Environmental Science
The Environmental Science (ES) major at Siena Heights University transforms its students into environmental professionals. The major prepares students for a diverse set of career options. After receiving an in-depth understanding of environmental issues and systems, students can then go out into the world as problem-solvers. Upper-class ES students may choose to concentrate on either the chemical, biological or environmental management aspects of the program.

An interdisciplinary program of the Biology, Chemistry and Environmental Science departments, the curriculum offers the following academic benefits:

• A variety of lecture, laboratory, research and field courses supporting career options in both the public and private sector
• Courses relating environmental problem-solving, life cycle assessments, scientific computing, green design, research statistics and instrumentation to address the depth of environmental science
• Coursework preparing students for advanced degrees in fields like environmental science, law, policy, health, industry and conservation. Electives may be utilized to enhance preparation for specific growth programs
• Professional certifications and training
• Summer hands-on internship opportunities
• Career counseling and referrals

A Place to Call Your Own
Siena Heights University is an active community member in leading green initiatives.

State, Local and National affiliates with the following:
• Michigan Association of Environmental Professionals
• Step-It-Up Lenawee
• Focus the Nation
• The Earth Charter
• Co-Op America Groups
• River Raisin Watershed Council
• The Lenawee Soil Conservation District
• Michigan Citizens for Water Conservation

Campus Initiatives include:
• Research and attention to green building technologies and design
• Green Light Environmental Science Group
• GAIA Tri-campus Environmental Group

“The Environmental Science program has taken me places I never knew existed. I feel that I am already making a difference.”

— Kayla Palmer
SHU ES Student
Hands-On Experience
Environmental Science majors at Siena Heights University can be involved in a variety of related events and activities, including:

- Paid summer internships
- Making a difference with classmates in our Green Light Environmental Science Group
- Hosting the annual Earth Day event
- Leading the campus-wide recycling program
- Studying natural habitat on site
- Completing a written senior research project
- Becoming a member of the tri-campus environmental committee to help design and implement sustainable solutions
- Cooperating with local environmental and climate change organizations such as Step-It-Up and River Raisin Watershed Council
- Delivering campus-wide and community presentations
- Actively participating with the Adrian Dominican Sisters on shared global environmental initiatives
- Conducting and presenting research of your environmental concern

"Once regarded as irrelevant to economic activity, environmental problems are drastically rewriting the rules for business, investors, and consumers, affecting over $100 billion in annual capital flows."

— Gary Gardner and Thomas Prugh
Project co-directors
Worldwatch Institute State of the World 2008
Bachelor of Science Degree Major

ENVIRONMENTAL SCIENCE

Environmental Science Requirements  22 semester hours
ENV 110  Introduction to Environmental Science  4
ENV 122  Geology  4
ENV 141  Climatology  3
ENV 152  Oceanography  3
ENV 351  Limnology  3

ENV 395  Junior Seminar in Environmental Science I  1
ENV 396  Junior Seminar in Environmental Science II  1
ENV 495  Senior Seminar in Environmental Science I  1
ENV 496  Senior Seminar in Environmental Science II  1

Cognate Requirements  45-47 semester hours
BIO 141  Basic Concepts of the Cell  4
BIO 241  Animal Biology  4
BIO 441  Terrestrial Ecology and Field Biology  4
CHE 141  General Chemistry I  4
CHE 142  General Chemistry II  4
CHE 350  Analytical Chemistry  4

PHY 141/161  Physics I  4
PHY 142/162  Physics II  4
CHE 241  Organic Chemistry I  4
TSC 101  Fundamentals of Speech Communication  3
MAT 174  Introduction to Statistics and Probability  3
MAT 244  Statistical Analysis and Design or Calculus with Analytic Geometry I  3
MAT 181  Calculus with Analytic Geometry I and II  4
MAT 182  Calculus with Analytic Geometry II  4
TSC 101  Fundamentals of Speech Communication  3

 OPTIONS

Biology Option  16 semester hours
BIO 242  Plant Biology  4
BIO 341  Entomology  4
BIO 342  Genetics  4
BIO 360  Microbiology  4

Chemistry Option  12 semester hours
CHE 241  Organic Chemistry I  4
CHE 242  Organic Chemistry II  4
CHE 341  Physical Chemistry I  4

Environmental Management Option  11 semester hours
ENV 342  Industrial Ecology & Sustainability  3
ENV 441  Environmental Regulations  3
ENV 452  Hydrogeology  3
ENV 380  Environmental Certifications  2

Safety Training
Hazardous Materials Transportation
RCRA Hazardous Waste Generator
Stormwater Operator
ISO 14001

Liberal Arts  28 semester hours
General Electives  8-15 semester hours
Total for Degree  120 semester hours

“After I graduate, I know that I will be working to make a real difference to the quality of people’s lives.”
— Jim Felan
SHU ES Student

Another Kind of Green

SHU Environmental Science graduates receive state and industry environmental science certifications employers value. Faculty actively counsel and refer students to quality, high-paying employment opportunities in this growing field. Related career titles for Environmental Science majors (by discipline) are:

Biology
• Agricultural scientist
• Biochemist
• Biomedical engineer
• Forest ranger
• Microbiologist
• Ocean technician
• Wildlife manager

Chemistry
• Biochemist
• Biomedical engineer
• Chemical technician

Environmental Management
• Air/Water quality manager
• Alternative energy/technology auditor
• City planner
• Conservation agent
• Consumer safety inspector
• Engineering technician
• Environment consultant
• Fund raiser
• Geologist
• Hazardous waste manager
• Industrial hygienist
• Meteorologist
• Seismologist

For more information about the Environmental Science program at Siena Heights University please call the admissions office at (800) 521-0009, or email us at admissions@sienaheights.edu.

Please consult a university catalog for most up to date info.