

# Certificate in Environment and Sustainability

This certificate program is open to all WSU undergraduate students.

## Program Requirements

Completion of the certificate in environment and sustainability requires a total of 13 credit hours of course work. This includes completion of GEOL 200 Introduction to Environment and Sustainability (3 credit hours) upon filing a plan of study in the certificate, and the GEOL 490 Environment and Sustainability Seminar (1 credit hour) at the conclusion of the certificate program. The remainder of the course work in this certificate program (9 credit hours) will be from courses in the particular track chosen by the student.

An overall grade point average of at least 2.000 for all courses comprising the certificate program, and no grade below C, is required to earn the certificate.

Students can choose from one of four tracks:

1. Environmental policy and communication;
2. Human society and the environment;
3. Resource and remediation science and technology; or
4. Environmental and green sciences.

These tracks allow students to tailor their studies in the certificate program to suit their individual interests and educational goals. Students are required to pick a certificate track upon completion of GEOL 200 Introduction to Environment and Sustainability and register their choice with the director of the certificate program. Students are free to change their certificate track at any time; however, credit hours from a previous track will only count towards the new track if the courses are listed in both tracks.

Environment and sustainability is an area of rapid growth, innovation and research. Given the highly dynamic nature of this field, the certificate program is also dynamic to ensure that students gain the greatest value from the program. As such, the courses listed in each track will be regularly evaluated to ensure that they provide appropriate value and reflect state-of-the-art developments. As new relevant courses are introduced at WSU they may be added to the certificate program within the most appropriate track(s). Similarly, courses that are no longer taught may be dropped from the certificate structure. Alterations to the courses offered in the certificate program will be made in concert with the faculty of record and relevant department chair.

Course	Title	Hours
<b>Required Courses</b>		
GEOL 200	Introduction to Environment and Sustainability	3
GEOL 490	Environment and Sustainability Seminar	1
<b>Tracks</b>		
Select one of the following four tracks from which the bulk of the certificate classes will be taken (minimum of 9 total credit hours)		9
<i>Environmental Policy and Communication Track</i>		
PHIL 385	Engineering Ethics	
POLS 305	Environmental Politics	
ENGL 503	American Literature I	
GEOL 300	Energy, Resources and Environment	
PHIL 590AD	Environmental Ethics	
Service Learning/Internship/Undergraduate Research Option		

## *Human Society and the Environment Track*

HIST 531	American Environmental History
HIST 535	History of Kansas
PHIL 300	Science and the Modern World
PHIL 385	Engineering Ethics
SOC 318	Environmental Sociology
SOC 320	Contemporary Social Problems
SOC 338	Health & Lifestyle
SOC 346	Sociology of Globalization
SOC 534	Urban Sociology
PHIL 530	Ethics of Space Exploration
POLS 305	Environmental Politics
PHIL 590AD	Environmental Ethics
GEOL 300	Energy, Resources and Environment
BIOL 370	Introductory Environmental Science
Service Learning/Internship/Undergraduate Research Option	

## *Resource and Remediation Science and Technology Track*

PHIL 385	Engineering Ethics
GEOL 300	Energy, Resources and Environment
GEOL 560	Geomorphology and Land Use
GEOL 650	Geohydrology
GEOL 690AK	Soils
GEOL 751	Advanced Geohydrology
BIOL 530	Applied and Environmental Microbiology
CHEM 531	Organic Chemistry I
CHEM 532	Organic Chemistry II
APEN 370	Environmental Engineering Technology
APEN 323	Introduction to Fluids
APEN 492	Energy Management and Sustainability
APEN 510	Solar and Wind Engineering
APEN 600	Water and Wastewater Treatment
APEN 610	Hydraulics and Hydrology
ME/PHYS 702	Energy and Sustainability
Service Learning/Internship/Undergraduate Research Option	

## *Environmental and Green Sciences Track*

GEOL 102	Earth Science and the Environment <sup>1</sup>
GEOL 111	General Geology <sup>1</sup>
GEOL 235	Meteorology
GEOL 300	Energy, Resources and Environment
GEOL 310	Oceanography
GEOL 560	Geomorphology and Land Use
GEOL 678	Geologic Perspectives on Climatic Change
GEOL 650	Geohydrology
GEOL 690AK	Soils
GEOL 751	Advanced Geohydrology
PHIL 590AD	Environmental Ethics
BIOL 370	Introductory Environmental Science

BIOL 418	General Ecology
BIOL 510	Ecosystem Management and Restoration
BIOL 530	Applied and Environmental Microbiology
BIOL 570	Conservation Biology
CHEM 211	General Chemistry I
CHEM 212	General Chemistry II
CHEM 531	Organic Chemistry I
CHEM 532	Organic Chemistry II
PHYS 761	Environmental Physics
Service Learning/Internship/Undergraduate Research Option	
<b>Total Credit Hours</b>	<b>13</b>

<sup>1</sup> Students may take GEOL 102 or GEOL 111 for credit towards this certificate.