**Program Description**

The Surveying & Civil Engineering Technology program prepares students to become technicians in the civil engineering and land surveying industries. Technicians may be employed by governmental agencies including counties, cities, and states. Graduates may also be employed in the private sector by contractors, engineering, or land surveying firms in a wide range of starting positions. Students are prepared to work in the industries of land surveying and civil engineering under a professional surveyor or civil engineer. Surveying technicians assist surveyors in collecting data and making maps of the earth’s surface. Surveying technicians typically work in an office or visit sites to take measurements of the land. Civil engineering technicians help civil engineers plan and design the construction of highways, bridges, utilities, and other major infrastructure projects. They also help with commercial, residential, and land development.

Students are provided with experiences emphasizing surveying, drafting/design, and materials testing. Surveying courses give students the opportunity to learn how to operate industry utilized equipment, including the latest in GNSS (GPS) technology. Survey drawings and engineering plans are developed using enhanced computer-aided drafting programs (CAD). Arts & Sciences courses round out the course of study, providing students with the analytical, communication, and writing skills the industry demands of its professionals. The program prepares students to take the National Society of Professional Surveyors (NSPS) Certified Survey Technician (CST) Level I exam.

For students with a bachelor’s degree in a related field, Dunwoody’s Surveying certificate may provide an avenue to licensure as a Land Surveyor. The certificate offers 22 technical credits in land surveying, as currently required by the MN board of licensure (AELSLAGID). Technical courses include lectures and laboratories in areas such as GPS and geodetic surveying, 2D and 3D drafting, boundary control, and land use planning.

**Dunwoody College of Technology:** a non-profit, private technical college since 1914.

<table>
<thead>
<tr>
<th>Credential Earned</th>
<th>AAS Degree</th>
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</thead>
<tbody>
<tr>
<td>Classes Offered</td>
<td>Day</td>
</tr>
<tr>
<td>Length of Program</td>
<td>2 years (4 semesters)</td>
</tr>
<tr>
<td>Available Starts</td>
<td>Fall Semester, Spring Semester</td>
</tr>
<tr>
<td>Further Study</td>
<td>Bachelor’s Completion Degree in Construction Management</td>
</tr>
</tbody>
</table>

**Degree Requirements**

- SCVL1111 Introduction to Surveying
- CSBT1002 Construction Drafting
- SCVL1130 Legal Descriptions & Boundary Control
- CSBT1000 AEC Seminar
- SCVL1210 Control & Geodetic Surveying
- SCVL1220 Transportation & Municipal Design
- SCVL1230 Land Use Planning
- CSBT2000 Professional Development
- SCVL2111 Materials Testing & Construction Methods
- SCVL2120 Utility & Construction Design
- CONST ELEC Any course with a CMGT acronym
- SCVL2140 SCVL Topics
- SCVL2210 Laser Scanning & Remote Sensing
- SCVL2240 Exam Preparation
- SCVL2250 Geospatial Technology
- SCVL2260 Site & Subdivision Design
- MATH1050 Algebra, Trigonometry & Geometry
- Communications Elective
- MATH2250 Statistics
- Social Sciences Elective
- MATH1700 Precalculus
- Humanities Elective
- Arts & Sciences Elective

**Certificate Requirements**

- SCVL1111, CSBT1002, SCVL2140, SCVL1130, and MATH1050.
- SCVL1210 or SCVL2210.
- SCVL2240 or SCVL1001 or SCVL2000.
- SCVL1230 or SCVL2250.

**How to Apply**

- dunwoody.edu
- 612.374.5800
- info@dunwoody.edu
Course Descriptions

SCVL1111 Introduction to Surveying, 3 cr.
Introduction to the technical equipment and industry processes used by surveying technicians to collect and interpret data.

CSBT1002 Construction Drafting, 3 cr.
Implement construction graphics and conventions using hand drafting and drawing software.

SCVL1130 Legal Descriptions & Boundary Control, 4 cr.
Introduction to property descriptions and land survey systems with a focus on composing and interpreting legal descriptions used in surveys.

CSBT1000 AEC Seminar, 1 cr.
Introduction to the academic and classroom culture. Develop a proficiency in communication skills including research, oral presentation, writing, and collaboration.

SCVL1210 Control & Geodetic Surveying, 4 cr.
Examine the fundamentals of Control Surveys, including Global Positioning Systems, focus and its' application to the geospatial industries, as well as an in-depth study of datums and projections.

SCVL1220 Transportation & Municipal Design, 4 cr.
Utilize the principles of civil design with industry software to create elements of transportation and municipal design.

SCVL1230 Land Use Planning, 4 cr.
Introduction to the planning process used to develop land with an emphasis on land use for public and private needs in a community.

CSBT2000 Professional Development, 1 cr.
Develop and implement a customized plan which identifies areas of focus to be a successful graduate. Emphasis is on completing an internship, professional development, or alternative project.

SCVL2111 Materials Testing & Construction Methods, 3 cr.
Introduction to testing construction materials and methods, inspection and quality control. Examine construction documents to estimate quantities and costs for civil projects.

SCVL2120 Utility & Construction Design, 4 cr.
Utilize the principles of civil design with industry software to create elements of utility infrastructure and its' construction.

SCVL2140 SCVL Topics, 1 cr.
Topics in land surveying and civil engineering presented and examined through lectures, speakers, and field trips to develop an awareness of current trends, issues, and the future of the surveying and civil design industries.

SCVL2210 Laser Scanning & Remote Sensing, 4 cr.
Analyze Laser Scanning and Remote Sensing technology, including the integration of the data to surveying and civil engineering projects.