Program Overview
GIS is an acronym for Geographic Information Science. The GIS Associate of Applied Science degree will prepare students for entry level positions in various industries that require geospatial skills and thinking or for transitioning to four-year baccalaureate programs. Students completing this degree will be able to create and import digital special data representing real-world features from the surface of the Earth with the goal of viewing, manipulating, and analyzing the data to be distributed and used in decision making.

Duties for many positions requiring GIS skills typically involve a combination of outside field work and indoor computer work. While outside, raw spatial data is often collected with GPS devices for a variety of features. Some examples include the location of trees, fountains, utility poles, underground pipelines, soil sample sites, endangered species, and more. The working environment may be in a dense urban area or remote national park, depending on the employer.

While inside, digital special data are imported from your GPS devices into a computer where the data is assessed for quality and revised/manipulated if necessary. Remotely sensed data from various sensors and online archives may also be used to generate additional information. GIS employees typically coordinate with other experts (e.g. geologists, business operations specialists, hydrologists, farmers, and urban planners) to discuss the scientific and managerial implications of their work.

Career Opportunities
There are abundant opportunities for employment as a GIS Analyst, GIS Technician, or GIS Specialist in a wide variety of businesses, universities, government agencies, and non-profit organizations. Employees with strong GIS skills are highly coveted in the oil and gas industry, government agencies, and various business groups. GIS employees typically coordinate with other experts (e.g. geologists, business operations specialists, hydrologists, farmers, and urban planners) to discuss the scientific and managerial implications of their work.

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>GISC 1770 Intro to GIS</td>
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<tr>
<td>GISC 1765 Cartography</td>
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<tr>
<td>GISC 1770 Spatial Thinking</td>
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<tr>
<td>GISC 1775 Intro to Remote Sensing</td>
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<tr>
<td>GISC 1780 Spatial Analysis</td>
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<tr>
<td>GISC 1785 GPS Field Techniques</td>
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<tr>
<td>GISC 2720 Web-based GIS</td>
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<tr>
<td>GISC 2725 Object-based Image Analysis</td>
<td>Object-based Image Analysis</td>
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<tr>
<td>GISC 2730 Programming and Scripting in GIS</td>
<td>Programming and Scripting</td>
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</table>

Total Program Credits: 60

Transfer Opportunities
Saint Paul College has a transfer articulation agreement between the following program and post-secondary institution for the baccalaureate degree program listed below. For more information please go to saintpaulcollege.edu/transfer.

Geographic Information Science AAS Degree

Program Start Dates
Fall, Spring, Summer
- only General Education courses & GISC 1785

Course Sequence
Not all courses are offered each semester; a selection of courses is offered summer term.

First Semester
GISC 1760 Introduction to GIS
GISC 1765 Cartography
GISC 1770 Spatial Thinking
Goal 1: COMM 17XX
Goal 5: GEOG 1700 Physical Geography
Total Semester Credits: 14

Second Semester
GISC 1775 Intro to Remote Sensing
GISC 1780 Spatial Analysis
GISC 1785 GPS Field Techniques
Total Semester Credits: 14

Third Semester
GISC 2720 Web-based GIS
GISC 2725 Object-based Image Analysis
Goal 1: ENGL 1711 Composition 1
Goal 6: Humanities and Fine Arts
MnTC Elective
Total Semester Credits: 16

Fourth Semester
GISC 2730 Programming and Scripting in GIS
Goal 3: BIOL 1725 Environmental Science
MnTC Elective
Total Semester Credits: 14

Minimum Program Entry Requirements
Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ on Reading Comprehension or grade of “C” or better in ENGL 0922
Writing: Score of 78+ on Writing or grade of “C” or better in ENGL 0922
College Level Math: Score of 50+ on College Level Math or grade of “C” or better in MATH 0920

Assessment Results and Prerequisites:
Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

Information is subject to change. This Program Requirements Guide is not a contract.

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