

# EARTH RESOURCES, CERTIFICATE

(Code 160-603)

Advisor: P. Ihinger (Geology and Environmental Science).

The Department of Geology and Environmental Science administers an **Earth Resources certificate**. This certificate provides non-Geology majors with core science, policy, and communication skills to better understand complex environmental issues involving mineral and water extraction and usage. The certificate would be ideal for Business, Communication, Economics, Geography, Journalism, Political Science, and Integrated Strategic Communication: Public Relations majors, who might need to communicate with scientists, engineers, politicians, and advocacy groups about environmental issues.

Code	Title	Credits
<b>Sixteen credits required</b>		<b>16</b>
Required Core (10 crs):		
BIOL 338	Vegetation Ecology	4
GEOL 301	Earth Resources and Sustainability	3
GEOL 308	Water Resources	3
Communication Skills (choose one of the following):		3
CJ 203	Fundamentals of Human Communication	
CJ 222	Beginning Journalism	
CJ 250	Introduction to Organizational Communication	
CJ 260	Introduction to Integrated Strategic Communication	
Policy and Ethics (choose one of the following):		3
ECON 268	Environmental Economics	
ENV/GEOG 377	U.S. Environmental and Sustainability Policy	
PHIL 320	Environmental Ethics	

Note: Students cannot pursue the Geology major and the Earth Resources certificate to meet graduate requirements for completing a first and second degree program.

## Program Learning Outcomes

Students completing this program will be expected to meet the following learning outcomes:

- Explain Earth processes.
- Use mathematics and computational methods to analyze scientific and geological data.
- Read, write, and critically evaluate geological papers.
- Construct an internally consistent geological map utilizing field data, topographic maps, geological maps, air photos, geographic information systems (GIS) data, and geological cross sections.
- Use analytical and quantitative methods to evaluate an environmental problem.