

LAND USE MAJOR FOR BACHELOR OF SCIENCE

Geographic Information Systems (GIS) Concentration

The land use major is a 65 hour extended major that combines general planning courses with a focused area of study (concentration), including environment and resources, geographic information systems, geology, or urban land use planning, linked by the vital thread of land use management. Students will receive a Bachelor of Science degree except when their concentration is urban land use planning in which case the student will receive a Bachelor of Arts degree. The major equips students with a dynamic foundation for understanding issues and solving problems that confront the community and environment, making them highly competitive in the job market. The program is broad in scope and can be applied to a number of career objectives and graduate school programs. Opportunities exist in such areas as cartography, environment and resource management, environmental science, geographic information systems, geology, mining and mineral resources, planning, population analysis, recreational land use, remote sensing, residential and industrial development, transportation, and a variety of other interrelated fields. Because the land use degree is an extended major, it does not require a minor. **Each student must have a department advisor and consult with his/her advisor regarding course work to avoid prerequisite problems.**

Required Core		Semester Hours
___	GEG 1220 Map Use	2
___	GEG 1610 Introduction to Planning	1
___	GEL 1010 General Geology	4
___	GEG 4950 Internship in Land Use	
	-or-	
___	GEL 4950 Internship in Geology	2
___	GIS 2250 Introduction to Geographic Information Systems	3
___	MTH 1210 Introduction to Statistics	4
<i>Required Core Total</i>		16

Required Concentration Courses

___	CMA 1010 Introduction to Computers	
	-or-	
___	CSS 1010 Introduction to Computers	3
___	GEG 3610 Principles of Land Use Planning	3
___	GIS 1710 Terrestrial Navigation	2
___	GIS 3210 Introduction to Cartography	4
___	GIS 3250 Computer Cartography	3
___	GIS 4840 Remote Sensing	3
___	GIS 4850 Advanced Geographic Information Systems	3
___	GIS 4860 Applications of ARC/INFO to Natural Resources Management	3
___	GIS 4870 Spatial Databases Design, Implementation, and Management	3
___	GIS 4890 Advanced GIS Laboratory (Senior Experience)	3
<i>Required Concentration Courses Total</i>		30

Because GIS is an application tool, students are required to specialize in an **area of interest**. One of the following interest areas must be selected or one may be designed and approved by a department advisor. Select a minimum of 19 credit hours from one of the following areas, resulting in a major total of 65 hours. Note: other suggestions include the courses comprising minors in Computer Science (School of Letters, Arts and Sciences); Computer Information Systems, General Business, International Business, Marketing (School of Business), and Criminal Justice and Criminology (School of Professional Studies).

AREAS OF INTEREST

Environment

___ ENV 1200	Introduction to Environmental Science	3
___ ENV 3540	Advanced Geologic and Environmental Hazards – Denver and Vicinity	2
___ ENV 4000	Environmental Geology (required)	3
___ ENV 4010	Environmental Hazards and Planning	3
___ ENV 4200	Environmental Policy and Planning	3
___ ENV 4420	Wetlands	3
___ ENV 4430	Habitat Planning	2
___ ENV 4960	Global Environmental Challenges	3
___ ENV 4970	Environmental Field Studies	3
___ GEG 4XXX	Advanced Seminars, Topics, or Workshops in Geography	1 – 3
___ GEL 3150	Hydrogeology	3
___ GEL 4150	Hydrology	3
<i>Subtotal</i>		19

Meteorology

___ MTR 2400	Introduction to Atmospheric Science (required)	4
___ MTR 2410	Weather Observing Systems	3
___ MTR 3100	Air Pollution	3
___ MTR 3400	Synoptic Meteorology	4
___ MTR 3420	Radar and Satellite Meteorology	3
___ MTR 3500	Hazardous Weather	3
___ MTR 4210	Forecasting Laboratory I	2
___ MTR 4440	Climatology	3
___ MTR 4500	Mesometeorology	3
<i>Subtotal</i>		19

Planning

___ ENV 1200	Introduction to Environmental Science	3
___ ENV 4000	Environmental Geology (required)	3
___ ENV 4010	Environmental Hazards and Planning	3
___ ENV 4200	Environmental Policy and Planning	3
___ ENV 4430	Habitat Planning	2
___ GEG 3610	Principles of Land Use Planning	3
___ GEG 3630	Transportation Planning and Land Use	3
___ GEG 4610	Urban and Regional Planning	3
___ GEG 4620	Residential Land Use Patterns	3
___ GEG 4640	Recreational Land Use Patterns	3
___ GEG 4XXX	Advanced Seminars, Topics, or Workshops in Geography	1 – 3
<i>Subtotal</i>		19

Resources

___ ENV 1400	World Resources	3
___ ENV 3400	Water Resources	3
___ ENV 3620	Population Resources, and Land Use	3
___ ENV 4960	Global Environmental Challenges	3
___ GEL 3150	Hydrogeology	3
___ GEL 3420	Soil Resources	4
___ GEL 3440	Energy and Mineral Resources	4
___ GEL 4150	Hydrology	3
<i>Subtotal</i>		19

Major Total		65
General Studies		33
Multicultural Requirement		3
General Electives		19
Total for Land Use Major		120