# Geospatial Science and Technology AAS
# Geographic Information Science – Concentration

**Program Description:**
The Geographic Information Science concentration prepares students for careers in the wide ranging field of Geospatial Science and Technology. Students will learn the fundamentals of Geospatial Science and Technology, including Geographic Information Systems (GIS), Global Positioning Systems (GPS) and Remote Sensing (RS). Students will use various Esri ArcGIS software packages to collect, create, edit, manage, store, program, and process spatial data using geospatial analysis techniques to solve problems and make decisions.

**Career Outlook, Salary Forecast and Common Career Opportunities:**
Employment of surveying and mapping technicians is projected to grow 5 percent from 2018 to 2028, about as fast as the average for all occupations. Increased demand for mapping technology is expected to require additional technicians to gather and prepare the data.

In May 2018, the median annual wages for surveying and mapping technicians in the top industries in which they worked were as follows:

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|---|---|
| Utilities | $61,780 |
| Mining, quarrying, and oil and gas extraction | $57,130 |
| Local government, excluding education and hospitals | $50,620 |
| Architectural, engineering, and related services | $40,620 |

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Surveying and Mapping Technicians, on the Internet at:
https://www.bls.gov/ooh/architecture-and-engineering/surveying-and-mapping-technicians.htm

**Program Admission Requirements:**
The college adheres to an open admissions policy which means applicants with a high school diploma or a GED are eligible for admission. Applicants with neither a high school diploma nor a GED may be admitted on a conditional basis.

**Contact Information:**
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| Geospatial Science & Technology Major Code – CG60 • Geographic Information Science Concentration Code – CG62 | | | | | |
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| **Name:** | | | | **ID Number 942-** | |
| **Educational Counselor:** | | | | | |
| **Faculty Advisor:** | | | | | |

## COURSE REQUIRED

| COURSE | REQUIREMENTS | SEM | HRS | GR | SUBSTITUTE/REPEAT CRS | SEM | CR |
|---|---|---|---|---|---|---|---|
| IT 101/102 | Fundamentals of Computers[2] (EDGE) | | 3 | | | | |
| GST 140 | WebGIS | | 3 | | | | |
| GST 150 | Intro to Drone Technology | | 3 | | | | |
| GEO 150 | Introduction to Geography | | 3 | | | | |
| ENL 111 | Written Communication[1] | | 3 | | | | |
| | | | **15** | | | | |
| COM 112 | Oral Communication | | 3 | | | | |
| IT 120 | Network Operating Systems | | 4 | | | | |
| GST 160 | Geographic Information System Concepts | | 3 | | | | |
| MAT 1XX | Any 100 Level Math[5] | | 3 | | | | |
| | Approved Elective [4, 11] | | 3 | | | | |
| | | | **16** | | | | |
| MFE 220 | Computer Aided Design I[8] | | 4 | | | | |
| MAT 210 | Statistics for Business & Industry[6] | | 3 | | | | |
| IT 250 | Applications to Databases[7] | | 3 | | | | |
| GST 230 | 2D and 3D GIS[3] | | 3 | | | | |
| | Approved Elective[4, 11] | | 3 | | | | |
| | | | **16** | | | | |
| GST 240 | GIS WebApps[9] | | 3 | | | | |
| GST 266 | Digital Cartography | | 3 | | | | |
| GST 299 | Information Technology Internship[10] | | 3 | | | | |
| | Approved Elective[4, 11] | | 4* | | | | |
| | | | **13** | | | | |

| | Hours Required for Graduation: **60** |
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**Earn A Degree Graduate Early (EDGE):**

This program provides students the opportunity to receive credit for their high school EDGE courses.

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[1] ENL 111 has a prerequisite of ENL 095 or placement in 100-level English, and REA 098 or placement in 100-level reading.
[2] IT 101 or IT 102 will meet the Fundamentals of Computers requirement.
[3] GST 230 has a prerequisite of GST 160.
[4] Choose from the following: ART 101, ENL 115, GST 100, GST 110, GST 210, GST 220, GST 165, GST 260, GST 263, GST 280-289, IT 1XX, IT 2XX, BIOL 101, EC 102, EC 201, EC 202, HIST 103, HIST 104, HIST 114, HIST 115, POLS 101, PSYC 200, PSYC 215, and SOCI 210.
[5] Choose from MAT 1oo or MAT 115 or MAT 145 or MAT 120. MAT 100 has a co-requisite of ASC 099.
[6] MAT 210 has a prerequisite of MAT 1oo or MAT 115 or MAT 145 or MAT 120
[7] IT 250 has a prerequisite of IT 101 or IT 102, and is offered fall semesters only
[8] MFE 220 has a prerequisite of permission.
[9] GST 240 has a prerequisite of GST 230
[10] Permission of Program Coordinator/Dean is required in order to enroll in GST 299.
[11] Suggested Electives for MU 2+2: Choose from ART 101; ENL 115; BIOL 101/101L
*If a student does not take a 4 credit hour course in this elective slot they will need to take two 3 credit hour courses to have the required 60 credit hours for graduation.