The Illinois Green Economy network (IGEN) began eight years ago with the simple goal of demonstrating all that community colleges can do to advance sustainability. Along the way, IGEN has become a national leader and the only comprehensive statewide effort in sustainability education in American higher education.

Four years ago, the leaders of IGEN saw the opportunity to seek federal funding to advance the work of IGEN to a new level by developing stackable curriculum about green jobs and careers. While all 48 Illinois community colleges are members of IGEN, a core group of 17 colleges stepped forward to apply for the IGEN Career Pathways program with funding from the U.S. Department of Labor, Round 1, TAACCCT grant.

Career Pathways has created curriculum for 39 degree and certificate programs in sustainability-related occupational fields, including agriculture, food and natural resources; architecture and construction; manufacturing; energy; and transportation, distribution and logistics. Each program's courses have been developed using open-source materials that can be used by any college.

We hope you are inspired by IGEN's Career Pathways work and will continue it. Our hope is that sustainability increasingly becomes a part of how we learn and work in Illinois.

Jerry W. Weber, Ph.D.
President, College of Lake County
Co-Chair, Steering Committee,
Illinois Green Economy Network

Georgia Costello, Ph.D.
President, Southwestern Illinois College
Co-Chair, Steering Committee,
Illinois Green Economy Network
Agriculture, Food and Natural Resources

Architecture and Construction

Energy

Manufacturing

Transportation, Distribution and Logistics
Imagine what it was like to live through the birth of the industrial age. You would have seen new railroad lines cut across pasture lands, and people flocking from the farms to cities, drawn by new jobs in factories. Over time you would have seen a rising middle class, growing as machines clanked out ever-increasing production. And if the smokestacks of the factories spewed pollutants along with prosperity, it was thought the price of progress.

A hundred years later, we’re also at the start of a new economy, one based not on consuming resources but on sustaining them. It’s an emerging economy that is transforming old jobs and creating new ones. Some of these jobs are focused on creating new technologies that will yield renewable energies or reduce pollution; others on making production processes or other existing business practices more environmentally friendly.

According to the latest estimate prepared by the Bureau of Labor Statistics (BLS), there are now 3.1 million jobs in the green or sustainable economy. Though still a relatively small portion of the overall economy, the green sector is poised to take off. In a recent Huffington Post column, Steven Cohen, executive director of Columbia University’s Earth Institute, referenced a survey by the Massachusetts Institute of Technology Sloan School of Management that found that 68 percent of responding executives had increased their commitment to sustainability in the past year, and 67 percent said that sustainability was essential to remain competitive.

This is the kind of thinking that is creating job opportunities in diverse fields requiring different degrees and areas of specialization. It can help Illinois build a vibrant economy, a thriving environment and an improved quality of life.
New Green Certificate and Degree Programs

Illinois community college students now have more options than ever to earn a certificate or degree that can lead to a rewarding green career or job.

The IGEN Career Pathways Consortium has created and re-designed 39 green industry certificates and degree programs at 17 Illinois community colleges created through the Department of Labor’s Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant program. These programs range from a "Green Facilities Management Certificate" to a "Sustainable Landscape Practices A.A.S. Degree."

A list of all programs and descriptions are available in this brochure and at www.igencc.org.

Open Source Course Curriculum Available for Colleges

All IGEN Career Pathways courses were created or re-designed using open-source materials and are intended to be shared as a free resource. Faculty and staff can explore the following pages for program descriptions, Classification of Instructional Programs (CIP) codes, Standard Occupational Classification (SOC) System codes, and contact information for the originating college.

Colleges can dig deeper and explore individual course content by visiting the online repository created by the U.S. Department of Labor at www.skillscommons.org and use the searchable database to download files and review content. Files can be uploaded to an LMS (Learning Management System) or used in the classroom. Content can be used "as is" or modified if proper attribution is given. More information about open source content is available at www.creativecommons.org.
VCN Green Economy

Thanks to the pioneering work of the faculty and staff from our 17 college consortium, the IGEN network of Illinois Community Colleges is at the forefront in preparing students and workers for entry and advancement in exciting green careers that help build the Illinois economy.

IGEN Career Pathways has partnered with the Virtual Career Network (VCN) to create the VCN Green Economy. This platform was developed to help job seekers by connecting them to education and training opportunities as well as providing various services, such as building an online career portfolio, career assessments and practice test-taking.

Visit [www.vcn.org](http://www.vcn.org) to explore careers and ensure that your college's programs are listed.

Green jobs are defined by the Bureau of Labor Statistics as jobs that produce goods or provide services that benefit the environment or conserve natural resources, as well as jobs in which workers’ duties involve making their establishment's production processes more environmentally friendly or use fewer natural resources.

Positions in the field contribute to environmental quality by:

- Protecting and restoring ecosystems and biodiversity.
- Reducing energy, material and/or water consumption through high efficiency.
- Minimizing or avoiding waste and pollution.
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Agriculture, Food and Natural Resources
Sustainable Agriculture Certificate

CIP Code: 010304

College of Lake County, www.clcillinois.edu

Sustainable agriculture is an emerging specialty field that is growing quickly as we seek to find economically viable ways to maintain farm land and sustainable ways to support local food production. Students take a variety of hands-on courses in areas such as permaculture, extended season production and seasonal fruit and vegetable production. Graduates are prepared to work as skilled farm laborers and managers or entry entrepreneurial support programs such as the Farm Business Development Center.

Occupation Title/SOC System Code:

11-9013.01 Nursery and Greenhouse Managers
45-1011.07 First-Line Supervisors of Agricultural Crop and Horticultural Workers
25-9021.00 Farm and Home Management Advisors
11-9013.02 Farm and Ranch Managers
19-1031.01 Soil and Water Conservationists
17-1012.00 Landscape Architects
19-1013.00 Soil and Plant Scientists
45-2092.01 Nursery Workers
13-1199.05 Sustainability Specialists
19-4011.01 Agricultural Technicians

For more information, contact:
Rory Klick, Instructor, Horticulture
rklick@clcillinois.edu
847-543-2320

“Seeing program graduates become successfully employed in the industry is one of the most rewarding aspects of my job.”

- Rory Klick, Department Chair
  College of Lake County
  Horticulture Department
Sustainable Agriculture Technology A.A.S.

CIP Code: 1.0308

Triton College, www.triton.edu

The Sustainable Agriculture Technology program provides students with the skills necessary to manage an environmentally sound and sustainable urban food production system. Graduates are qualified for numerous positions associated with sustainable agriculture including horticulture, nursery operations, agricultural education and managing food production. After completing the Sustainable Agriculture Technology associate degree, students will be able to:

- Choose sustainable food production practices for nutritious food
- Evaluate food distribution and storage practices
- Integrate appropriate sustainable practices to promote urban agriculture
- Describe the interrelationships of people, society and plants
- Demonstrate effective written, visual and verbal communication skills
- Use learned skills to advance in a chosen career and continue professional development through four-year transfer programs

**Occupation Title/SOC System Code:**

19-4011.01 Agriculture Technician
13-1199.05 Sustainability Specialists
11-1011.03 Chief Sustainability Officers
19-2041.03 Industrial Ecologists
19-4011.00 Food Science Technicians
19-1013.00 Soil and Plant Scientists
19-1031.01 Soil and Water Conservationists
11-9013.02 Farm and Ranch Managers

For more information, contact:

Tom Elsey, Horticulture Coordinator and Greenhouse Operations Manager
thomaselsey@triton.edu
708-456-0300, ext. 3550

“My coursework in Triton's sustainable agriculture program gave me a great foundation and specific skills that my employer wanted for new employees.”

- Everado Meza Jr., student
Triton Community College
Niche Livestock Production Certificate

CIP Code:  1.0302

John Wood Community College, www.jwcc.edu

The Niche Livestock Production certificate is designed to provide students with the practical skills and knowledge needed to be successful in the niche livestock industry. Emphasis is placed on production practices and business practices suited to self-employed niche livestock producers.

Occupation Title/SOC System Code:

11-9012.00   Farmers and Ranchers
45-1011.00   First-Line Supervisors of Farming, Fishing and Forestry Workers
45-2092   Farmworkers, Farm and Ranch Animals
11-9011   Farm, Ranch and other Agricultural Managers

For more information, contact:

David Hetzler, Director, CTHE Strategic Project
dhetzler@jwcc.edu
217-641-4953

“To restore economic and agricultural vibrancy across the state, the food processing and business communities must be engaged to support efforts to expand capacity of livestock and specialty crop production sectors.”

Fruit and Vegetable Production Certificate

CIP Code: 1.0304

John Wood Community College, www.jwcc.edu

The Sustainable Local Foods Farming program provides courses and hands-on training in sustainable fruit and vegetable production, entrepreneurship and marketing. Students gain the practical skills and knowledge needed to be successful agricultural entrepreneurs in this emerging industry.

Occupation Title/SOC System Code:

11-9012.00  Farmers and Ranchers
45-1011.00  First-Line Supervisors of Farming, Fishing and Forestry Workers
45-2092     Farmworkers, Farm and Ranch Animals
11-9011     Farm, Ranch and Other Agricultural Managers

For more information, contact:

David Hetzler, Director, CTHE Strategic Project
dhetzler@jwcc.edu
217-641-4953

“Illinois needs trained professionals—farmers, scientists, chefs, marketers, and so forth—to address future demands of a growing world population and diminishing supply of natural resources.”

Sustainable Food Production Certificate

CIP Code:  1.0308

Triton College, www.triton.edu

This program focuses on how to produce nutritional food crops, addressing the lack of available fresh, nutritional food produce.

Upon successful completion of the Sustainable Food Production certificate, the learner will be able to:

• Analyze methods of improving nutritious value of food through sustainable food production practices
• Examine government policies and regulations which control production of nutritious food products
• Appraise techniques of solving the challenges of urban food production

Occupation Title/SOC System Code:
13-1199.05  Sustainability Specialists
45-2011.00  Agricultural Inspectors
19-4011.00  Agriculture and Food Science Technicians
11-2011.01  Green Marketers
19-2041.03  Industrial Ecologists
11-1011.03  Chief Sustainability Officers
19-2041.02  Environmental Restoration Planners
11-9013.02  Farm and Ranch Managers

"I have long been interested in sustainable food. Being a part of the certification program has given me great focus."

- Regina Milkovich, student
  Triton Community College

For more information, contact:

Tom Elsey, Horticulture Coordinator and Greenhouse Operations Manager
thomaselsey@triton.edu
708-456-0300, ext. 3550
Value-Added Local Food Certificate

CIP Code: 12.05

Lincoln Land Community College, [www.llcc.edu](http://www.llcc.edu)

The Value-Added Local Food certificate prepares individuals who are involved with or plan to pursue a career related to the culinary or agricultural field and want to focus on local foods. This certificate is designed for individuals working as entrepreneurs, chefs and restaurant managers.

**Occupation Title/SOC System Code:**

- 11-1021.00 General and Operations Managers
- 35-2012.00 Institution and Cafeteria Cooks
- 13-1199.00 Business Operations Specialists, All Other
- 35-1011.00 Chefs and Head Cooks

**For more information contact:**

Marnie Record, Workforce Specialist
marnie.record@llcc.edu
217-786-4993

“By concentrating on value-added crops like vegetables and grains in the winter, farmers can increase their income and customer base. Focusing on these products contributes to community and rural economic development.”

- Marnie Record, Instructor
  Lincoln Land Community College
Stormwater Management Certificate

CIP Code:  26.1301

Lewis & Clark Community College, www.lc.edu

The Stormwater Management certificate provides stormwater systems training to private and public employees in various construction-related fields. The program’s goal is to increase the proper design, construction and maintenance of erosion and sediment controls during construction and to assure the proper long-term operation and maintenance of storm water systems after construction is completed. The training program is primarily directed toward inspectors and contractors, however, permit reviewers, public works personnel and engineers will also benefit from this program.

Occupation Title/SOC System Code:

13-1041.01  Environmental Compliance Inspectors
17-2081.01  Water/Wastewater Engineers
17-2051.00  Civil Engineers
17-3025.00  Environmental Engineering Technicians
19-1031.01  Soil and Water Conservationists
19-2043.00  Hydrologists

For more information, contact:

James Moss, Instructor
jkmoss@lc.edu
618-468-4875

“As climate continues to warp our weather, Illinois needs to encourage communities to make their water infrastructure more resilient to both extreme precipitation and drought.”

- Rob Moore, Senior Policy Analyst at NRDC
Sustainable Landscape Practices A.A.S.

CIP Code: 1.0605

Triton College, www.triton.edu

The Sustainable Landscape Practices program gives students a background in sustainable landscape features and practices such as soil and water conservation and the appropriate use of native plants.

This program provides students with training in sustainable agriculture and horticulture practices and the necessary background to pursue a career in sustainable agriculture technology. The program includes landscape and home gardening practices that provide conservation and sustainable practices. Topics covered include green roofs, water gardens, natural gardens, xeriscaping and other related sustainable agricultural practices. Students will examine common landscape and agricultural practices that have an adverse effect on the environment and explore solutions to those problems. Environmental aspects of bioenergy also are included.

**Occupation Title/SOC System Code:**

37-3011.00  Landscaping and Groundskeeping Workers
17-1012.00  Landscape Architects
37-1012.00  First-Line Supervisors of Landscaping, Lawn Service and Groundskeeping Workers
11-9013.01  Nursery and Greenhouse Managers
11-1011.03  Chief Sustainability Officers
11-9199.11  Brownfield Redevelopment Specialists and Site Managers
19-2041.02  Environmental Restoration Planners
19-1013.00  Soil and Plant Scientists

For more information, contact:

Tom Elsey, Horticulture Coordinator and Greenhouse Operations Manager
thomaselsey@triton.edu
708-456-0300, ext. 3550

“College leaders themselves are enhancing higher education by increasing the number of sustainability projects on their own campuses and in the wider community that engage various vendors and contractors and provide applied learning opportunities for students.”

Sustainable Agroecology Certificate

CIP Code: 1.0308

Triton College, www.triton.edu

The Sustainable Agroecology program is designed for learners who wish to gain an appreciation and practical skills to use sustainable practices that will positively influence the quality of natural ecosystems and the human environment.

After successfully completing the Sustainable Agroecology certificate program, students will be able to:

- Design and manage a sustainable urban food production system
- Analyze social and political framework
- Prepare solutions to address environmental issues caused by landscape practices
- Demonstrate and model landscape management practices to provide a healthier environment

Occupation Title/SOC System Code:

- 19-2041.03 Industrial Ecologists
- 19-2041.02 Environmental Restoration Planners
- 19-1031.00 Conservation Scientists
- 45-4011.00 Forest and Conservation Workers
- 13-1199.05 Sustainability Specialists
- 19-3011.01 Environmental Economists
- 19-1013.00 Soil and Plant Scientists
- 37-3011.00 Landscaping and Groundskeeping Workers

For more information, contact:

Tom Elsey, Horticulture Coordinator and Greenhouse Operations Manager
thomaselsey@triton.edu
708-456-0300, ext. 3550

“When you think of a healthy, resilient community, the ground beneath your feet may not be the first thing that comes to mind. But soil is one of the most important determinants of economic, environmental and human health. In fact, healthy soil is so important that cultures around the world have recognized its critical role for centuries.”

- Groundswell International Organization
Sustainable Resource Management Certificate

CIP Code: 030201 SUST V61A

Kankakee Community College, [www.kcc.edu](http://www.kcc.edu)

The Sustainable Resource Management certificate is designed to prepare students for careers in sustainable resource management. Those who complete the courses are eligible to take the Illinois Recycling Association state certification exam. Students will examine basic principles and practices of sustainable resource management, consider the roles of government and evaluate and design sustainable resource management strategies for diverse organizational settings.

**Occupation Title/SOC System Code:**

- 51-9199.01 Recycling and Reclamation Workers
- 53-1021.01 Recycling Coordinators
- 53-7081.00 Refuse and Recyclable Material Collectors
- 11-3071.01 Transportation Managers
- 51-9061.00 Inspectors, Testers, Sorters, Samplers and Weighers
- 51-8099.02 Methane/Landfill Gas Generation System Technicians
- 53-1031.00 First-Line Supervisors of Transportation and materials-moving machine and vehicle operators
- 51-1011.00 First-Line Supervisors of Production and operating workers

**For more information, contact**

Paul Carlson, Associate Dean Business/Technology
pcarlson@kcc.edu
815-802-8858

“Any graduate of this coursework and certification exam will be able to apply relevant knowledge and skills in the real recycling world, and any employer of these graduates will realize the benefits of their industry-driven training.”

- Wynne Coplea, President
Illinois Recycling Association
Industrial/Brownfield Safety, Land Reuse and Public Health Certificate

South Suburban College, www.ssc.edu

The federal government defines brownfields as “abandoned, idled or underused industrial and commercial properties where expansion or redevelopment is complicated by real or perceived environmental contamination.”

Brownfield redevelopment can help a community in many ways. Many brownfield sites are in unattractive, economically depressed parts of a neighborhood. Cleanup and redevelopment of the sites can encourage higher property values and create jobs, as well as positively impact the local economy by creating a safer, healthier urban space to house businesses and residences.

Occupation Title/SOC System Code:

29-9012  Construction Health and Safety Technicians

For more information, contact:

Steve Kasper, Department Chair, Building Code Enforcement and Building Construction Technology Program Coordinator, Instructor
skasper@ssc.edu
708-596-2000, ext. 2295

“This new program is just another step to ensure that SSC plays a vital role to foster this growth and provide the career pathways for our residents now and in the future.”

- Becky Admave, Dean of Extension Services, South Suburban College
Sustainable Design Green Building Certificate

CIP Code: 150503

Rend Lake College, www.rlc.edu

After completion, students will understand essential principles for cutting energy costs in buildings and how to develop sustainable design and do pre-construction analysis and testing. The program includes energy analysis, landscape design, automated manufacturing for on-site development and a design-build component.

Occupation Title/SOC System Code:

11-3051.04  Biomass Power Plant Managers
11-9041.00  Architectural and Engineering Managers
11-1021.00  General and Operations Managers
11-9141.00  Property, Real Estate and Community Association Managers
17-2051.00  Civil Engineers
17-1011.00  Architects, Except Landscape and Naval
17-2199.03  Energy Engineers

For more information contact:

Matt Jackson, Curriculum Coordinator
jacksonm@rlc.edu
618-437-5321 ext., 1296

"Rend Lake College offers cutting-edge digital fabrication equipment, minimizing off-site manufacturing for large scale production."

- Tyson Ellis, Sustainability Professional, Rend Lake College
Sustainable Energy A.A.S.

CIP Code: 150503-C

John A. Logan College, www.jalc.edu

The Sustainable Energy degree provides students with the knowledge, skills, training and resources to pursue employment in renewable energy careers, including the most current knowledge of energy efficient management and HVAC trends. These emerging fields include energy auditing, thermal imaging services, energy efficiency, hydropower, wind energy and solar energy. The curriculum provides theory as well as sufficient laboratory experience to prepare graduates for immediate employment. Students are trained for competency in installing, operating, troubleshooting and maintaining all types of environmental control equipment.

Occupation Title/SOC System Code:

11-1011.03  Chief Sustainability Officers
13-1199.05  Sustainability Specialists
17-2199.03  Energy Engineers
13-1199.01  Energy Auditors
47-4099.03  Weatherization Installers and Technicians
17-2199.11  Solar Energy Systems Engineers
47-1011.03  Solar Energy Installation Managers
11-9199.10  Wind Energy Project Managers

For more information, contact:

Michael Coffman, Dean for Career and Technical Education
Michael.Coffman@jalc.edu
618-985-2828

“The green economy in the U.S. is growing, responding to needs like conserving natural resources and protecting biodiversity. With this growth, employers are seeking employees with the sustainability skills to contribute to commonly shared goals: profitability, environmental stewardship, and worker health, safety and productivity.”

Energy Efficiency Certificate

CIP Code:  150503-T

John A. Logan College, [www.jalc.edu](http://www.jalc.edu)

The Energy Efficiency certificate will give the student a solid foundation in electrical systems and energy efficiency topics. Upon successful completion of the certificate program, students will have a basic understanding of energy efficient management and HVAC trends. Renewable energy topics will focus on energy auditing, thermal imaging services, energy efficiency, hydropower, wind energy and solar energy.

**Occupation Title/SOC code**

17-2199.03  Energy Engineers
13-1199.01  Energy Auditors
17-2199.11  Solar Energy Systems Engineers
47-4099.03  Weatherization Installers and Technicians
17-2071.00  Electrical Engineers
17-3029.05  Industrial Engineering Technologists
17-2199.10  Wind Energy Engineers
49-9021.01  Heating and Air Conditioning Mechanics and Installers

"Now students are able to participate in lab sessions using up-to-date equipment and simulate real-world experiences in the energy auditing field."

- Jason Stutes, HVAC Instructor
  John A. Logan College

For more information, contact:

Michael Coffman, Dean for Career and Technical Education  
Michael.Coffman@jalc.edu  
618-985-2828
Green Facilities Management Certificate

CIP Code: 150503

Rend Lake College, [www.rlc.edu](http://www.rlc.edu)

The Green Facilities Management program allows students to understand the essentials of cutting energy cost in buildings, how to do pre-construction analysis and testing and know how to maintain green facilities. The program includes pre-post construction management and site design.

**Occupation Title/SOC System Code:**

- 11-3051.04  Biomass Power Plant Managers
- 11-9041.00  Architectural and Engineering Managers
- 11-1021.00  General and Operations Managers
- 11-9141.00  Property, Real Estate and Community Association Managers
- 17-2051.00  Civil Engineers
- 17-1011.00  Architects, Except Landscape and Naval
- 17-2199.03  Energy Engineers

For more information, contact:

Matt Jackson, Illinois Green Economy Network Curriculum Coordinator

[rc.edu](http://rlc.edu)

618-437-5321, ext. 1296
HVAC Performance Systems Certificate

CIP Code: 150503-R

John A. Logan College, www.jalc.edu

The HVAC Performance Systems certificate program will train students to perform energy audits and implement cost-effective, energy-efficient measures that make heating and cooling systems more efficient and keep the systems running at their maximum potential.

This certificate program will incorporate “green” technology including the use of thermal imaging, weatherization measures and renewable energy systems such as geothermal systems. Upon completion of the HVAC Performance Systems certificate, students will be proficient in conducting energy audits and will be able to recommend and implement heating and cooling systems and upgrades that optimize energy efficiency.

Occupation Title/SOC System Code:

17-2199.03  Energy Engineers
49-9021.01  Heating and Air Conditioning Mechanics and Installers
49-9099.01  Geothermal Technicians
49-9021.02  Refrigeration Mechanics and Installers
17-3025.00  Environmental Engineering Technicians
47-4099.03  Weatherization Installers and Technicians
47-4011.00  Construction and Building Inspectors
49-9098.00  Helpers—Installation, Maintenance and Repair Workers

“Fifty-four percent of a typical home's energy costs can be traced back to the heating and cooling systems, and 20 percent of all energy usage is due to heating water. This means that almost 75 percent of your home's total energy usage is related to your water heater, air conditioner and heater.”

- “Chicago Tribune” article

For more information, contact:

Michael Coffman, Dean for Career and Technical Education
Michael.Coffman@jalc.edu
618-985-2828
Energy Audit A.A.S.

CIP Code: 47.0201

College of Lake County, www.clcillinois.edu

The Energy Audit program prepares students for employment in the areas of energy audit and insulation of residential and commercial buildings. Students will acquire skills in safety, HVAC principles, soldering and brazing, mechanical and electrical troubleshooting, refrigerant handling, the use of refrigerant gauges, electrical test equipment and blower door testing.

The Energy Audit curriculum is aligned with the educational standards of Residential Energy Services Network (RESNET®) and the Illinois Occupational Skill Standards for HVACR. HET courses in A/C split-systems, residential HVAC, RESNET exam preparation, building insulation, energy auditing, air movement and ventilation, HVACR codes, EPA and NATE certification preparation, Carpentry, and a HET capstone course meet re-certification requirements for NATE.

The Energy Audit program is a partner of the Residential Energy Services Network (RESNET®). Upon successful completion of second semester courses, students will qualify to sit for the Industry Competency Examination (ICE), the North American Technician Excellence (NATE) exam, or the RESNET exam which provides recognition on national registries distributed to heating, ventilation, air conditioning, and refrigeration employers and homeowners.

Occupation Title/SOC System Code:

13-1199.01 Energy Auditors
17-2199.03 Energy Engineers
47-4099.03 Weatherization Installers and Technicians
49-9021.01 Heating and Air conditioning Mechanics and Installers
49-9021.02 Refrigeration Mechanics and Installers

For more information, contact:

Terrie Nierenberger
Office Manager, Engineering, Math and Physical Sciences division
TNierenberger@clcillinois.edu
847-543-2044
Stationary Engineer A.A.S.

CIP Code: 47.0201

College of Lake County, [www.clcillinois.edu](http://www.clcillinois.edu)

The Stationary Engineering A.A.S. program prepares students for employment as stationary engineers, specializing in design, layout, installation and service of commercial building HVAC equipment and green roof technology. The program also prepares students to sit for the Chicago Stationary Engineer exam. Students acquire skills in safety, HVAC principles, soldering and brazing, mechanical and electrical troubleshooting, refrigerant handling, the use of refrigerant gauges and electrical test equipment.

**Occupation Title/SOC System Code:**

- 51-8021.00 Stationary Engineers and Boiler Operators
- 17-2199.03 Energy Engineers
- 49-9021.01 Heating and Air Conditioning Mechanics and Installers
- 49-9021.02 Refrigeration Mechanics and Installers
- 47-4099.03 Weatherization Installers and Technicians
- 49-9021.01 Heating and Air conditioning Mechanics and Installers
- 49-9071.00 Maintenance and Repair Workers, General
- 51-8013.00 Power Plant Operators

**For more information, contact:**

Terrie Nierenberger
Office Manager, Engineering, Math and Physical Sciences division
[TNierenberger@clcillinois.edu](mailto:TNierenberger@clcillinois.edu)
847-543-2044

“One of the greatest things about the HVAC program is that it is a growing field. People can come in the field and expect to leave with the skills to be able to make an income, and they can take care of their family.”

- Allen Smith, Jr., Department Chair and Instructor
  College of Lake County
Stormwater Certificate

CIP Code: 26.1301

Lewis & Clark Community College, [www.lc.edu](http://www.lc.edu)

The Storm Water Management certificate provides stormwater systems training to private and public employees in various construction-related fields. The goal of the program is to teach skills for the proper design, construction and maintenance of erosion and sediment controls during construction and to assure the proper long-term operation and maintenance of storm water systems after construction is completed. The training program is primarily directed toward inspectors and contractors, however, permit reviewers, public works personnel and engineers will also benefit.

**Occupation Title/SOC System Code:**

- 13-1041.01 Environmental Compliance Inspectors
- 17-2081.01 Water/Wastewater Engineers
- 17-2051.00 Civil Engineers
- 17-3025.00 Environmental Engineering Technicians
- 19-1031.01 Soil and Water Conservationists
- 19-2043.00 Hydrologists

**For more information, contact:**

James Moss, Instructor
jkmos@lc.edu
618-468-4875

“Green infrastructure is a cost-effective and resilient approach to our water infrastructure needs that provides many community benefits. These benefits not only promote urban livability, but also add to the bottom line.”

– U.S. Environmental Protection Agency

“Green infrastructure is a cost-effective and resilient approach to our water infrastructure needs that provides many community benefits. These benefits not only promote urban livability, but also add to the bottom line.”

– U.S. Environmental Protection Agency
Deconstruction and Building Materials Salvage and Reuse Certificate

CIP Code: 15.1001

Illinois Central College, www.icc.edu

The Deconstruction and Building Materials Salvage and Reuse certificate program is designed to be completed in one semester. The program introduces the basic practice of building deconstruction and building material (architectural and structural) salvage. It also introduces typical construction methods, structural considerations and fundamental properties of building material. An introduction to key components of site assessment, project planning and market considerations are included as well as a hands-on deconstruction experience in a laboratory and/or in the field (on site).

Occupation Title/SOC System Code:

51-9199.01 Recycling and Reclamation Workers
53-1021.01 Recycling Coordinators
53-7081.00 Refuse and Recyclable Material Collectors
47-4041.00 Hazardous Materials Removal Workers
47-2061.00 Construction Laborers
53-7062.00 Laborers and Freight, Stock and Material Movers, Hand
13-1022.00 Wholesale and Retail Buyers, Except Farm Products

For more information, contact:

Jennifer Morris, Regional Coordinator
Jennifer.Morris@icc.edu
309-694-8444

“Tom Wester, who enrolled in the first course, went on to open his own salvage company in the area and now offers internships and jobs to program graduates.”

- Diana Fuller, Regional Coordinator
Illinois Central College
Green Building Certificate

South Suburban College, www.ssc.edu

Green building (also known as green construction or sustainable building) refers to using responsible and resource-efficient processes throughout a building’s lifecycle: from site selection and design to construction, operation, maintenance, renovation and demolition. Success requires the close cooperation of the design team, architects, engineers and client at all project stages. The green building practice expands and complements the classical building design concerns of economy, utility, durability and comfort.

Although new technologies are constantly being developed to complement current practices in creating greener structures, the common objective is that green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by:

- Efficiently using energy, water and other resources
- Protecting occupant health and improving employee productivity
- Reducing waste, pollution and environmental degradation

Occupation Title/SOC System Code:

47-2000 Construction Trades Workers

For more information, contact:

Steve Kasper, Program Coordinator
skasper@ssc.edu
708-596-2000, ext. 2295

“As business leaders and policymakers seek to expand the U.S. economic base, there is growing demand for workers who can add value to businesses by helping them to become more efficient and profitable enterprises. Community colleges can play a central role in developing the workforce needed in this emerging market.”

- “Jobs for the Future,” June 2015
Green Entrepreneurship Certificate

South Suburban College, www.ssc.edu

The Green Entrepreneur Program will prepare students for entry-level opportunities or job promotion in business while also providing a foundation for higher levels of education. Courses cover business principles, theories and techniques and use green initiative scenarios to enhance the learning process. Students will have the opportunity to conduct research and interviews with those who have successfully adapted green initiatives in industry.

Occupation Title/SOC System Code:

11-2011.01  Green Marketers

For more information, contact:

Becky Admave, Dean of Extension Services
708-225-6005
badmave@ssc.edu

“We want to see this thing grow into an opportunity for people, sometimes with difficult backgrounds, to get work experience and create relationships that they can use as a stepping stone to bigger things.”

- Tom Wester, owner
  Peoria Architectural Salvage
Green Facilities Management Certificate

CIP Code: 15.05

Lincoln Land Community College, www.llcc.edu

The Green facilities Management Program certificate prepares individuals who are involved with or plan to pursue a career related to the facilities or building operation. This certificate is designed for individuals working as building technicians, maintenance, and facility managers.

Occupation Title/SOC System Code:

46-0401 Building/Property Management
46-0403 Building/Home/Construction Inspection/Inspector
15-0501 HVACR Engineering Technology/Technician
46-0415 Building Construction Technology

For more information, contact:

David B. Bowman, Workforce Development Program Coordinator
david.bowman@llcc.edu
217-786-2317

“The expansion of building tradespeople, engineers and heating, ventilation and air conditioning professions into the clean energy sector is an important trend that has help to drive an increase in energy efficient jobs by 14 percent.”

- Clean Jobs Illinois Report
Biofuels Production and Sustainability A.A.S.

CIP Code: 150503

Southeastern Illinois College, www.sic.edu

The Biofuels Production and Sustainability A.A.S. degree program leads to employment in a biofuels facility as an operator, instrumentation technician or maintenance technician. Major employers include ethanol companies, biodiesel companies, biofuels companies, ethanol plants, renewable fuels companies and government agencies.

Occupation Title/SOC System Code:

17-3029.00 Engineering Technicians, except Drafters, All Other
27-1021.00 Commercial and Industrial Designers

For more information, contact:

Dr. Dana Keating, Vice President for Academic and Student Affairs
dana.keating@sic.edu
618-252-5400, ext. 2200

“Because of the ups and downs of the biofuels industry over the last 40 years, there are misconceptions about its durability. These courses are meant to dispel myths and provide a strong basis of understanding of the industries and their production processes.”

– Renee Loesche, Instructor
Southeastern Illinois College
Biofuels Production Fast-Track Certificate

CIP Code: 150503

Southeastern Illinois College, www.sic.edu

The Biofuels Production Fast-Track certificate program leads to employment in a biofuels facility as an operator, instrumentation technician or maintenance technician. Major employers include ethanol companies, biodiesel companies, biofuels companies, ethanol plants, renewable fuels companies and government agencies.

Occupation Title/SOC System Code:

11-3051.03  Biofuels Production Manager
51-8099.01  Biomass Plant Technician
11-9041.01  Biofuels/Biodiesel Technology and Product Development Manager
11-3051.04  Biomass Power Plant Manager
47-2152.02  Plumber, Pipefitters and Steamfitters
11-1021.00  General and Operations Managers
11-3071.03  Logistics Manager
17-2199.01  Biochemical Engineer

For more information, contact:

Dr. Dana Keating, Vice President for Academic and Student Affairs
dana.keating@sic.edu
618-252-5400, ext. 2200

“The program is 100 percent online, allowing students to take classes as they have time. The four required courses can be completed in as little as nine months.”

- Renee Loesche, Instructor
Southeastern Illinois College
Biofuels Production Certificate

Biofuels Technology and Sustainability Certificate

Biodiesel Production Certificate

CIP Code: 150503

Southeastern Illinois College, www.sic.edu

These three certificates lead to employment in a biofuels facility as an operator, instrumentation technician or maintenance technician. Major employers include ethanol companies, biodiesel companies, biofuels companies, ethanol plants, renewable fuels companies and government agencies.

Occupation Title/SOC System Code:

11-3051.03   Biofuels Production Manager
17-3029.00   Engineering Technicians, except Drafters
27-1021.00   Commercial and Industrial Designers
17-3029.00   Engineering Technicians, except Drafters
27-1021.00   Commercial and Industrial Designers

For more information, contact:

Dr. Dana Keating, Vice President for Academic and Student Affairs
dana.keating@sic.edu
618-252-5400, Ext. 2200

According to “National Geographic” magazine, gasoline and diesel are actually ancient biofuels. But they are known as fossil fuels because they are made from decomposed plants and animals that have been buried in the ground for millions of years. Biofuels are similar, except that they’re made from plants grown today.
In the Sustainable Energy Systems program, students develop a background in building systems for sustainable energy. They learn about building automation, heating, cooling, controllers, sustainability, renewable energy and solar thermal systems. Students choose to focus on an environmental control, biofuels or hydro and HVAC option. After completion, students can seek employment that has rapid growth, such as a technician in sustainable energy, energy assessment and management, environmental controls, and automation and controls. Students can apply all of these courses into the Sustainable Energy Systems A.A.S. degree.

Occupation Title/SOC System Code:

13-1199.05 Sustainability Specialists
41-4011.00 Wholesale and Manufacturing, Sales Representatives
        Technical and Scientific Products
13-1199.01 Energy Auditors
19-2041.03 Industrial Ecologists
49-9071.00 General, Maintenance and Repair Workers

For more information, contact:

Chris Miller, Instructor of Industrial Technology
chris.miller@heartland.edu
309-268-8855

“The jobs in these fields will not go away. They cannot be done in a foreign country. They will form a strong backbone of technical work.”

- Chris Miller, Instructor
Heartland Community College
Wind Turbine Technician Certificate

Highland Community College, www.highland.edu

CIP Code: 470302

The Wind Turbine Technician certificate program prepares individuals to work in the emerging wind power energy industry. Students will complete an industry-derived curriculum as they learn about the electrical power generation industry, safety at the work site, mechanical devices, as well as hydraulic and electrical systems. Courses take place in traditional classrooms and at various lab settings on campus. Graduates enter the workforce needing further on-the-job training to become a wind turbine technician. They will, however, possess the basic skills needed to complete more advanced training and coursework.

Occupation Title/SOC System Code:

11-9199.09 Wind Energy Operations Managers
11-9199.09 Wind Energy Operations Managers
17-2199.10 Wind Energy Engineers
49-9081.00 Wind Turbine Service Technicians

For more information, contact:

Scott Anderson, Dean, Business and Technology
Scott.Anderson@highland.edu
815-235-6121

“As one of the initial programs to receive the American Wind Energy Association (AWEA) Seal of Approval for an educational institution, those entering Highland’s program are exposed to cutting-edge curriculum not yet seen at other community colleges.”

- David Vrtol, Instructor, Highland Community College
Wind Turbine Technician A.A.S.

CIP Code: 15.0503

Danville Area Community College, www.dacc.edu

This program prepares individuals to work in the emerging wind power energy industry. Students will complete an industry-derived curriculum as they learn about the electrical power generation industry, safety at the worksite, mechanical devices, as well as hydraulic and electrical systems. Graduates enter the workforce with the skills necessary to be employed and succeed in entry-level technical positions and with additional training and experience may advance to supervisory or advanced technical positions.

Occupation Title/SOC System Code:

17-3029 Energy Technicians, Except Drafters, All Other

For more information, contact:

Bruce Rape, Dean, Business and Technology
217-443-8786 or
Greg Hansbraugh, Lead Instructor
217-443-8579

“The Illinois Department of Employment Security (IDES) did a report titled, ‘Illinois Green Jobs Survey,’ which found that green employment could be found across Illinois and that it was growing from 5 percent to 15.8 percent by different regions of the state.”

– Dave Loomis, Director
Center for Renewable Energy
Illinois State University
Solar-Photovoltaic Technology Certificate

CIP Code: 150503 Tech C39C

Kankakee Community College, www.kcc.edu

This certificate program explores the design, installation and use of solar-photovoltaic power systems for consumer and commercial applications. Students learn theory and get hands-on lab experience in sizing, installing and maintaining solar-photovoltaic electrical generating systems. Students must supply basic hand tools. The program prepares students for the North American Board of Certified Energy Practitioners (NABCEP) Solar-PV Entry Level Exam and the Midwest Renewable Energy Association (MREA) Certificate Exam for Solar-PV site assessment.

In addition to the solar-photovoltaic certificate, KCC also offers a Renewable Energy Technology Specialization track in its Electrical Technology program.

Occupation Title/SOC System Code:

47-1011.03  Solar Energy Installation Managers
47-2231.00  Solar Photovoltaic Installers
47-2111.00  Electricians
49-9098.00  Helpers—Installation, Maintenance and Repair Workers
13-2021.01  Assessors
51-2022.00  Electrical and Electronic Equipment Assemblers

For more information, contact:

Tim Wilhelm, Instructor and Program Coordinator, Electrical Technology
TWilhelm@kcc.edu
815-802-8864

“The MREA’s ANSI-IREC accredited Photovoltaic Site Assessment certification was added. This allows graduates to evaluate energy consumption and solar resources in households or businesses, which helps potential clients understand the system options and benefit.”

– Tim Wilhelm, Instructor
Kankakee Community College
Smart Grid Certificate

CIP Code: 46.0301

Lewis and Clark Community College, www.lc.edu

Smart grid includes a wide variety of applications that automate electrical distribution and monitoring for increased energy efficiency. Companies are increasing their deployment of smart grid applications as part of their efforts to drive energy efficiency. This entry-level certificate includes an overview of computer networking, renewable energy technology, power transmission and distribution and energy efficient buildings (students choose four of seven classes).

Occupation Title/SOC System Code:

17-2071.00 Electrical Engineers
17-2199.03 Energy Engineers
17-2199.05 Mechatronics Engineers
15-1152.00 Computer Network Support Specialists
49-9051.00 Electrical PowerLine Installers and Repairers
15-1142.00 Network and Computer Systems Administrators
15-1143.01 Telecommunications Engineering Specialists
15-1122.00 Information Security Analysts

For more information, contact:

Nate Keener, Director of Sustainability
Nkeener@lc.edu
618-468-2782

“As utilities strive in coming years to continue implementation of smart grid technologies, they will rely on new employees with unique skill sets.”

- Chris Reese, Instructor
Lewis and Clark Community College
Building Environmental Controls Skills Certificate

CIP Code: 520401

Heartland Community College, www.heartland.edu

The Building Environmental Control Skills certificate program covers building automation, heating, cooling, controllers and geothermal and heat pump systems. After completing the program, students can seek employment as an in-demand technician in sustainable energy, energy assessment and management, environmental controls, and automation and controls. Courses completed in the program can be applied toward Heartland’s Sustainable Energy Systems certificate.

Occupation Title/SOC System Code:

49-9071.00 Maintenance and Repair Workers, General
13-1199.01 Energy Auditor
17-3024.00 Electro-Mechanical

For more information, contact:

Chris Miller, Instructor of Industrial Technology
chris.miller@heartland.edu
309-268-8855

“A better environment and a better economy go hand in hand.”

– Jen Walling, Executive Director, Illinois Environmental Council
Biofuels Manufacturing Technology A.A.S.

CIP Code: 15.0303

Carl Sandburg College, www.sandburg.edu

The Biofuels Manufacturing Technology program is intended for students who want to become professional technicians qualified for employment in the renewable energy and/or manufacturing sectors.

The technical components of the program prepare graduates for employment as operating or technicians in the field of biodiesel production, wet and dry ethanol production, waste and water treatment, process control and chemical processing.

Occupation Title/SOC System Code:

11-9041.01 Biofuels/Biodiesel Technology and Product Development Managers
11-3051.03 Biofuels Production Managers
51-8099.01 Biofuels Processing Technicians
17-2199.01 Biochemical Engineers
51-8099.03 Biomass Plant Technicians
11-3051.04 Biomass Power Plant Managers
19-2041.01 Climate Change Analysts
51-8021.00 Stationary Engineers and Boiler Operators

For more information, contact

Chuck Young, Coordinator/Instructor
IGEN Biofuels Manufacturing Technology
cyoung@sandburg.edu
309-345-3504

“I really love the lab here at Carl Sandburg. It is very similar to the one at Big River Resources where I am interning. The program is providing excellent preparation to work in this industry.”

- Jacqueline Peel, first program graduate, expected May 2016
Advanced Welding Manufacturing Certificate

CIP Code: 480508

Southwestern Illinois College, www.swic.edu

The Advanced Welding Manufacturing certificate consists of two courses: welding automation and robotic welding (10 semester hours). Career opportunities include welder, welding technician, fitter, layout person or welding technician.

Occupation Title/SOC System Code:

- 51-4122.00  Welding, Soldering and Brazing Machine Setters, Operators and Tenders
- 51-4121.06  Welders, Cutters and Welder Fitters
- 17-3029.09  Manufacturing Production Technicians
- 51-4011.00  Computer-Controlled Machine Tool Operators, Metal and Plastic
- 51-4012.00  Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic

“For more information, contact:

Kevin Corgan, Instructor, Welding Technology
kevin.corgan@swic.edu
618-797-7423

“I wanted a career and I wanted a better life for my children. Welding was something I was always interested in. I looked online at what (SWIC) offered and what careers were lacking workers. I knew that welding was a growing field and that a lot of trained workers are needed.”

- Dawn Poston, program graduate
Advanced CNC Programming Certificate

CIP Code: 480501

Southwestern Illinois College, www.swic.edu

The CNC Machining certificate prepares students to set up and operate Computerized Numerical Control (CNC) machine tools. These include three axis vertical mills and two axis turning centers. The certificate provides experience in setting work offsets, tool length offsets and operating HAAS CNC equipment. The courses transition to programming CNC machine tools using G and M codes needed to produce a finished part. Students also learn how to problem-solve program errors and edit their programs at the machine tool. Each student is provided a print needed to produce parts on both the CNC mill and CNC turning centers. Students have the opportunity to earn up to three National Institute for Metalworking Skills (NIMS) CNC certifications.

Occupation Title/SOC System Code:

51-4011.00 Computer-Controlled Machine Tool Operators, Metal and Plastic
51-4012.00 Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic
51-4031.00 Cutting, Punching, and Press Machine Setters, Operators and Tenders, Metal and Plastic
51-4032.00 Drilling and Boring Machine Tool Setters, Operators and Tenders, Metal and Plastic
51-4034.00 Lathe and Turning Machine Tool Setters, Operators and Tenders, Metal and Plastic
51-4035.00 Milling and Planing Machine Setters, Operators and Tenders, Metal and Plastic
51-4041.00 Machinists
51-4111.00 Tool and Die Makers

For more information, contact:

Mark Bosworth, Machining Technology Program Coordinator
mark.bosworth@swic.edu
618-931-0600, ext. 7457

“The IGEN Career Pathways Grant helped Southwestern Illinois College to transform its manual machining program into a state-of-the-art Precision Machining Technology program that now ranks among the best in the state.”

- Mark Bosworth, Precision Machining Technology Program Coordinator
Southwestern Illinois College
Transportation, Distribution and Logistics
Automotive Recycling Certificate

CIP Code: 470604

Waubonsee Community College, [www.waubonsee.edu](http://www.waubonsee.edu)

The Automotive Recycling certificate prepares graduates for positions in the automotive recycling industry. The program develops dismantling, parts grading and quality control skills. Coursework focuses on following environmental best practices during automotive recycling.

**Occupation Title/SOC System Code:**

- 51-9199.01 Recycling and Reclamation Workers
- 53-7081.00 Refuse and Recyclable Material Collectors
- 53-1021.01 Recycling Coordinators
- 17-2141.02 Automotive Engineers
- 49-3021.00 Automotive Body and related Repairers
- 49-3023.00 Automotive Service Technicians and Mechanics
- 17-3027.01 Automotive Engineering Technicians
- 49-3023.02 Automotive Specialty Technicians

**For more information, contact:**

Michael Cermak  
Business and Career Technologies  
cteinfo@waubonsee.edu  
630-466-7900, ext. 2263

“I urge my students to think outside the box and consider the opportunities for starting their own business in recycling while still using what they are learning from their auto technology degree.”

- Pat O'Connor, Instructor  
  Waubonsee Community College
Programs by College

BFM 101 Biofuels Fundamentals
BFM 201 Ethanol Production
BFM 202 Biodiesel Production
BFM 203 Water Treatment and Control
BFM 291 Professional Internship

AGR 111 Permaculture Production
AGR 112 Season Extension Methods
AGR 114 Annual Fruit and Vegetable Production
AGR 210 Agricultural Marketing
CMM 128 Interviewing Practices
ECO 110 Economics for Business and Industry
ENG 120 Technical Composition I
HET 110 & ENG 120 Basic Refrigeration Systems and Technical Composition I
HET 110 Basic Refrigeration Systems
HET 111 HVACR Electricity I
HET 119 HVACR Electricity II
HET 130 Heating and Residential Appliances
HET 150 Air Conditioning I Split Systems
HET 190 EPA Certification Preparation
HET 191 HVACR Heat Load
HET 192 HVACR Engineering Tech Practicum
HET 194 NATE Certification Preparation
HET 195 Chicago Stationary Engineer Exam Prep
HET 230 Air Movement and Ventilation
HET 250 A/C II Commercial HVAC Appliances
HET 273 Pneumatic, Electric and DDC Automation
HET 290 Building Insulation
HET 291 Energy Audit
HET 292 RESENT Exam Preparation
HET 293 Energy Auditing
HET 295 HET Capstone
HRT 111 Introduction to Horticulture
HRT 114 Introduction to Soil Science
HRT 211 Plant Propagation
HRT 219 Organic and Sustainable Practices
HRT 285 Sustainable Landscapes
HUM 299 Environmental Humanities
MTH 114 Applied Mathematics I – HET Emphasis

ELEC 160WH Introduction to Electricity/Electronics
ELEC 220WH Opto Electronics
WIND 100WH Introduction to Wind Energy
WIND 150WH Wind Turbine Materials and Electro Mechanical Equipment
WIND 200WH Wind Power Delivery Systems
WIND 250WH Wind Turbine Troubleshooting

ELTC 102 Digital Electronics
REEC 120 Sustainability and Renewable Energy
REEC 140 Photovoltaic Systems
REEC 220 Solar Thermal Systems
REEC 223 Geothermal and Heat Pump Systems
BUSN 141 Business Communications
ELEC 179 Introduction to Electronic Principles
INFT 180HB Introduction to Information Systems
MTEC 263 General Hydraulics
WTEC 101 Intro to Wind Energy
WTEC 110 Wind Mechanical Systems

ELTR 2334 Introduction to Solar Photovoltaic
SUST 1013 Sustainable Resource Management I
SUST 1023 Sustainable Resource Management II

ELT 102 Basic Electricity and Wiring
ELT 125 Energy Auditing and Thermography
ELT 143 Renewable Energy Principles
ELT 243 Renewable Energy Systems
ELT 260 Introduction to Hydropower
HAC 121 Heating I
HAC 131 Refrigeration and Air Conditioning 1
HAC 140 Weatherization
HAC 224 Geothermal Systems
HAC 241 Building Systems and Performance Spring 2015

DECON 101 Introduction to Deconstruction
DECON 102 Deconstruction Methods and Materials
DECON 103 Principles of Deconstruction Assessment
DECON 104 Deconstruction Project
### Programs by College

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<td>STWR 100 Intro to Stormwater</td>
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<td>GFM 1201 Plan and Develop Green Facilities</td>
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<td>GFM 1202 Building Automation and Control Systems</td>
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<td>SDGB 1201 Foundations of Sustainable Design</td>
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<td>SDGB 1202 BIM and Sustainability</td>
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<td>SDGB 1203 Sustainable Landscape Design</td>
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<td>SDGB 1204 Sustainable Design and Construction</td>
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</table>
GFM 101 Fundamentals of Green Facilities Management
GFM 102 Technical Aspects of Energy Sources and Users
GFM 103 Exterior Environmental Management
GFM 104 Sustainable Buildings Measures: Costs and Benefits
GFM 105 Energy System Fundamentals: Basic Design, Operation and Conservation
GFM 106 Green Indoor Environmental Quality Fundamentals
GFM 107 Facility Electrical Systems and Efficient Lighting Essentials
WVA 101 Local Food and Cuisine
WVA 102 Food Preservation Methods
WVA 103 Fermentation Methods
WVA 104 Sauces, Condiments and Dressings
WVA 105 Value Added Herbs
WVA 106 Local Food in Institutions
WVA 110 Local Food Regulations

BCD 106 Mechanical Inspections
BCD 190 IECC Residential Energy Inspections
BLD 100 Green Residential General Contracting
BLD 107 Pre-Apprenticeship
BLD 130 General Welding
BLD 150 Introduction to Building Science
BLD 157 Green Construction Career Planning
BLD 159 Intro to Brownfield Remediation, Land Re-use and Public Health
BLD 160 Residential Energy Auditing
BLD 161 Basic Safety Training for Construction and Brownfield Workers
BLD 162 Introduction to Environmental Health
BLD 163 Basic Site Assessment
BLD 167 Hazardous Waste Operations and Emergency Response
BLD 168 Strategies for Safe Handling of Hazardous Substances
BUS 135 Business Financial Fundamentals
BUS 231 Technology for Running a Small Business
BUS 234 Organization in a Small Green Business
BUS 237 Enacting your Green Business Plan
BUS 270 Introduction to Sustainability in Business
BUS 278 How to Start a Green Business
Programs by College

Southwestern Illinois College

- ENGY 111 Introduction to Biofuels
- ENGY 113 Plant Maintenance
- ENGY 115 Agricultural Wastes to Biofuels
- ENGY 131 Biodiesel Production
- ENGY 151 Ethanol Production
- ENGY 211 Biofuels Systems Technology
- ENGY 213 Algae Feedstocks for Biofuels

Triton College

- BIS 105 Environmental Biology
- BIS 205 Field Ecology
- HRT 125 Plants and Society
- HRT 135 Soils and Fertilizers
- HRT 270 Sustainable Landscape Practices
- HRT 275 Innovations in Sustainability
- SAT 100 Principles of Agroecology
- SAT 105 Urban Agriculture Issues
- SAT 110 Natural Resource Management
- SAT 130 Sustainable Plant Health Care
- SAT 140 Sustainable/Organic Plants
- SAT 170 Introductory Biotechnology
- SAT 210 Sustainable Plant Production for Human Nutrition
- SAT 220 Designing Food Production Systems in Urban Landscapes
- SAT 230 Managing Food Production Systems in the Urban Landscape
- SAT 271 Design of Sustainable Landscaping
- SAT 272 Construction of Sustainable Landscaping

Southeastern Illinois College

- AUT 105 Automotive Recycling
- AUT 211 Automotive Recycling Basics
- AUT 212 Environmental Standards for Automotive Recycling

Waubonsee Community College
Acknowledgements

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