

Geographic Science Program

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Please check the JMU Undergraduate Catalog for changes.

GEOGRAPHIC SCIENCE PROGRAM CORE COURSES

COURSES	DESCRIPTION	CREDIT HRS.
GISAT 251 or MATH 220	Statistics	3
GEOG 205	Cultural Geography	3
GEOG 210	Physical Geography	4
GEOG 215	Geospatial Tools I	3
GEOG 216	Geospatial Tools II	3
GEOG 230	Spatial Thinking	3
GEOG 290	Human Interactions with the Physical Environment	3
GEOG 305	History and Philosophy of Geography	4
Senior Project (see criteria below)		6
GEOG 390	Senior Project Design	1
Choose one of the following (3 credit hours maximum can count toward the senior project from these courses)		
GEOG 490	Senior Project I	3
GEOG 491	International Study	3
GEOG 495	Internship	3
GEOG 496	Senior Project II	2
OR		
GEOG 499	Honors in Geography (Thesis)	6

In addition to the Geographic Core course requirements, all students must choose one of the two concentrations listed in the “Concentrations” section. All courses for the major must be taken on a graded basis.

CONCENTRATIONS

Applied Geographic Information Science Concentration (AGIS)

Students in the AGIS concentration must complete the following coursework.

AGIS CONCENTRATION REQUIREMENTS

REQUIRED COURSES	DESCRIPTION	CREDIT HRS.
GEOG 365	Cartography and Geospatial Visualization	3
GEOG 366	Geographic Information Science	3
GEOG 385	Principles of Remote Sensing	3

AGIS ELECTIVE COURSES (Choose 9 credit hours from the following)

ELECTIVE COURSES	DESCRIPTION	CREDIT HRS.
GEOG 465	Topics in GIS	3
GEOG 466	GIS and Geographic Databases	3
GEOG 467	GIS Project Management	3
GEOG 468	Internet Geographic Information Systems	3
GEOG 469	Applications of GIS	3
GEOG 485	Processing Remotely Sensed Data	3
GEOG 486	High Resolution Imagery	3

Cognate course (3 credit hours selected from one of the following)

COURSE	DESCRIPTION	COURSE	DESCRIPTION
GEOG 300	Population Geography	GEOG 337	Geography of Latin America
GEOG 311	Endangered Environments	GEOG 338	Geography of the Philippines
GEOG 315	Field Studies	GEOG 340	Biogeography
GEOG 320	Human Dimensions of Global Change	GEOG 341	Wilderness Techniques
GEOG 322	Agricultural Systems	GEOG 342	Management and Protection of Natural Resources
GEOG 325	Environmental Ethics	GEOG 343	Wildlife Management
GEOG 327	Climatology	GEOG 344	Economic Geography and Development Issues
GEOG 332	Geography of Europe	GEOG 345	Geography of Poverty
GEOG 333	Geography of Russia and the Former Soviet Union	GEOG 350	Topics in Geography
GEOG 334	Geography of East Asia	GEOG 375	Political Geography
GEOG 335	Geography of Africa	GEOG 376	Urban Geography
GEOG 336	Geography of North America	ISAT 425	Environmental Hydrology

Courses from the ISAT program, the Department of Computer Science and the College of Business may be used as electives, as approved by the GS Program Director.

8/18/09

ENVIRONMENTAL CONSERVATION, SUSTAINABILITY AND DEVELOPMENT CONCENTRATION (ECSD)

Students in the ECSD concentration must complete the following course work.

ECSD CONCENTRATION REQUIREMENTS

REQUIRED COURSES	DESCRIPTION	CREDIT HRS.
GEOG 320	Human Dimensions of Global Change	3
GEOG 470	Senior Seminar in ECSD (choose one of the options listed below) *	3
	Global Biodiversity	
	Politics of the Environment	
	Global Perspectives on Population	
	Sustainability	
	Principles and Theories of Sustainable Communities	
	* GEOG 429 also satisfies this requirement	

ECSD Cognate courses (Choose 3 credit hours from the following)

COURSES	DESCRIPTION	CREDIT HRS.
GEOG 365	Cartography and Geospatial Visualization	3
GEOG 366	Geographic Information Science	3
GEOG 385	Principles of Remote Sensing	3

ECSD elective courses (12 credit hours selected from four of the following)

These 300-level courses are identified on their concentration form, which will be reviewed and approved by the ECSD committee. Other courses may substitute for one of the electives with approval of the ECSD committee.

COURSE	DESCRIPTION	COURSE	DESCRIPTION
GEOG 300	Population Geography	GEOG 338	Geography of the Philippines
GEOG 311	Endangered Environments	GEOG 340	Biogeography
GEOG 315	Field Studies	GEOG 341	Wilderness Techniques
GEOG 322	Agricultural Systems	GEOG 342	Management and Protection of Natural Resources
GEOG 325	Environmental Ethics	GEOG 343	Wildlife Management
GEOG 327	Climatology	GEOG 344	Economic Geography and Development Issues
GEOG 332	Geography of Europe	GEOG 345	Geography of Poverty
GEOG 333	Geography of Russia and the Former Soviet Union	GEOG 350	Topics in Geography
GEOG 334	Geography of East Asia	GEOG 375	Political Geography
GEOG 335	Geography of Africa	GEOG 376	Urban Geography
GEOG 336	Geography of North America	ISAT 425	Environmental Hydrology
GEOG 337	Geography of Latin America		

GEOGRAPHIC SCIENCE MINOR

The minor in geographic science consists of the following courses for a total of not less than 19 credit hours.

REQUIRED COURSES	DESCRIPTION	CREDIT HRS.
GEOG 205	Cultural Geography	3
GEOG 210	Physical Geography	4
GEOG 215	Geospatial Tools I	3
Three additional geographic science courses		9-12