Program Map

Geographic Information Systems

Degree: Associate of Applied Science (AAS) Degree
Certificate: Level 1 (C1) and Level 2 (C2) Certificates

DESIGN, MANUFACTURING, CONSTRUCTION & APPLIED TECHNOLOGY

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Program Description: This is an example course sequence for students interested in Geographic Information Systems. It does not represent a contract, nor does it guarantee course availability. If this pathway is followed as outlined, you will earn an Associate of Applied Science (AAS) degree in Geographic Information Systems or a Level I or Level II Certificate (C) in Geographic Information Systems.

GIS specialists use data to create intelligent maps that address complex questions; such as how many houses will be impacted by a flood zone, whether proximity to a highway relates to residential crime, or how commercial development may affect endangered species? Private-sector companies and public organizations use GIS to harness their resources more efficiently when planning and making decisions.

Level I Certificate: This certificate is designed to be the first building block in the program. It includes entry-level know-how to begin working in GIS. All Level I courses transfer toward the Level II certificate.

Level II Certificate: Focused GIS education including the latest geospatial programming and web-based applications are detailed in this certificate. Individuals who use GIS in their current jobs often select this program to update their skills with the latest industry software. All Level II certificate courses transfer toward the AAS degree.

Use this Program Map to choose courses with your college advisor and track your progress towards milestones and completion of program.

Pre-Degree Requirements

Program Specific	Reading and Writing Placement *Placements based on TSI*	Mathematics Placement *Placements based on TSI*
There are no prerequisite courses to enter this program.	☐ Basic Developmental Courses ☐ ESOL Courses ☐ INRW Courses	☐ MATD-0332 - Basic Math Skills ☐ MATD-042x/032x – ALEKS Sequence ☐ MATD-0385/0485 – Developing Mathematical Thinking* **Not prerequisite for MATH-1314/1324* ☐ MATD-0370 – Elementary Algebra** ☐ MATD-0390 – Intermediate Algebra** ***Take MATD-0370 and 0390 to prepare for MATH-1314/1324*

D=Degree
C1=Level 1 Certificate
C2=Level 2 Certificate

SEMESTER-BY-SEMESTER PROGRAM PLAN FOR FULL-TIME STUDENTS

Plans can be modified to fit the needs of part-time students by adding more semesters

C1	C2	D	Semester 1	CR	Advising Notes
●	●	●	GEOG 2470 - Introduction to Geographic Information Systems (GIS)	3	
●	●	●	ITSW 1307 - Introduction to Database: Access	4	ITSW 1307: COSC 1301 prerequisite is waived for GIS students.
		●	ENGL 1301 - English Composition I	3	
	● ● ● ●	● ● ● ●	EDUC 1300 - Effective Learning: Strategies for College Success **OR** COSC 1315 - Fundamentals of Programming **OR** DFTG 1405 - Technical Drafting **OR** SRVY 1301 - Introduction to Surveying	3-4	All first time Austin Community College (ACC) students with fewer than 12 SCH of successful college credit must take the EDUC 1300 course in their first semester at ACC. All other students may select EDUC 1300, COSC 1315, DFTG 1405, or SRVY 1301. See an advisor or a full-time faculty member in Geographic Information Systems for more information.
				13-14	**Program Semester Hours / Meet with your advisor**

			Semester 2		
●	●	●	GISC 1491 - Special Topics in Cartography	4	
●	●	●	GISC 2420 - Intermediate Geographic Information Systems (GIS)	4	
	●	●	ENGL 2311 - Technical and Business Writing	3	
	●	●	GEOG 1301 - Introduction to Physical Geography	3	
				14	**Program Semester Hours / Meet with your advisor**
			Semester 3		
●	●	●	GISC 2401 - Data Acquisition and Analysis in Geographic Information Systems (GIS)	4	
	●	●	Restricted Elective	4	GIS Restricted Elective: select three courses from GISC 1401, GISC 1421, GISC 2435, GISC 2459, and GISC 2479.
	●	●	GISC 2250 - Scripting for Geographic Information Systems (GIS)	2	
		●	Social and Behavioral Sciences	3	Select from the appropriate section of the Core Curriculum Course List.
		●	MATH 1314 College Algebra **OR** MATH 1342 Elementary Statistics	3	
				16	**Program Semester Hours / Meet with your advisor**
			Semester 4		
	●	●	GISC 2231 - Advanced Problems in Geographic Information Systems (GIS)	2	
	●	●	Restricted Elective	4	GIS Restricted Elective: select three courses from GISC 1401, GISC 1421, GISC 2435, GISC 2459, and GISC 2479.
	●	●	Restricted Elective	4	GIS Restricted Elective: select three courses from GISC 1401, GISC 1421, GISC 2435, GISC 2459, and GISC 2479.
		●	Language, Philosophy, and Culture **OR** Creative Arts	3	Select from the appropriate section of the Core Curriculum Course List.
		●	Oral Communication	3	Select a speech course from the Component Area Option section of the Core Curriculum Course List.
● ● ●	● ● ●	● ● ●	GISC 2280 - Cooperative Education-Cartography **OR** GISC 2164 - Practicum (or Field Experience) - Cartography **OR** GISC 1391 - Special Topics in Cartography	1-3	Capstone course options. **ACHIEVEMENT**: Geographic Information Systems Associate of Applied Science degree **ACHIEVEMENT**: GIS Level 2 Certificate **ACHIEVEMENT**: GIS Level 1 Certificate
				17-19	**Program Semester Hours**
			Total Program Hours:	**60-63**	

Please always check online at austincc.edu/catalog or meet with your academic or program advisor to ensure that you are viewing the latest and most accurate information.

Career & Transfer Resources

ACC's Career & Transfer websites provide detailed, guided information on career exploration and transfer.
www.austincc.edu/career
www.austincc.edu/transfer

For further information regarding this specific program, please see the Career & Transfer Resources supplement provided in the next section of this Program Map.

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Career & Transfer Resources Updated 8/18/17

Career Information

Training in geography opens doors to careers in areas such as these:

Geospatial Technologies
- GIS Manager
- Air Photo Interpreter
- Cartographer
- Remote Sensing Specialist
- GIS Analyst
- Mapping Technician
- GIS Software Developer

Human Geography
- Medical Geographer
- City/Regional Planner
- Political Analyst
- Transportation Coordinator
- Diplomat
- Market Researcher

Physical Geography
- Hydrologist
- Meteorologist
- Crisis Response Coordinator
- Coastal Zone Manager
- Climatologist
- Habitat Researcher

Resource Management
- Ecotourism Planner
- Soil Conservationist
- Water Quality Manager
- Park Ranger
- Pollution Control Consultant
- Outdoor Interpretive Guide

Common Job Titles

Geographic Information Systems Analyst (GIS Analyst), Geographic Information Systems Specialist (GIS Specialist), Geographic Information Systems Technician (GIS Technician), Cartographer, Meteorologist

Regional Labor Market Information

Geographic Information Systems Technicians: New workers generally start around $52,650. Normal pay for Geographic Information Systems Technicians is $77,378 per year, while highly experienced workers can earn as much as $116,844. Over the last year, 30 companies have posted 89 jobs for Geographic Information Systems Technicians in this region. There are currently 2,960 Geographic Information Systems Technicians that are employed in Austin-Round Rock, TX.
Source: https://austincc.emsicc.com/careers/geographic-information-systems-technicians

Career and labor market research tools (see Quick Reference Guide at http://www.austincc.edu/career):
EMSI: https://austincc.emsicc.com/, Bureau of Labor Statistics: http://www.bls.gov/ooh/, O*NET: https://www.onetonline.org/

Career Resources: ACC's career services website provides information on career exploration and employment at http://www.austincc.edu/career. Students are encouraged to consult with their area of study advisor for additional career assistance. The above information is provided as a guide and reference tool for occupations related to this program. This is not a guarantee of job placement in any of these occupations after successful completion of an ACC program. The common job titles listed are representative titles and are provided for career research. These are not the only occupations possible in this area of study.

Transfer Information

The Associate of Applied Science in Geographic Information Systems prepares students to directly enter the workforce.
30% of the course credit in this plan can transfer to a 4-year public college or university in Texas in a traditional bachelor's degree program. A Bachelor of Applied Arts and Sciences (BAAS) is a alternative transfer degree option for students in AAS programs who want to complete a 4-year degree.

Transfer Guides: *The universities listed here do not constitute an ACC endorsement. Transfer course evaluations and determination of what courses will count toward a bachelor's degree are made by the receiving transfer institution.*

Texas State University: http://www.owls.txstate.edu/undergraduate-degrees/applied-arts-sciences.html
Concordia University Texas: http://www.concordia.edu/academics/college-of-business-and-communication/baas-in-business.html
Texas A&M University Central Texas: https://www.tamuct.edu/degrees/undergraduate/business-management.html
Texas Tech University: https://www.depts.ttu.edu/universitystudies/prospective_students/baas.php

Additional Transfer Resources: ACC's transfer website provides information on additional colleges & universities: http://www.austincc.edu/transferguides. Students are encouraged to consult with a faculty advisor, area of study advisor, and/or their chosen transfer institution to ensure courses taken at ACC will apply toward their bachelor's degree program.