrists

- Total Positions 12,900
- Field Growth 6.3%
- Median Salary \$76,210
- Average Openings 1.0

Surveyors

- Total Positions 52,600
- Field Growth 5.9%
- Median Salary \$68,540
- Average Openings 4.0

Drafters, all other

- Total Positions 18,500
- Field Growth -5.7%
- Median Salary \$59,260
- Average Openings 1.5

Surveying and mapping technicians

- Total Positions 57,400
- Field Growth 5.6%
- Median Salary \$48,940
- Average Openings 7.6