Central Arizona College
8470 N. Overfield Road
Coolidge, AZ 85128
Phone: (520) 494-5444

GIS Drafting and Mapping Certificate

Program Description for the Catalog:
Creation, analysis, and mapping of Geographic Information Systems (GIS) data to prepare for positions utilizing GIS and GPS technology and/or to progress towards the GIS A.A.S. Degree.

Effective Term: Fall
Effective Year: 2013
Semester Hours: 30

Prerequisites: MAT101 Essential Mathematics (4) or higher
Corequisites: None
Recommended Proficiencies: Mathematics/Statistics and Computer Information Systems proficiencies

List of Course Requirements for the Catalog:
GIS Drafting and Mapping Certificate (30)
Prerequisite: MAT101 Essential Mathematics (4) or higher

Core Requirements (30)
GIS101 Introduction to Geographic Information Technologies (3)
GIS102 Map and Image Interpretation (3)
GIS111 Introduction to GIS (3)
GIS112 Intermediate GIS (3)
GIS113 Advanced GIS (3)
DFT127 AutoCAD I (3)
DFT128 AutoCAD II (3)
DFT131 AutoCAD III (3)
GIS150 GIS and Global Positioning Systems (GPS) (3)
GIS196 GIS Internship I (3)

Other Requirements
Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.
Students must earn at least one-third of the certificate credits from CAC.

Measureable Student Learning Outcome
1. (Evaluation Level) Identify and explain GIS skills and knowledge to create GIS projects and evaluate those projects based on industry GIS standards.
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**Statements for Program:**

2. (Analysis Level) Analyze GIS applications based on project goals and stakeholder's needs.

3. (Analysis Level) Explain and analyze datums, projections, and coordinate systems to determine next project steps.

4. (Evaluation Level) Demonstrate, explain and critique the role of remote sensing applications in GIS.

5. (Synthesis Level) Create and explain the process to digitally create and modify a map.

6. (Evaluation Level) Use GIS applications to analyze a range of datasets including transportations systems, the environment, and communities to create a city plan.

7. (Synthesis Level) Assemble a comprehensive plan to use GIS methods to conduct research in preparation or in conjunction with an Internship.

8. (Synthesis Level) Apply GIS and GPS knowledge and skills to real-world applications.

9. (Comprehension Level) Identify and explain advanced level map elements, including: title, scale, north arrow, date and legend and many others.

**Internal/External Standards/Accreditation for Program:**

- URISA (http://www.urisa.org/)
- GISCI (http://www.gisci.org/)
- NCGIA (http://www.ncgia.ucsb.edu/) & (http://www.ncgia.ucsb.edu/other/ucgis/ed_priorities/a&c.html)

**Revised:** May 21, 2013