

**About this Certificate . . .**

The Physical and Environmental Sciences (PES) Department at Colorado Mesa University offers a certificate in Geographic Information Science and Technology. The courses are open to all students interested in broadening their knowledge and enhancing job-related skills in a rapidly expanding market of computer-based technology. The multidisciplinary nature of the geographic information science and technology allows students from a wide variety of fields to participate in this exciting program.

Geographic Information Science and Technology includes Geographic Information Systems, Global Positioning Systems, and Remote Sensing. A geographic information system (GIS) is a computer-based tool for mapping and analyzing things that exist, and events that happen on earth. GIS technology is a special case of information systems where the database consists of features, activities, or events that are definable in space as points, lines, or areas. GPS (Global Positioning System) is a satellite system that allows users to collect precise geographic data for use in mapping. Remote sensing refers to any technique whereby information about objects and the environment is obtained from a distance such as aircrafts or satellites. The remote sensing often permits us to greatly expand our spectral view of the earth and “see” the world much more clearly than we can with the unaided eye.

There is a strong demand for people who are trained in Geographic Information Science and Technology and this certificate will assist students in securing jobs in this rapidly growing field. GIS/GPS can be used for cartography, business, biology, geology, environmental science, history, archeology, and criminal justice.

For more information on what you can do with this major, go to <http://www.coloradomesa.edu/career/whatmajor.html>.

**POLICIES:**

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the Catalog for a complete list of graduation requirements.
2. You must turn in your “Intent to Graduate” form to the Registrar’s Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.**
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.**
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar’s Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your “Intent to Graduate” does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you may be required to take a Major Field Achievement Test (exit exam).

**NAME:** \_\_\_\_\_ **STUDENT ID #** \_\_\_\_\_

**LOCAL ADDRESS AND PHONE NUMBER:** \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

I, (Signature) \_\_\_\_\_, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

\_\_\_\_\_  
Signature of Geographic Information Systems Advisor Date \_\_\_\_\_ 20\_\_\_\_

\_\_\_\_\_  
Signature of Department Head Date \_\_\_\_\_ 20\_\_\_\_

\_\_\_\_\_  
Signature of Registrar Date \_\_\_\_\_ 20\_\_\_\_

**Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.**

Degree Requirements:

- At least 33 percent of the credit hours required for the certificate must be in courses numbered 300 or above.
- A GPA of 2.00 or higher in the certificate is required.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- When filling out the program sheet a course can be used only once.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

**REQUIRED COURSES** (16 Semester hours)

Course No	Title	Sem.hrs	Grade	Term/Trns	Course No	Title	Sem.hrs	Grade	Term/Trns
GEOL 305	Cartography for GIS	1	_____	_____	GEOL 375	Global Positioning Systems for GIS	2	_____	_____
<b><u>OR</u></b>									
GEOG 131	Introduction to Cartography	3	_____	_____	GEOL 375L	Global Positioning Systems for GIS Lab	1	_____	_____
GEOL 321	Introduction to Remote Sensing	2	_____	_____	GEOL 432	Advanced GIS	2	_____	_____
GEOL 321L	Introduction to Remote Sensing Lab	1	_____	_____	GEOL 432L	Advanced GIS Lab	1	_____	_____
GEOL 332	Introduction to GIS	2	_____	_____	GEOL 445	Geospatial Database & Design	2	_____	_____
	<u>(BIOL, ENVS)</u>				GEOL 445L	Geospatial Database & Design Lab	1	_____	_____
GEOL 332L	Introduction to GIS Lab	1	_____	_____					
	<u>(BIOL, ENVS)</u>								