

CURRICULUM STANDARD

Effective Term
Fall 2010
[2010*03]

Curriculum Program Title

Surveying Technology

Code

A40380

Concentration

(not applicable)

Curriculum Description

The Surveying Technology curriculum provides training for technicians in the many areas of surveying. Surveyors are involved in land surveying, route surveying, construction surveying, photogrammetry, mapping, global positioning systems, geographical information systems, and other areas of property description and measurements.

Course work includes the communication and computational skills required for boundary, construction, route, and control surveying, photogrammetry, topography, drainage, surveying law, and subdivision design, with emphasis upon applications of electronic data collection and related software including CAD.

Graduates should qualify for jobs as survey party chief, instrument person, surveying technician, highway surveyor, mapper, GPS technician, and CAD operator. Graduates will be prepared to pursue the requirements necessary to become a Registered Land Surveyor in North Carolina.

*Curriculum Requirements**

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

| | AAS | Diploma | Certificate |
|---|--------------|----------------|--------------------|
| Minimum General Education Hours | 15 | 6 | 0 |
| Minimum Major Hours | 49 | 30 | 12 |
| Other Required Hours | 0-7 | 0-4 | 0-1 |
| Total Semester Hours Credit in Program | 64-76 | 36-48 | 12-18 |

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** (if applicable). A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

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| | AAS | Diploma | Certificate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Minimum Major Hours Required | 49 SHC | 30 SHC | 12 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>A. CORE <i>A diploma offered under this AAS degree requires a minimum of 12 SHC extracted from the required subject/course core of the AAS degree.</i></p> <p>Required Courses:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">SRV 110</td> <td style="width: 15%;">Surveying I</td> <td style="width: 5%; text-align: right;">4 SHC</td> </tr> <tr> <td>SRV 111</td> <td>Surveying II</td> <td style="text-align: right;">4 SHC</td> </tr> <tr> <td>SRV 210</td> <td>Surveying III</td> <td style="text-align: right;">4 SHC</td> </tr> </table> <p>Required Subject Areas. Select a set of courses from one of the following subject areas:</p> <p>Land Survey:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">SRV 211</td> <td style="width: 15%;">Introduction to Hydrology</td> <td style="width: 5%; text-align: right;">3 SHC</td> </tr> <tr> <td>SRV 220</td> <td>Surveying Law</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>SRV 230</td> <td>Subdivision Planning</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>SRV 240</td> <td>Topo/Site Surveying</td> <td style="text-align: right;">4 SHC</td> </tr> </table> <p>Civil Engineering:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">CIV 110</td> <td style="width: 15%;">Statics/Strength of Mater</td> <td style="width: 5%; text-align: right;">4 SHC</td> </tr> <tr> <td>CIV 111</td> <td>Soils and Foundations</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>CIV 211</td> <td>Hydraulics and Hydrology</td> <td style="text-align: right;">3 SHC</td> </tr> </table> <p>Geospatial Technology:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">GIS 111</td> <td style="width: 15%;">Introduction to GIS</td> <td style="width: 5%; text-align: right;">3 SHC</td> </tr> <tr> <td>GIS 120</td> <td>Introduction to Geodesy</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>GIS 121</td> <td>Georeferencing and Mapping</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>GIS 240</td> <td>Air Photo Interpretation</td> <td style="text-align: right;">3 SHC</td> </tr> </table> | SRV 110 | Surveying I | 4 SHC | SRV 111 | Surveying II | 4 SHC | SRV 210 | Surveying III | 4 SHC | SRV 211 | Introduction to Hydrology | 3 SHC | SRV 220 | Surveying Law | 3 SHC | SRV 230 | Subdivision Planning | 3 SHC | SRV 240 | Topo/Site Surveying | 4 SHC | CIV 110 | Statics/Strength of Mater | 4 SHC | CIV 111 | Soils and Foundations | 3 SHC | CIV 211 | Hydraulics and Hydrology | 3 SHC | GIS 111 | Introduction to GIS | 3 SHC | GIS 120 | Introduction to Geodesy | 3 SHC | GIS 121 | Georeferencing and Mapping | 3 SHC | GIS 240 | Air Photo Interpretation | 3 SHC | 22-25 SHC | 12 SHC | |
| SRV 110 | Surveying I | 4 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SRV 111 | Surveying II | 4 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SRV 210 | Surveying III | 4 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SRV 211 | Introduction to Hydrology | 3 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SRV 220 | Surveying Law | 3 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SRV 230 | Subdivision Planning | 3 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SRV 240 | Topo/Site Surveying | 4 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CIV 110 | Statics/Strength of Mater | 4 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CIV 111 | Soils and Foundations | 3 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CIV 211 | Hydraulics and Hydrology | 3 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GIS 111 | Introduction to GIS | 3 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GIS 120 | Introduction to Geodesy | 3 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GIS 121 | Georeferencing and Mapping | 3 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GIS 240 | Air Photo Interpretation | 3 SHC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B. CONCENTRATION (Not applicable) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i></p> <p>CIS, CIV, COE, CSC, DFT, EGR, FOR, GIS, MAT, MEC, PHY, and SRV</p> <p><i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |