Bachelor of Science: Surveying and Geomatics Engineering Technology

To declare a major in Surveying and Geomatics Engineering Technology, a student must have completed an AAS Degree in Civil Engineering Technology at ISU or equivalent, or have permission of the program coordinator. Students will meet with an advisor prior to the third year of the program to declare the major. For further details, please consult faculty of the Surveying and Geomatics Engineering Technology program.

The following courses are required for a Bachelor of Science degree.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 0111</td>
<td>Drawing with CAD</td>
<td>3</td>
</tr>
<tr>
<td>CET 0112</td>
<td>Beginning Survey</td>
<td>3</td>
</tr>
<tr>
<td>CET 0121</td>
<td>Civil Engineering Technology Drafting</td>
<td>3</td>
</tr>
<tr>
<td>CET 0122</td>
<td>Intermediate Surveying and Spatial Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CET 0216</td>
<td>Route Survey and GPS Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>CET 0226</td>
<td>Construction Surveying</td>
<td>3</td>
</tr>
<tr>
<td>CET 0228</td>
<td>Principles of GIS</td>
<td>3</td>
</tr>
<tr>
<td>CET 0232</td>
<td>Plan Reading and Worksite Safety</td>
<td>3</td>
</tr>
<tr>
<td>CET 0243</td>
<td>Public Works</td>
<td>3</td>
</tr>
<tr>
<td>CET 0250</td>
<td>Unmanned Aerial Systems/Imagery Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CET 0251</td>
<td>Introduction to Legal Descriptions</td>
<td>1</td>
</tr>
</tbody>
</table>

Complete either this course: 5

MATH 1147   College Algebra and Trigonometry

Complete either these two courses: 6

CET 0110   Applied Mathematics I
CET 0120   Applied Mathematics II

Complete either these two courses: 8

CET 0115A  Materials Testing I
CET 0125A  Materials Testing II

Complete either these two courses: 6

BT 0170    Computer Literacy and Business Software
GEMT 2231  Survey Computations
ENGL 3307  Professional and Technical Writing
GEMT 3310  Boundary Surveying Law
GEMT 3311  Advanced Surveying
GEMT 3312  Public Land Surveying
GEMT 3313  Surveying Software Applications
GEMT 3314  Research and Evidence in Surveying
GEMT 3315  Surveying Adjustments and Coordinate Systems
GEMT 3317  Subdivision Planning and Platting
GEMT 3319  Writing Legal Descriptions
GEMT 4400  Essentials of Surveying
GEMT 4411  Geodesy
GEMT 4415  Survey Office Practice
GEMT 4416  Surveying Project
GEMT 4430  GPS Principles and Applications

Complete either these courses: 8

MATH 1170  Calculus I
MATH 1175  Calculus II

OR these two courses:

RCET 0264  Introductory Calculus
RCET 1372  Calculus for Advanced Electronics

Select ONE of the following: 3

GEMT 4432  Principles of Photogrammetry
GEOL 4409  Remote Sensing

Select ONE of the following: 3

GEMT 4425  Principles of Cartography
GEOL 4404  Advanced Geographic Information Systems
GEOL 4427  Information Technology for GIS

General Education Requirements

COMM 1101  Fundamentals of Oral Communication (Satisfies General Education Objective 2)
ENGL 1101  Writing and Rhetoric I (Partially satisfies General Education Objective 1)
OR ENGL 1101P  Writing and Rhetoric I Plus
ENGL 1102  Writing and Rhetoric II (Partially satisfies General Education Objective 1)
MATH 1153  Statistical Reasoning (Satisfies General Education Objective 3)
PHYS 1101 & 1101L  Elements of Physics and Elements of Physics Laboratory (Partially satisfies General Education Objective 5)
HIST 1118  US History and Culture (Satisfies General Education Objective 7)
ECON 1100  Economic Issues (Each of these 3 courses partially satisfy General Education Objective 6)
OR ECON 2201  Principles of Macroeconomics
OR ECON 2202  Principles of Microeconomics
PHIL 1103  Introduction to Ethics (Partially satisfies General Education Objective 4)

Other General Education Objective courses 12

Total Credits 130-133