



BACHELOR OF

Sustainability

 **chatham** UNIVERSITY

Sustainability has grown from a niche field to an increasingly crucial lens through which all aspects of society are being considered. That's why Chatham has developed four unique tracks within our Bachelor of Sustainability program.

TRACK 1: SUSTAINABLE ENERGY & URBAN SYSTEMS

introduces students to a wide range of renewable energy technologies and systems, and explores the relationship between technological, social and policy change, particularly in the context of the sustainable cities of the future.

TRACK 2: NATURAL RESOURCE MANAGEMENT provides students with a broad-based understanding of the inter-connectedness of ecological, economic, social and political systems. It introduces students to a wide range of renewable natural resources, along with their use and management. It combines professional competency in management skills with a strong foundation in the biophysical, social, and economic fields.

TRACK 3: SUSTAINABLE BUSINESS exposes students to analytical concepts and tools for decision making. At the same time students are encouraged to think broadly about the impacts of business decisions. The track includes traditional business classes, an introduction to sustainable technology, approaches to decision analysis and corporate social responsibility.

TRACK 4: FOOD STUDIES offers an integrated and applied perspective on food and agriculture through the interdisciplinary analysis of social, cultural, economic, environmental, and historical topics, giving students an in-depth understanding of how our food systems work, from a local to global perspective.

Note: Students who want to focus on sustainability but don't find what they are looking for in the three tracks are able to "build their own degree" in conjunction with their faculty advisor.



CURRICULUM YEARS 1 & 2

In addition to general education requirements, all BSUS students will take the following courses (primarily in years 1 and 2):

- Statistics/Business Statistics
- Sustainability Science
- Sustainability and Society
- Integrative Biology and lab
- Dynamic Earth Systems
- Sustainability and Technology
- Writing about Environmental Science
- Sustainability Career Prep
- Geographic Information Systems
- Economics of Sustainability
- Policy and Decision Making
- Sustainable Decision Analysis
- Capstone
- Agroecology and lab

Sample course

Sustainability Career Prep

Students will develop career-readiness, explore professional opportunities in Sustainability and related fields, and develop self-marketing techniques, including: resumes, cover letters, interview and networking skills and a professional demeanor. Students will develop and implement a job, internship, or graduate school search plan to map out the steps necessary to land their first professional experience.

CURRICULUM YEARS 3 & 4

Further coursework allows students to develop skills in their area of interest.

SUSTAINABLE ENERGY & URBAN SYSTEMS

Required Courses

- Green and Sustainable Design
- Renewable Energy and Society
- Energy Policy

Electives (choose two)

- Information Systems & Operations
- Introduction to Programming
- Database Management
- Sustainable Cities
- Applications in Sustainable Energy
- Green Innovation

Sample course

Green & Sustainable Design

Global issues of energy use, resource depletion, and indoor air quality have promoted design professionals to re-evaluate design and construction processes. This course provides students with knowledge of the US Green Building Council (USGBC) and Environmental Design (LEED) certification systems to promote environmentally responsible design.

NATURAL RESOURCE MANAGEMENT

Required Courses

- Chemistry in Context and lab
- Natural Resource Policy and Law
- Quantitative Ecology and lab

Electives (choose two)

- Global Environmental Health
- Science of Global Change
- Aquatic Entomology
- Forestry

Sample course

Science of Global Change

The climate system of Earth is rapidly changing due to complex and interacting phenomena. This course offers an in-depth investigation of the science behind climate change, including a survey of model forecasts. Emphasis will also include the current and projected consequences of climate change on natural resources.

FAQ

Q: Do I have to enter the program knowing which track I want to be in?

A: No. We expect that students will spend the first couple of years exploring their interests in sustainability, and then declare the track they wish to pursue.

Q: Will my diploma show my track?

A: No, but tracks will be indicated on the transcript.

For more information,
visit falk.chatham.edu/bsus

SUSTAINABLE BUSINESS & MANAGEMENT

Required Courses

- Foundations of Business
- Green Innovation
- Corporate Social Responsibility

Electives (choose two)

- Principles of Marketing
- Database Management
- Renewable Energy and Society
- Sustainable/Resilient Cities
- Applications in Sustainable Energy

Sample course

Sustainable and Resilient Cities

This course analyzes cities as complex systems with subsystems such as food and water, energy, and transportation. We will explore systemic approaches for urban sustainability and climate resiliency, drawing on examples worldwide.

FOOD STUDIES

Required Courses

- Food, Farm and Field
- International Cuisine
- Food Access and Policy
- Sustainable Production
- Sustainable Aquaculture

Sample course

Food, Farm and Field

This course explores food, farm, and environment through readings, films, lectures, demonstrations, field trips, and on-farm and kitchen experiences in research and production problems.

INTEGRATED DEGREE PROGRAMS

Students may also choose to further their education at Chatham through pursuing an Integrated Degree Program (IDP) with either our Master of Sustainability or the Master of Arts in Food Studies. Through the IDP, students earn both bachelor's and master's degrees in as few as five years, saving time and money.



EDEN HALL CAMPUS



Located on 388 acres in the North Hills of Pittsburgh, the lab building and the residence hall are net zero, and the entire campus aims to be net zero in the future.



Water: Stormwater is managed by rain gardens that collect and direct water flow, gravel walkways that make it easier for rainwater to get to the soil below, and a rainwater harvesting system that uses it for crop irrigation. Eden Hall treats wastewater through a six-step process that mimics nature and handles up to 6,000 gallons daily.



Food & Sustainable Agriculture: Eden Hall Campus encompasses a certified organic farm, demonstration garden, and greenhouses (one heated year-round by solar-thermal panels). Faculty and students demonstrate sustainable agricultural practices, and produce food for the campus. Initiatives include nutrient recycling and soil building from compost; aquaponics; mushroom farming; and edible landscaping around buildings.



“All students are encouraged to play an active role in helping to manage and develop Eden Hall Campus. Jobs that directly link to classes are available—managing the woodlands, working with the data and energy systems that permeate the campus buildings, partnering with local businesses, or doing community outreach. The experience at Eden Hall isn’t just taking classes and living in the dorms.”

— **PETER WALKER, PH.D.**, dean of the Falk School of Sustainability & Environment



Energy & Climate: Over 400 solar panels not only generate enough energy to power 14 homes for one year—they also provide heat for a residence hall and a greenhouse, and the campus is heated and cooled via 40+ geothermal wells. Eden Hall’s weather station collects data on solar radiation, air temperature, precipitation, wind speed and direction, and leaf wetness. Soil sensors collect data on items like volumetric water content and electrical conductivity.



Design & Planning: Eden Hall models a variety of building standards, energy management techniques, and new ways of sustainable living. Each building is monitored to determine optimal energy consumption. Buildings meet LEED (Leadership in Environmental and Energy Design) Platinum certification, and some future buildings are planned to be built to Living Building Challenge standards.



Community & Health: Eden Hall attracts academic, public, and artistic communities through year-round programming including workshops, dinners, performances, and festivals. Visitors can hike eco-education trails, take yoga classes, explore sustainable agriculture sites, and observe natural wastewater treatment systems in action. In addition, our farm connects to the community through farm-to-school programs and partnerships with local farmers and nonprofits.





Shadyside Campus



HOUSING



Esther Barazzone Center



To make the most out of your experience at Chatham, we require that students live and study on-campus for at least two years:

- Year 1: Shadyside Campus (Most first-year BSUS classes will take place here)
- Year 2: Student's choice (SC, EHC, or off campus)
- Year 3: Eden Hall Campus
- Year 4: Student's choice (EHC, SC, or off campus)

	Year 1	Year 2	Year 3	Year 4
Shadyside Campus (SC)	✓	o	X	o
Eden Hall Campus (EHC)	X	o	✓	o
Off Campus/Commuter	X	o	X	o

Chatham was ranked 7th in the nation for best food grown and sourced locally by *Sierra Magazine's* 2015 "Cool Schools" report.

A sampling of food from the kitchen in the Esther Barazzone Center:

- Korean barbecue
- Vegetarian soufflé
- Homemade soft pretzels
- Crostini bar (with mushroom and leek, artichoke and Asiago, and tomato and basil toppings)
- Homemade sun-dried tomato and rosemary bread
- Mac and cheese with brisket smoked on campus
- Artichoke-crustied tilapia from our Aquaculture Lab
- Sweet potato pancakes with smoked chipotle



Orchard Hall

Orchard Hall, Eden Hall Campus's residence building, is constructed to the highest LEED (Leadership in Energy and Environment Design) standards. Here's what that looks like:

Rooms are heated and cooled through radiant panels on the ceiling that use the campus-wide geothermal heating.

"Smart" rooms monitor temperature and humidity and tell the system how to respond.

All electricity—and heat for the hot water—is generated by solar panels on the roof.

The Importance of Eden Hall Campus Residency

The immersion year at Eden Hall is an integral part of the program, as students live and learn on the campus where they will apply their knowledge and interests toward projects that tackle sustainability challenges. During students' third year in the program, most of their major classes will be held at Eden Hall, utilizing the campus for first-hand experience of the lessons covered throughout the courses. Outside of classes, students can utilize the campus's rural setting and technologies to explore and investigate for research, project work, or advanced study. Additionally, surrounding themselves with like-minded peers and faculty inspires students to delve into important topics and collaborate with others to create results that are applicable to the real world and impressive to future employers.

Although residency at Eden Hall is only required during Year 3, students can choose to live and study at Eden Hall during Years 2 and 4 to take advantage of the unlimited opportunities EHC presents to Bachelor of Sustainability students.



When not in class, residents (and visitors) have plenty to do, with yoga classes, karaoke, bowling, billiards, and game nights. EHC also hosts community-wide events such as the annual Hunger Banquet, and workshops including Leave No Trace, Back Country Backpacking, Soapmaking, Wilderness Survival and First Aid, and Community Create Nights that are open to all students.

CAREERS

Because sustainability is an increasingly important consideration, professionals are found in a greater number and array of arenas. Graduates find employment in industry; public and private education; all levels of government; policy institutions; international organizations, and other non-governmental organizations. Here's a small selection of job titles associated with each of our tracks.

Sustainable Energy & Urban Systems

- Renewable energy analyst
- Campus sustainability director
- Corporate social responsibility/sustainability professional
- Water engineer or scientist
- Green building professional
- Urban sustainability and energy specialist

Natural Resource Management

- Environmental services consultant
- Conservation scientist
- Environmental policy analyst
- Forester
- Land use planner
- Restoration specialist
- Wildlife habitat specialist

Sustainable Business

- Chief sustainability executive
- Corporate sustainability manager
- General and operations manager
- Industrial production manager
- Campus sustainability officer
- Fleet manager
- Research officer
- Supply chain manager

Food Studies

- Production manager, horticulture
- Cloning and bio-regulation technicians, controlled environment agriculture
- Farm manager
- Purchasing officers at food corporations
- Catering manager



BSUS students have access to a dedicated Associate Director for Career Development who provides support, resources, and learning opportunities designed specifically for Falk School undergraduate and graduate students. Offerings include:

- One-on-one consultations
- Professional development workshops and programs for students
- Connecting students with alumni to provide opportunities for mentorship, networking, job shadowing, informational interviewing, internships, and jobs



THE CHATHAM PLAN

The Chatham Plan is a 5-step approach to infusing the entirety of your undergraduate education with all the things you need to launch your career after you graduate.

- Steps 1 & 2: Assessment and Goals
- Step 3: Professional Preparation
- Step 4: Internships
- Step 5: The Graduation Checklist

More info at www.chatham.edu/chathamplan

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For more information, visit
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