COLLEGE OF GEOSCIENCES
TEXAS A&M UNIVERSITY

BACHELOR OF SCIENCE IN ENVIRONMENTAL GEOSCIENCES
CATALOG 133

STUDENT: _____ **HOME DEPARTMENT: Environmental Programs, College of Geosciences**

COURSE	#	SEM	SUBJECT	HRS

CORE GEOSCIENCE COURSES				
			Introductory Course A[1]	4
			Introductory Course B[1]	4
GEOS	105		Intro Environmental Geosciences	3
GEOS	405		Environmental Geosciences	3
GEOS	470		Data Analysis Methods in Geosciences	3
GEOG	330		Resources and Environment	3
GEOL	420		Environmental Geology	3
			Seminar[2]	1
TOTAL HRS				24

ENVIRONMENTAL THEME ELECTIVES[3]				
				3
				3
				3
				3
				3
				3
TOTAL HRS				18

TECHNICAL ELECTIVES[4]				
				3
				3
				3
				3
TOTAL HRS				12

ENVIRONMENTAL POLICY ELECTIVES[5]				
				3
				3
TOTAL HRS				6

MATH AND SCIENCE				
MATH	151		Engineering Math I	4
MATH	152		Engineering Math II	4
BIOL[6]				4
BIOL[6]				4
CHEM	101/111		Fundamentals in Chemistry I	4
CHEM	102/112		Fundamentals in Chemistry II	4
PHYS	201		College Physics	4
STAT	303		Statistical Methods	3
TOTAL HRS				31

COMMUNICATIONS[7]				
ENGL	104		Composition and Rhetoric	3
				3
TOTAL	HRS			6

CITIZENSHIP				
HIST	105		History of the USA I	3
HIST	106		History of the USA II	3
POLS	206		American National Government	3
POLS	207		State and Local Government	3
TOTAL HRS				12

KINESIOLOGY				
KINE	198		Health and Fitness Activity	1
KINE	199 S/U		Required Physical Activity	1
TOTAL HRS				2

SOCIAL AND BEHAVIORAL SCIENCES				
GEOG	201		Intro to Human Geography	3
TOTAL HRS				3

VISUAL AND PERFORMING ARTS[8]				
				3
TOTAL HRS				3

HUMANITIES[9]				
				3
TOTAL HRS				3

TOTAL HOURS FOR DEGREE **120**

Other requirements to be satisfied (see Core Curriculum and Degree Information sections of catalog 133)

Residency requirement
36 hours of 300- and/or 400-level course work successfully completed in residence at TAMU _____

Foreign language requirement
Two units of the same foreign language in high school *or* **one year** in college or demonstrate proficiency by examination _____

International and cultural diversity requirement
6 hrs., chosen from a list of approved courses, many of which also satisfy other core curriculum requirements _____

Writing intensive course requirement
at least **two** courses in the major; must be 900 section _____

NOTES

See website, Academic Advisor, or Faculty Advisor for questions or help selecting elective choices below.

1. Choose one introductory College of Geosciences course in the first semester and an additional one in the second semester of the freshman year. Choose from ATMO 201 Atmospheric Science (3-0) and ATMO 202 Atmospheric Science Lab (0-2), GEOG 203 Planet Earth (3-2), GEOL 101 Principles of Geology (3-2), or OCNG 251 Oceanography (3-0) and OCNG 252 Oceanography Lab (0-2).
2. Freshmen entering the program take a First Year Seminar (UGST 181). The choice is not restricted. Students transferring into the program, or who have not taken UGST 181, are required to take GEOS 481 Geosciences Seminar in their junior or senior year.
3. Choose 18 hours of courses from one of the following themes in your junior and senior years: Climate Change, Coastal and Marine Environments, Human Impact on the Environment, and Water. Table 3 shows each of the theme core courses to take and a list of the remaining electives to choose from.
4. Choose 12 hours of technical electives from Table 2, or courses offered in other colleges (see website for definition of a technical electives).
5. Choose 6 hours of environmental policy electives from Table 1.
6. Choose from BIOL 101 Botany and BIOL 107 Zoology or BIOL 111 Introductory Biology I and BIOL 112 Introductory Biology II.
7. Other Communications elective to be selected from the University Core Curriculum.
8. Visual and Performing Arts elective to be selected from the University Core Curriculum. It is recommended to take a course also on the International and Cultural Diversity list for this requirement.
9. Humanities elective to be selected from the University Core Curriculum. It is recommended to take a course also on the International and Cultural Diversity list for this requirement.

Table 1. Environmental Policy Electives		
AGEC 350	Environmental and Natural Resource Economics	3
BESC 367	U.S. Environmental Regulations	3
ECON 202	Principles of Economics: Microeconomics	3
ECON 203	Principles of Economics: Macroeconomics	3
ECON 323	Microeconomic Theory	3
ECON 435	Economic Resource Scarcity	3
GEOG 304	Economic Geography	3
GEOG 309	Geography of Energy	3
GEOG 401	Political Geography	3
GEOG 406	Geographic Perspectives on Urban Issues	3
GEOG 430	Environmental Justice	3
GEOS 401	Polar Regions of the Earth	3
PHIL 314	Environmental Ethics	3
POLS 347	Politics of Energy	3
RENR 420	Natural Resource Law	3
RENR 470	Environmental Impact Assessment	3
SOCI 328	Environmental Sociology	3
URSC 301	Introduction to Planning	3
URSC 360	Issues in Environmental Quality	3
URSC 371	Environmental and Health Planning Policy	3
URSC 460	Sustainable Communities	3

Table 2. Technical Electives		
ATMO 321	Computer Applications in the Atmospheric Sciences	3
ATMO 441	Satellite Meteorology and Remote Sensing	3
ATMO 464	Lab Methods in Atmospheric Science	3
GEOG 312	Data Analysis Methods in Geography	3
GEOG 361	Remote Sensing in Geosciences	4
GEOG 380	Workshop in Environmental Studies	2-6
GEOG 390	Principles of Geographic Information Systems	3
GEOG 450	Field Geography	3
GEOG 462	Advanced GIS Analysis for Natural Resource Management	3
GEOG 467	Dynamic Modeling of Earth and Environmental Systems	4
GEOG 475	Advanced Topics in GIS	4
GEOG 476	GIS Practicum	3
GEOL 309	Intro Geologic Field Methods	3
GEOL 330	Geologic Field Trips	1-3
GEOL/GEOG 352	GPS in the Geosciences	2
GEOP 413	Near-Surface Geophysics	3
OCNG 451	Mathematical Modeling of Ocean Climate	4

Always check for prerequisites!

Table 3. Environmental Themes

Climate Change	Water
CORE COURSES GEOS 210 Climate Change GEOS 410 Global Change *or* GEOS 444 The Science and Politics of Global Climate Change PHYS 202 College Physics II ELECTIVES ATMO 324 Physical and Regional Climatology *or* GEOG 324 Global Climatic Regions ATMO 363 Introduction to Atmospheric Chemistry and Air Pollution ATMO 463 Air Pollution Meteorology GEOG/GEOS 442 Past Climates GEOL 305 Paleobiology GEOL 306 Sedimentology and Stratigraphy GEOL 307 Dinosaur World GEOL 451 Intro to Geochemistry GEOS 401 Polar Regions of the Earth: Science, Society and Discovery GEOS 410 Global Change *or* GEOS 444 The Science and Politics of Global Climate Change GEOS 411 Vegetation Response to Climate Change OCNG 401 Interdisciplinary Oceanography OCNG 410 Introduction to Physical Oceanography OCNG 440 Introduction to Chemical Oceanography	CORE COURSES GEOG 434 Hydrology and Environment GEOL 410 Hydrogeology ELECTIVES AGSM 335 Water and Soil Management AGSM 337 Technology for Environmental and Natural Resource Engineering ATMO 251 Weather Observation and Analysis ATMO 324 Physical and Regional Climatology *or* GEOG324 Global Climatic Regions ATMO 335 Atmospheric Thermodynamics ATMO 352 Severe Weather and Mesoscale Forecasting ATMO 443 Radar Meteorology GEOG 331 Geomorphology GEOG 360 Natural Hazards GEOL 440 Engineering Geology GEOL 451 Geochemistry GEOS 401 Polar Regions of the Earth: Science, Society and Discovery OCNG 401 Interdisciplinary Oceanography OCNG 440 Introduction to Chemical Oceanography SCSC 445 Environmental Soil Science SCSC 489 SPTP Land Use and Water Quality WFSC 410 Aquatic Bioassesment
Human Impact on the Environment	**Coastal and Marine Environments**
CORE COURSES GEOS 430 Global Science and Policy Making GEOG 430 Environmental Justice ELECTIVES ATMO 362 Environmental Atmospheric Science ATMO 363 Introduction to Atmospheric Chemistry and Air Pollution GEOG 309 Geography of Energy GEOG 360 Natural Hazards GEOG 401 Political Geography GEOL 301 Mineral Resources GEOL 410 Hydrogeology GEOL 440 Engineering Geology GEOL 451 Intro to Geochemistry GEOS 401 Polar Regions of the Earth: Science, Society and Discovery GEOS 444 Science and Politics of Climate Change URSC 461 Urban Issues WFSC 420 Ecology and Society	CORE COURSES GEOG 370 Coastal Processes OCNG 401 Interdisciplinary Oceanography ELECTIVES GEOG 331 Geomorphology GEOG 360 Natural Hazards GEOL 306 Sedimentology and Stratigraphy GEOL 440 Engineering Geology GEOS 401 Polar Regions of the Earth: Science, Society and Discovery GEOS 444 The Science and Politics of Global Climate Change OCNG 410 Introduction to Physical Oceanography OCNG 420 Introduction of Biological Oceanography OCNG 430 Introduction to Geological Oceanography OCNG 440 Introduction to Chemical Oceanography WFSC 418 Ecology of the Coastal Zone WFSC 425 Marine Fisheries WFSC 428 Wetland Ecosystem Management

Please see your undergraduate catalog for prerequisites for all elective courses.
We encourage you to take 484 Internship, 485 Directed Studies, or 491 Research credit. These can be applied as a policy, theme, or technical elective. See your academic advisor or faculty mentor for more details.