Are you interested in learning more about how the world around you works? Would you like to explore the interconnected nature of the ground beneath your feet, the air around you, and the water that makes up 65 percent of your body? Would you like to be one of those individuals who helps protect and safeguard our ecosystem? Would you like to work in an interesting field that pays well?

If these questions intrigue you, Environmental Sustainability and Technology (EST) just might be the major for you.

The EST degree offers a solid core of General Education and science courses and allows you to pick an area of interest in a related field to prepare you for the future. Some students will choose to gain additional knowledge and have a second area of interest to fill the elective hours.

Those areas of interest, known as cognates, are:
- Earth Sciences
- Energy Technology
- Environmental Biology
- Health and Safety
- Spatial Analysis
- Water and Waste Management

The EST degree is broad based, giving you an opportunity to pursue interests in several scientific or technical fields. There are many career options in the public sector, industry, and consulting firms.

For More Information

For more information about this program and the opportunities it provides, please contact:

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(615) 898-2113
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or

Carol Boraiko, Associate Professor
Engineering Technology
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Environmental Sustainability and Technology

The Environmental Sustainability and Technology (EST) degree program consists of 41 hours of General Education courses, 13 hours of Core courses, 24 hours of supporting courses, and 49 hours for the selected cognate(s), plus electives. This program allows Prior Learning Assessment (PLA) credit, through which industry certifications, training, and other programs may reduce the number of courses required to earn this degree. Talk to your advisor to determine if PLA might be an option for you.

All EST students are required to take 13 credit hours in the following core courses:
- EST 2810 Introduction to Environmental Science (3)
- EST 4770 Pollution Control Technology (3)
- EST 4760 Seminar in Environmental Sustainability and Technology (1)
- EST 4980 Environmental Public Health (3)
- ET 3920 Industrial Internship (3)

Depending on your choice of cognates, there are between 15 and 21 required credits.

Earth Sciences Cognate (15 or 16 credits)
- GEOL 3010 Oceanography (3)
- P GEO 4000 Climatology and Climate Change (3)
- GEOL 4050 Meteorology (3)
- P GEO 4020 Environmental Issues, Impacts, and Sustainability (3)

Then choose one of the following:
- GEOL 4040 Engineering Geology (3)
- GEOL 4120 Environmental Geology (4)
- P GEO 4020 Environmental Issues, Impacts, and Sustainability (3)

Energy Technology Cognate (21 credits)
- EST 4810 Energy and the Environment (3)
- EST 4820 Solar Design (3)
- EST 4840 Energy Auditing (3)
- ET 3610 Introduction to Electricity and Electronics (3)
- ET 3810 Thermodynamics (3)
- ET 4815 Heating, Ventilation, and Air Conditioning (3)

Then choose one of the following:
- P GEO 4530 Geographic Information Systems (3)
- ABAS 4120 Alternative Fuels (3)
- CMT 3195 Sustainable Construction (3)

Environmental Biology Cognate (20–21 credits)
- BIOL 3210/3211 Environmental Microbiology (3)
- BIOL 3400/3401 General Ecology (4)
- BIOL 4550 Biotechnology (3)
- BIOL 4590 Principles of Environmental Toxicology (4)
- CHEM 4600 Introduction to Environmental Chemistry (3)

Then choose one of the following:
- BIOL 4570/4571 Principles of Toxicology (3)
- GEOL 4120 Environmental Geology (4)
- GEOL 4130 Hydrogeology (4)
- P GEO 4020 Environmental Issues, Impacts, and Sustainability (3)

Health and Safety (18 credits)
- ET 4440 Fire Safety (3)
- ET 4450 Industrial Hygiene (3)
- ENGR 3920 Engineering Safety (3)
- ENGR 3970 Engineering Economy (3)
- BIOL 4570/4571 Principles of Toxicology (3)
- BIOL 4590 Principles of Environmental Toxicology (3)

Then choose one of the following:
- PHIL 3340 Environmental Ethics (3)
- P GEO 4020 Environmental Issues, Impacts, and Sustainability (3)
- CHEM 4600 Introduction to Environmental Chemistry (3)

Spatial Analysis (17–18 credits)
- P GEO 4490 Remote Sensing (4)
- P GEO 4510 Laboratory Problems in Remote Sensing (4)
- P GEO 4530 Geographic Information Systems (3)
- P GEO 4560 Intermediate GIS (3)

Then choose one of the following:
- P GEO 3000 Maps and Mapping (3)
- P GEO 4380 Cartography (4)

Water & Waste Management (17–19 credits)
- BIOL 2230/2231 Microbiology (4)
- BIOL 4240/4241 Ecology (4)
- CHEM 4600 Introduction to Environmental Chemistry (3)

Then choose two of the following:
- ABAS 3340 Soils (3)
- GEOL 4130 Hydrogeology (4)
- CHEM 4610 Environmental Chemistry (4)
- ENGR 3920 Engineering Safety (3)
- BIOL 4570/71 Principles of Toxicology (3)
- BIOL 4590 Principles of Environmental Toxicology (3)