



Surveying Technology at White Mountains Community College

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Surveying has changed dramatically with the integration of computers and global positioning systems into Surveying Technology. Students studying Surveying Technology (an option within the [Spatial Information Technology](#) program) learn the most current surveying techniques using the latest surveying equipment. Students have the opportunity to become proficient in using electronic total stations, data collectors and global positioning systems equipment, as well as computer software programs.

The two-year Associate Degree program is designed for students who plan a well-rounded surveying technician career, with a path towards licensure as a licensed land surveyor or professional land surveyor. Students also have the option of a one-year [Professional Certificate](#) program designed to meet the needs of those whose predominant wish is to pursue field positions. *For the Certificate program content, see the first year, fall and spring semesters below.*

Students will learn survey-related computer skills in one of the best-equipped computer labs in New Hampshire. AutoCad 2006, Carlson Survey & SurvCADD, Land Development Desktop, Idrisi, ArcInfo, Thales Solution I Mobilemapper Office, and Trimble PathFinder Office software programs are taught in a lab dedicated to surveying and GIS.

Graduates will be skilled in performing topographic and boundary line surveys, as well as construction and engineering surveys. Graduates will be able to perform standard survey calculations such as traverses, horizontal and vertical curves, solar observations, state plane coordinates, quantities and area determinations. Additional surveying skills that the graduate will take into the job market include the ability to research deeds and public records, an understanding of the American legal system and experience in using sophisticated global positioning systems receivers and software.

First Year

| Fall Semester | Lec | Lab | Cr |
|--|-----------|-----------|-----------|
| COM119 Introduction to AutoCAD | 1 | 4 | 3 |
| ENG120 College Composition | 3 | 0 | 3 |
| FOR211 Intro to Tree and Shrub Identification | 0 | 2 | 1 |
| GIS112 Intro to Geographic Information Systems | 2 | 2 | 3 |
| MAT112 Algebra & Trigonometry I | 3 | 0 | 3 |
| SUR111 Methods of Surveying | 2 | 2 | 3 |
| Semester Total | 11 | 10 | 16 |

| Spring Semester | Lec | Lab | Cr |
|--|-----------|----------|-----------|
| ENG211 Technical Writing | 3 | 0 | 3 |
| GIS111 Introduction to Cartography | 2 | 2 | 3 |
| MAT214 Statistics | 4 | 0 | 4 |
| SUR212 Surveying & Mapping | 2 | 3 | 3 |
| SUR213 Computer Applications for Surveyors | 2 | 2 | 3 |
| Humanities Elective | 3 | 0 | 3 |
| Semester Total | 16 | 7 | 19 |
| First Year Total | 35 | | |
| Total for Certificate | 35 | | |

Second Year

| Fall Semester | Lec | Lab | Cr |
|--|-----------|-----------|-----------|
| ECO111 Principles of Macroeconomics | 3 | 0 | 3 |
| OR | | | |
| ECO112 Principles of Microeconomics | 3 | 0 | 3 |
| GIS213 Remote Sensing and Digital Image Processing | 2 | 2 | 3 |
| SUR215 Construction Surveying | 0 | 2 | 1 |
| SUR216 Survey Law | 2 | 2 | 3 |
| SUR219 Global Positioning Systems | 2 | 2 | 3 |
| SUR220 Survey Practice | 2 | 2 | 3 |
| Semester Total | 11 | 10 | 16 |

| Spring Semester | | Lec | Lab | Cr |
|------------------------|---|------------|------------|-----------|
| GEO112 | Geology and Soils | 3 | 2 | 4 |
| MAT211 | Algebra & Trigonometry II | 3 | 0 | 3 |
| SUR214 | Advanced Surveying | 2 | 2 | 3 |
| SUR217 | Surveying Problems | 1 | 4 | 3 |
| | Spatial Information Technology Elective | 2 | 2 | 3 |
| | Semester Total | 11 | 10 | 16 |
| | Second Year Total | | | 32 |
| | Total for A.S. Degree | | | 67 |



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