

Geospatial Sciences, B.S.

Department of Earth & Atmospheric Sciences, 303-615-1177, Science Room 2028
College of Letters, Arts, and Sciences

Catalog
2019-2020

This sheet applies to the 2019-20 catalog *only*. It does not replace the full catalog as an official statement of requirements. Students with declared majors *must* work with an advisor on course selection and sequencing to ensure a timely graduation.

General Studies	33 min
Required Pre-Requisites	7 min
Major courses	76
Unrestricted Electives	<u>4</u>
Total to graduate (min. 40 hrs. upper-division)	120 min

<u>General Studies Course Requirements</u>	<u>Credits</u>	<u>Geospatial Sciences Required Pre-Requisites*</u>	<u>Credits</u>
<u>Written Communication (min. 6 credits)</u>		___ MTH 1120 College Trigonometry	3
___ ENG 1010 Composing Arguments*	3	OR	
___ ENG 1020 Freshman Comp: Analysis, Research, & Doc.	3	___ MTH 1400 Pre-calculus	4
		OR	
<u>Oral Communication* (min. 3 credits)</u>		___ MTH 1410 Calculus I	4
___ _____		AND	
<u>Quantitative Literacy* (min. 3 credits)</u>		___ MTH 1210 Introduction to Statistics	4
See Required Pre-requisites on the reverse side for recommendations**			
<u>Arts and Humanities (min. 6 credits)</u>		<u>Geospatial Sciences Required Core Courses</u>	<u>Credits</u>
___ _____		___ GEG1100 Introduction to Physical Geography	3
___ _____		___ GIS 1220 Introduction to Geospatial Sciences	3
		___ GIS 2250 Geographic Information Systems	3
<u>Historical (min. 3 credits)</u>		___ GIS 3250 Cartography (Preq. GIS 2250 & MTH 1210)	3
___ _____		___ GIS 4840 Remote Sensing	3
		(Preq. GIS 2550 & MTH 1110)	
<u>Natural and Physical Sciences (min. 6 credits)</u>		___ GIS 4850 Spatial Modeling in Raster (Preq. GIS	4
___ General Chemistry & Lab, College Physics I & Lab or		(Preq. GIS 2250 & MTH 1110)	
General Physics I & Lab - (recommended)		___ GIS 4860 GIS Applications	4
___ Additional Natural Science course		(Preq. GIS 2250, Co-Req. GIS 3250)	
		___ GIS 4870 Spatial Databases (Preq. GIS 4860)	3
<u>Social and Behavioral Sciences I (min. 3 credits)</u>		___ GIS 4810 GIS Programming (Preq. GIS 2250)	3
___ _____			
<u>Social and Behavioral Sciences II (min. 3 credits)</u>		<u>Internship Requirement (min. 3 credits)</u>	<u>Credits</u>
___ _____		___ GEG 4950 Internship in Geography	3
		(Preq. Jr.. Status & Permission of EAS Dept.)	
<u>Global Diversity</u>			
___ may be satisfied within General Studies (GD code)			
<u>Multicultural Requirement</u>			
___ may be satisfied within General Studies (MC code)			

<u>Geospatial Sciences Electives (min 9 credits)</u>	<u>Credits</u>
___ CS 1050 Computer Science I (<i>Preq. CS 1030</i>)	4
___ CSS 1247 Introduction to Programming: Visual Basic (<i>Preq. CSS 1010</i>)	4
___ GIS 2710 Global Positioning Systems (<i>Preq. GIS 1220</i>)	2
___ GIS 3000-4999 Any UD GIS course taught at MSU	3-4
___ MTH 140 Calculus I (<i>Preq. MTH 1109 or MTH 1110 and MTH 1120</i>)	4
___ MTH 2520 R Programming (<i>Preq. MTH 1110 or MTH 1112 or MTH 1310</i>)	4
___ MTH 3240 Environmental Statistics (<i>Preq. MTH 1110 & MTH 1210</i>)	4

If you have transferred any courses or military credit related to GSS to MSU Denver, please see a faculty advisor to evaluate any equivalencies.

Need to total a minimum of 120 credits for a bachelor's degree

A grade of "C-" or better is required for all Geospatial Sciences coursework.

The degree is an extended major that does not require a minor.

<u>Senior Experience Requirement (min. 3 credits)</u>	<u>Credits</u>
___ GIS 4890 Advanced GIS Project (<i>Preq. GIS 4860</i>)	3
___ GIS 4910 Satellite Image Processing (<i>Preq. GIS 4840 & GIS 4850 or GIS 4860 & Sr Status</i>)	3
___ GIS 4920 Adv Directed Study in Geospatial Sciences (<i>Preq. GIS 4860, Permission of Instructor</i>)	3

Geospatial Sciences Area of Interest

- Develop with a faculty advisor (min. of 18 credits)

Because Geospatial Sciences focus on using computer analysis and applications, students are required to develop competency in an area of interest. The plan may be modeled after existing minors and/or customized to meet unique student goals. Some examples of areas of interest include courses that focus on the Environment, Meteorology, Geography, Sustainability, Planning, Computer Science, Business, Marketing, Criminology, etc. The plan must be developed and approved in consultation with an advisor by the time 90 credit are completed. Transfer students with 90 credits need to meet with an advisor as soon as possible after admittance.