SUNY Ulster offers several training paths for those interested in a career in the growing field of clean energy technology. The North American Board of Certified Energy Practitioners (NABCEP) has recently released an Entry-Level Solar Heating exam in addition to the existing exam for Photovoltaics Installers. They have also released exams for Solar Heating Certification, PV Technical Sales Certification and Small Wind Installer Certification. For more information on these exams please visit www.nabcep.org. For SUNY Ulster’s recommended detailed course sequence toward certification in these areas, please review pages 2-4 or call 845-802-7171 to speak to a Program Manager.

**Career Pathways**

- **Photovoltaics**
  - Photovoltaics Installer
  - Photovoltaics Site Assessor
  - Photovoltaics Technical Sales

- **Small Wind**
  - Small Wind Installer
  - Small Wind Site Assessor

- **Solar Heating**
  - Solar Hot Water Installer
  - Solar Heating Site Assessor
  - Solar Heating Sales

**Clean Energy Technology Training Resource Center**
Funded by the NY State Energy Research & Development Authority (NYSERDA), this resource room is open to the public and located at the Business Resource Center in Kingston. It features textbooks, journals, event flyers and career information. In addition, the room displays several types of photovoltaics (PV) panels including the Solartech panel manufactured in Kingston, NY. A small wind turbine is on display as are two geothermal trainers. The room is stocked with the latest articles on different renewable energy technologies as well as news articles about local renewable companies. Come pick up a copy of the latest solar magazine or inquire about our Clean Energy Technology Training and Energy Efficiency courses. Call 845-339-2025 for hours of operation. Need to test your skill sets? Come to the Resource Center to take our math and electrical assessments and get started on a new career path! For more information call 845-802-7171.

To register call 845-339-2025
Clean Energy Technology Training

Course sequence aligns with the NABCEP PV Installer Job Task Analysis. To view a copy of this JTA, visit www.nabcep.org

Photovoltaics (PV) Installer Certification

Photovoltaics (PV) Systems - Recognized by NABCEP

The class will cover the basic sizing and design of systems to serve a given electrical load and safety procedures for installers and for those learning the basics of solar installation. Students will study the electrical code for PV systems in detail and the various mounting systems for PV arrays and how they affect roofs. Course includes a hands-on installation of a PV system. Students completing this course may sit for the NABCEP Entry Level PV Systems Exam. This course is approved for the Training of Veterans.

Prerequisites: Basic Mathematics and Electrical Theory (see page 9) or equivalent (Take our math assessment available online at http://goo.gl/Oo0YM and electrical assessment available online at http://goo.gl/0E8ZH)

Recommended co-requisite: Building Analyst (see page 15 OSHA 10)


Materials needed: scientific calculator

Mon & Wed, Sep 17 - Oct 24 • 5:30 - 9 pm
Lab: Sat, Oct 13 • 9 am - 2:30 pm
11 sessions • $599
DCB 795-15 • BRC & SRC
Approved for 40 PDHs
No class Sep 26 and Oct 8

NABCEP Photovoltaics (PV) Entry Level Exam Review

This course is for those who have completed Photovoltaics (PV) Systems and need a review before taking the NABCEP Entry Level PV Exam.

Mon & Wed, Nov 5 & 7 • 9 am - 4:30 pm
2 sessions • $240 without PV course; $120 with payment of PV course
DCB 992-11 • BRC

NABCEP Photovoltaics Entry Level Exam

This exam is for those students who have completed Photovoltaics (PV) Systems and have mastered the ten skill sets listed on the NABCEP learning objectives. Students must preregister for this exam and bring a signed copy of the NABCEP Candidate Eligibility Form to the exam.

Materials needed: non-programmable scientific calculator, No. 2 pencil

Fri, Oct 19 • 6 pm
1 session • $150
DCB 950-47 • BRC

OSHA 10 Standard for the Construction Industry

This course is aimed at promoting workplace safety and health and is taught by an OSHA authorized trainer. OSHA course completion cards will be issued to all participants. This course is required for NABCEP PV Installer Certification.

Mon & Wed, Dec 3 - 12 • 6:30 - 9 pm
4 sessions • $200
HSI 359-06 • BRC

NEW! Advanced Photovoltaics Systems

This course will cover system design, both grid connected and off-grid with battery back-up. Additional course modules will cover code-compliant electrical and structural design, system commissioning and performance monitoring and maintenance.

Prerequisite: Photovoltaics (PV) Systems


Materials needed: scientific calculator

Mon & Tue, Nov 26 & 27 • 9 am - 5 pm
2 sessions • $500
DCB 956-07 • BRC
Approved for 14 PDHs and 14 NABCEP Advanced Continuing Education NABCEP hours
Clean Energy Technology Training

Photovoltaics (PV) Installer Certification

NEW! Commercial Photovoltaics Installation
This class will cover issues associated with larger commercial PV installations which most typically have three phase electrical systems. Weight and wind loading play a major part in the design of a large commercial installation as most commercial buildings have expansive, flat roofs. The course will also explore characteristics of large, ground-mounted systems and study interconnection issues such as the necessary size of the local service, when a new transformer would be needed, when an entire substation would be needed and when the utility might need the plant to provide reactive power (VAR support). The economics of these larger systems will also be covered. Your instructor is Dr. Gay E. Canough, a NABCEP certified PV Installer and ISP certified Master Trainer.
Prerequisites: Photovoltaics (PV) Systems
Tue, Oct 30 • 8:30 am - 5:30 pm (Networking 5:30 - 7 pm)
1 session • $250
DCB 252-01 • BRC
Approved for 8 PDHs and 8 NABCEP Advanced Continuing Education hours

NEW! How to Run a Small Photovoltaics (PV) Business
Interested in running your own Photovoltaics business? Join Francine Notte as she discusses the high spots and points out the pitfalls of small business ownership. This course will cover costs, policy making relating to employees, insurance, worker’s compensation and more!
Spring 2013 • 9 am - 5 pm
2 sessions • $350
DCB 230-02 • BRC
Approved for 14 NABCEP Advanced Continuing Education hours

Basic Mathematics
Mathematics Foundation for Clean Energy Technology Training and Advanced Manufacturing
This class reviews basic math skills needed to continue with College Mathematics or Mathematics for Machine Technology. Subjects include: order of operations, fractions, decimals, rounding, percentages, metric units, negative numbers, introduction to algebra, exponents and scientific notation.
Materials needed: scientific calculator
Tue & Thu, Sep 18 - Oct 2 • 6 - 8:30 pm
Class will end at 8 on Oct 2
5 sessions • $39
DCB 174-03 • BRC
Tue & Thu, Sep 20 - Oct 11 • 10 am - noon
6 sessions • $39
DCB 174-04 • BRC
No class Oct 9

College Mathematics - Intro to
Math for a Technical Career in Clean Energy Technology or Advanced Manufacturing
This class will provide a review of basic arithmetic, elementary algebra, geometry and trigonometry.
Materials needed: scientific calculator
Mon & Wed, Oct 10 - 24 • 6 - 8 pm
5 sessions • $39
DCB 844-09 • BRC
Tue & Thu, Oct 16 - 30 • 10 am - noon
5 sessions • $39
DCB 844-10 • BRC

Electrical Theory I Basics
Topics covered will include components of the atom, how electrons flow through conductors, conductivity, series and parallel circuits, tracing circuits, trouble shooting, voltage and current resistance, AC and DC voltage, single phase, three phase, and Ohm’s Law. Course includes a lab component.
Prerequisite: basic understanding of algebra and trigonometry
Materials needed: scientific calculator
Tue & Thu, Nov 1 - 27 • 9 am - noon
5 sessions • $125
DCB 947-17 • BRC
No class Nov 6, 13, and 22
Mon & Wed, Nov 28 - Dec 10 • 6 - 10 pm
Dec 10 meets 6 - 9 pm
4 sessions • $125
DCB 947-18 • BRC

Electrical Theory II Basics
Course includes wire splicing, wiring a PV combiner box, connecting modules in series and parallel and monitoring output, and practicing current and voltage calculations. Course includes a lab component.
Prerequisite: Electrical Theory I
Mon & Wed, Dec 12 - 19 • 6 - 10 pm
3 sessions • $99
DCB 631-07 • BRC

To register call 845-339-2025
Clean Energy Technology Training

PV Technical Sales Certification
Course sequence aligns with the NABCEP PV Installer Job Task Analysis.
To view a copy of this JTA, visit www.nabcep.org

Photovoltaics (PV) Systems
See page 8 for details.

Residential Photovoltaics (PV) Site Assessor
See below for details.

Solar Sales
Attend this workshop to learn the basics of selling solar energy systems. Learn how to talk to customers on the phone, how to determine customers’ needs and how to close the deal.
Thu & Fri, Nov 29 & 30 • 9 am - 4:30 pm
2 sessions • $350
DCB 957-08 • Rockland Community College
Prerequisite: Photovoltaics (PV) Systems
Optional materials: laptop, digital camera, USB flash drive
Approved for 14 NABCEP Advanced Continuing Education hours

OSHA 10 Standard for the Construction Industry
This course is required for NABCEP PV Technical Sales Certification.
Mon & Wed. Dec 3 - 12 • 6:30 - 9:00 pm
4 sessions • $200
HSI 359-06 • BRC

Residential PV Site Assessor Certificate
Students interested in receiving a certificate in Residential PV Site Assessor must take Photovoltaics (PV) Systems, Residential Photovoltaics (PV) Site Assessor and Advanced Residential Photovoltaics and pass the certificate exam.

Photovoltaics (PV) Systems - Recognized by NABCEP
See page 8 for details.

Residential Photovoltaics (PV) Site Assessor
This course covers how to recommend a system to the customer to meet their needs, identify and recommend steps for energy efficiency, identify and recommend array placement options, provide a general cost estimate, write a PV assessment, and how to use web-based performance calculators. Students will learn how to use the tools needed for a site assessment. Students will visit sites to practice assessments. Your instructor is Jason Novak.
Sat, Nov 10 & 17 • 9 am - 4:30 pm
2 sessions • $350
DCB 837-06 • BRC and sites for assessments • transportation to sites not included
Prerequisite: knowledge of spreadsheets, web navigation, algebra and trigonometry
Suggested course prerequisite: Photovoltaics (PV) Systems
Materials needed: calculator, clip board, compass, digital camera, USB flash drive
Approved for 14 NABCEP Advanced Continuing Education hours

NEW! Advanced Residential Photovoltaics (PV) Site Assessor
As a prerequisite for the MREA Residential Photovoltaics (PV) Site Assessor Certificate, students are required to submit two site assessments to be reviewed by a technology mentor. In this course, students will independently complete two practice assessments and upload them for review. Students will need to work independently to gather information for their reports.
Prerequisite: Residential Photovoltaics (PV) Site Assessor
Sat, Dec 1 & 15 • 9 am - noon
2 sessions • $750
DCB 175-04 • BRC
No class Dec 8
Approved for 6 NABCEP Advanced Continuing Education hours

NEW! MREA Residential Photovoltaics (PV) Site Assessor Certificate Examination
Please call 845-802-7171 to make an appointment to take the MREA exam. Exam fee is $250.
DCB 266-01 • BRC
Clean Energy Technology Training

Photovoltaics (PV) Introduction to Off-Grid Systems
This two-day workshop provides an introduction to off-grid solar. Students will join instructor John Calhoun, P.E. as he covers system design, performance modeling, and safe installation, operation and maintenance.
Prerequisite: Photovoltaics (PV) Systems
Thu - Fri, Spring 2013 • 9 am - 4:30 pm
2 sessions • $350
DCB 031-03 • BRC
Approved for 14 NABCEP Advanced Continuing Education hours and 14 PDHs

Photovoltaics (PV) Troubleshooting and Maintenance
This two-day course is designed for those who are directly responsible for hands-on installation, troubleshooting, maintenance and operation of solar electric systems. This course will cover both grid and off-grid systems. Your instructor is John Calhoun, P.E.
Prerequisite: Photovoltaics (PV) Systems
Thu - Fri, Spring 2013 • 9 am - 4:30 pm
2 sessions • $350
DCB 077-02 • BRC
Approved for 14 NABCEP Advanced Continuing Education hours and 14 PDHs

Conquering the Forms and Regulations of Solar Incentives
Learn how to apply for building permits, including filling out permit applications, putting together complete packages for towns, getting stamped drawings, and other requirements by local building inspectors.
Prerequisite: Photovoltaics (PV) Systems
Fri, Spring 2013 • 9 am - 4:30 pm
1 session • $250
DCB 227-02 • BRC
Approved for 7 NABCEP Advanced Continuing Education hours and 7 PDHs

Photovoltaics Hands-on Lab Workshop
This workshop consists of a full day of hands-on instruction on pipe bending, inverter installation, roof layout and conduit installation. Learn the techniques that an experienced installer has spent the past years fine tuning. This course is led by Francine Notte, a NABCEP certified installer and ISPQ certified instructor.
Prerequisite: Photovoltaics (PV) Systems
Spring 2013 • 9 am - 5 pm
1 session • $250
DCB 958-09 • BRC
Approved for 7 Advanced Continuing Education hours and 7 PDHs

NEW! Introduction to Small Wind Energy (online)
This course is a prerequisite for the Small Wind Energy Workshop.
Available Spring 2013

Small Wind Energy Workshop
This course will lead participants through the necessary steps required to site and install a small wind turbine (up to 100 kW). This course is designed around the NABCEP Objectives and Task Analysis for a Small Wind Energy System Installer. Course is presented by Roy Butler of Four Winds.
Prerequisite: Intro to Small Wind Energy
Mon - Wed, Spring 2013 • 9 am - 5 pm
3 sessions • $450
DCB 900 • BRC and SRC

Residential Wind Site Assessor Training
Join Roy Butler of Four Winds as he leads the class through the background information required to perform a small wind site assessment. This course is designed around the NABCEP Small Wind Site Assessor Job Task Analysis. Course price includes a copy of 7th Wind Performance Calculator.
Prerequisite: Small Wind Energy Workshop
Mon - Fri, Spring 2013 • 9 am - 5 pm
5 sessions • $499
DCB 959 • BRC
Approved for 35 NABCEP Advanced Continuing Education hours

To register call 845-339-2025
**Clean Energy Technology Training**

**Radiant Floor Heat for Homeowners**
This course provides you with the pertinent information you need to make intelligent choices about the types of systems available and how they should be installed. It provides complete information about the benefits of radiant heating and compares it with conventional heating systems, highlighting radiant heating’s more comfortable warmth and its greater efficiency. Upon completion of the course, attendees will be able to select the correct application for their home and make informed decisions about floor coverings, heat sources and control systems. The class fee includes a copy of the Radiant Flooring Guide. Your instructor **John Abularrage**

Wed, Oct 10 • 6:30 - 8:30 pm
1 session • $39
DCB 476-09 • BRC

**Radiant Architecture**
Radiant Architecture was developed by the Radiant Professionals Alliance specifically for architects, specifying engineers, building designers, building officials, and general contractors. This course covers the variety of applications and equipment used in radiant heating system and provides the information needed to make informed decisions on when, where, and how to use radiant heating and cooling systems in residential and commercial buildings. Scheduling and sequencing is also covered to help construction professionals properly plan for and execute a successful installation. Your instructor **John Abularrage**

Wed, Oct 10 • 1 - 4:30 pm
1 session • $75
DCB 831-04 • BRC
Approved for 3.5 AIA CEUs
Optional texts: Radiant Architecture, Radiant Flooring Guide, RPA Guidelines

**Foundations of Refrigeration and Air Conditioning**
This course will introduce the student to the basic theory and operation of refrigeration systems, heat transfer, installation techniques and practices. At the conclusion of the course, students should be able to correctly describe the components and operation of geothermal heat pumps. The course includes a lab component. Your instructor is **John Trosie**.

Tue & Thu, Oct 2 & 4 • 5 - 9 pm
2 sessions • $20
VOC024 • Dutchess Community College, to register call 845-431-8907

**EPA Refrigerant Technician Training, Testing and Certification**
This course consists of six hours of classroom instruction followed by two hours of testing. This exam is for stationary equipment only and does not include automotive certification. Your instructor is **John Trosie**.

Sat, Sep 15 • 8 am - 4 pm
VOC193 • Dutchess Community College, to register call 845-431-8907

**IGSHPA Accredited Geothermal Installation/NATE Certification**
This three-day comprehensive workshop focuses on the planning, design and installation of geothermal heating and cooling systems. Step by step examples of a local closed loop system designed for residential applications are covered, as well as geothermal marketing for small and large companies.

Accreditation: Upon successful completion of the workshop and passing the IGSHPA (International Ground Source Heat Pump Association) exam, you will be issued an IGSHPA accreditation as an installer of GSHP systems; as well as receive an installer’s card and a certificate, and be listed on their web site. This is a NATE (North American Technical Excellence) administered exam, which also qualifies successful candidates to be NATE certified toward ACCA (Air Conditioning Contractors of America) Quality Install Energy Star and other benefits. This course is approved for the Training of Veterans.

Thu - Sat, Nov 1 - 3 • 8 am - 5 pm
3 sessions • $1,249 • Register online at www.heatspring.com
DCB 943-09 • Course will be held at Dutchess County Community College
Approved for 24 AIA CEUs
Solar Hot Water Installation and Design and NABCEP Entry Level Solar Heating Exam

Solar power isn’t just for electricity; solar thermal systems (or Solar Hot Water) are less expensive, more efficient than solar photovoltaics and still qualify for lucrative federal and state tax credits. This course covers equipment such as collectors, tanks, pumps, piping and controllers and reviews major system designs such as “closed loop pressurized” and “drainback” as well as solar pool heating designs. This course is designed for trades people, engineers, architects, HVAC practitioners and other professionals. This course is designed to meet training requirements for NABCEP installer exams and price includes the NABCEP Entry Level Solar Heating Exam.

Recommended co-requisite: Building Analyst (see page 15)

Sat - Wed, Dec 8 - 12 • 8 am - 5 pm
5 sessions • $1,249 (includes textbook) • Register online at www.heatspring.com
DCB 254-01 • Course will be held at Dutchess County Community College
Approved for 40 PDHs

NEW! NABCEP Solar Heating Entry Level Exam Review

This course is for those who have completed the Solar Hot Water Installation and Design course and need a review before taking the NABCEP Solar Heating Entry Level Exam. Your instructor is Peter Skinner, P.E., President of E2G.

Sat, Dec 15 • 9 am - 5:30 pm
1 session • $240 without Solar Thermal course; $120 with payment of Solar Thermal course
DCB 223-02 • BRC

NEW! Domestic Solar Hot Water Heating Hands-on Workshop

This class is for students who want an introductory, hands-on experience in solar thermal systems. The class will cover how these systems work, basic design elements and components of solar thermal installations and how to troubleshoot systems. This course will feature presentations of fundamental theory and installation best practices. Students will learn how to connect tanks and integrate the SHW system to a variety of existing domestic hot water systems. Together, the students and instructors will assemble two systems – a manufacturer kit based close loop antifreeze pressurized system, and a component based drainback system. The course will help prepare you for the NABCEP Solar Heating Entry Level exam. This course is presented by Peter Skinner, P.E., President of E2G.

Mon & Tue, Dec 17 - 18 • 9 am - 5 pm
2 sessions • $350
DCB 222-02 • BRC
Prerequisite: Solar Hot Water Installation and Design
Materials needed: scientific calculator
Approved for 14 PDHs and 14 NABCEP Advanced Continuing Education hours

COMING SPRING 2013

NEW! Residential Solar Heating Site Assessor

1 session • $250 • DCB 233-02 • BRC
Prerequisite: Solar Hot Water Installation and Design

NEW! Advanced Solar Hot Water Installation and Design

2 sessions and webinar • $650 (includes textbook)
DCB 176-03 • BRC
Prerequisite: Solar Hot Water Installation and Design

NEW! NABCEP Solar Heating Certification Exam Review

1 session • $250 • DCB 232-02 • BRC
Energy Efficiency

Over the last year, the U.S. Department of Energy, the National Renewable Energy Laboratory, and BPI worked to develop the Home Energy Professional certifications, a new set of advanced certifications for workers in the home performance industry. These certifications focus on the most common jobs in the industry: energy auditor, retrofit installer, crew leader, and quality control inspector.

Career Pathways

Building Analyst + Building Envelope + AC and Heat Pump

Certified Energy Auditor

An Energy Auditor is a residential energy efficiency professional who evaluates the energy efficiency, health, and safety of a home, and conducts field measurements to identify areas for savings. The Energy Auditor produces this information as a report and makes recommendations to the customer.

BASI + Building Envelope + Heating Professional + AC Heat Pump

Certified Crew Leader

A Crew Leader is a residential energy efficiency professional who is responsible for supervising the retrofitting activities specified in the scope of the work.

BASI + Building Envelope + Heating Professional + AC and Heat Pump

Certified Retrofit Installer Technician

A Retrofit Installer Technician is a residential energy efficiency professional who installs energy efficiency upgrades in single-family homes, and small multi-family housing (2-4 units).

Building Analyst + Building Envelope + Heating + AC and Heat Pump

Building Analyst + Energy Auditor

Certified Quality Control Inspector

A Quality Control Inspector is a residential energy efficiency professional who ensures the completion, appropriateness, and quality of energy upgrade work by conducting a methodological audit/inspection of the building, performing safety and diagnostic tests, and observing work.
BPI training programs will provide you with an advanced training in building science, whole-home assessments and energy efficiency work scoping, and will prepare you for the BPI certification written and field exams. Adding this comprehensive set of skills and services to your business can increase the quality and scope of work performed, and can lead to greater customer satisfaction. Training focuses on “house as a system” approach to the following:

• Health and safety; air quality & moisture control
• Envelope integrity; air sealing & insulation
• Thermal comfort; optimizing HVAC systems
• Energy efficiency and reduction

All courses are approved for the Training of Veterans.

**Basics of Building Science - Online**
If you are new to building science and want to develop a foundation of skills and knowledge to prepare you for Building Analyst, this course is for you. This online course teaches the basics of building science and how interacting relationships affect the performance of a home. This course consists of five structured modules over five weeks; 15 hours of online participation required.
Oct 2 - 30
DCB 170-04 • $300

**NEW! BPI Basic Air Sealing and Insulation (BASI)**
This course is designed to introduce the student to basic building performance concepts and material installation techniques by the use of both classroom instruction and hands-on laboratory experience. Students will learn how to install attic, wall and floor insulation and implement the air-sealing procedures necessary to increase the effectiveness of the installed insulation. Following the completion of the course, students will be prepared to take the BPI certification exam. Upon successful completion of this exam, students will receive the Building Performance Institute’s Residential Building Envelope Whole House Air Leakage Control Installer Certification.
Prerequisites: basic math and reading skills
Fri & Sat, Nov 2 - 10 • 8:30 am - 4:30 pm
4 sessions • $899
DCB 255-01 • SUNY Sullivan
Certification Testing:
Fri & Sat, Nov 16 & 17 • 8:30 am - 4:30 pm
1 session • $500
DCB 263-01 • SUNY Sullivan
Individual certification testing times will be scheduled the first week of class.

**BPI Building Analyst Professional**
This training prepares students to perform comprehensive, “whole-house” assessments, identify a building’s problems at the root cause and prescribe and prioritize solutions based on building science principles. Upon successful completion of the written and field exams students will receive building analyst certification.
Prerequisite: basic building science background is strongly recommended
Tue - Thu, Sep 18 - 20 • 9 am - 4 pm
Mon, Tue & Thu, Sep 24, 25 & 27 • 9 am - 4 pm
6 sessions • $1,045
DCB 842-27 • BRC, Kingston
Review and Written Exam:
Fri, Sep 28 • 9 am - 1 pm
1 session • $250
DCB 025-27 • BRC, Kingston
Tue & Thu, Oct 9 - Nov 1 • 6 - 9:15 pm
Sat & Sun, Nov 3 & 4 • 8:30 am - 4 pm
10 sessions • $1,045
DCB 842-28 • SUNY Sullivan
Review and Written Exam:
Thu, Nov 8 • 6 - 10 pm
1 session • $250
DCB 025-27 • SUNY Sullivan
Tue - Thu, Oct 16 - 25 • 9 am - 4 pm
6 sessions • $1,045
DCB 842-29 • Dutchess Community College
Review and Written Exam:
Fri, Oct 26 • 9 am - 1 pm
1 session • $250
DCB 025-27 • Dutchess Community College
Tue - Fri, Dec 11 - 14 • 9 am - 4 pm
Mon & Tue, Dec 17 - 18 • 9 am - 4 pm
6 sessions • $1,045
DCB 842-30 • Dutchess Community College
Review and Written Exam:
Wed, Dec 19 • 9 am - 1 pm
1 session • $250
DCB 025-27 • Dutchess Community College

Field exams are by appointment only. Please call 845-802-7171 to schedule.
Field exam fees are $500 each. Students are required to provide their own field testing house and to make arrangements for the equipment.

To register call 845-339-2025
Energy Efficiency
Building Performance Institute (BPI)

BPI Envelope Professional
This course is the training to quantify “whole-house” performance and prescribe improvements to help tighten the building envelope (shell), stop uncontrolled air leakage, install needed insulation, and optimize comfort, durability and HVAC performance.
Prerequisites: Building Analyst training or BPI Building Analyst Certification
Tue - Thu, Oct 30 - Nov 1 • 9 am - 4 pm  Tue - Fri, Nov 13 - 16 • 9 am - 4 pm
Wed & Thu, Nov 7 & 8 • 9 am - 4 pm  Mon, Nov 19 • 9 am - 4 pm
5 sessions • $1,125  5 sessions • $1,125
DCB 843-15 • BRC, Kingston  DCB 843-16 • Dutchess Community College
Review and Written Exam:
Fri, Nov 9 • 9 am - 1 pm  Tue, Nov 20 • 9 am - 1 pm
1 session • $250  1 session • $250
DCB 026-15 • BRC, Kingston  DCB 026-15 • Dutchess Community College

BPI Heating Professional
This training focuses on how to optimize the performance of heating equipment to help save energy and ensure occupant comfort, health and safety.
Prerequisites: Building Analyst training or BPI Building Analyst Certification
Tue - Thu, Nov 27 - 29 • 9 am - 4 pm  Tue & Wed, Dec 4 & 5 • 9 am - 4 pm
Tue & Wed, Dec 4 & 5 • 9 am - 4 pm  5 sessions • $1,250
DCB 036-06 • Dutchess Community College
Review and Written Exam:
Thu, Dec 6 • 9 am - 1 pm
1 session • $250
DCB 635-07 • Dutchess Community College

NEW! BPI Air Conditioning and Heat Pump Professional
This training focuses on understanding the role of these systems within the whole-house and how to diagnose and correct problems properly to achieve peak performance. This training will help prepare professionals for the BPI Air Conditioning and Heat Pump Professional exams.
Prerequisites: Building Analyst, EPA Section 608 Certification
Tue - Thu, Oct 2 - 4 • 9 am - 4 pm  Tue & Wed, Oct 9 & 10 • 9 am - 4 pm
Tue & Wed, Oct 9 & 10 • 9 am - 4 pm  5 sessions • $1,250
DCB 256-01 • BRC, Kingston
Review and Written Exam:
Thu, Oct 11 • 9 am - 1 pm
1 session • $250
DCB 262-01 • BRC, Kingston

NEW! BPI Energy Auditor Certification
An Energy Auditor is a building scientist who evaluates the energy efficiency and health and safety of a building and identifies areas for savings by gathering empirical data, conducting tests and using energy modeling software in order to reduce the energy consumption, improve the safety and increase the lifespan of a building while improving the quality of life and comfort for building occupants. A certified BPI Building Analyst energy auditor has passed both a written and field exam. Prerequisites for Energy Auditor Certification exams can be found at www.bpi.org. Students must apply to BPI to take the exam and once approved, may contact us to schedule the written and field exams.
Written exam • DCB 268-01 • $500  Field exam • DCB 269-01 • $500

Field exams are by appointment only. Please call 845-802-7171 to schedule. Field exam fees are $500 each. Students are required to provide their own field testing house and to make arrangements for the equipment.
**Green Building for LEED**

US Green Building Council’s Leadership in Energy Environmental Design (LEED) professional accreditations are designed for those who want more than a basic understanding of sustainability and green building concepts. These courses are intended for those who wish to become LEED certified, those who already are LEED certified, for architects and those who engage in community planning.

**NEW! Green Facilities Training**
Learn from industry professionals how to take advantage of the cost saving opportunities available to you through a greener, more sustainable business. This course will supply you with the resources and knowledge needed to complete a facility assessment, develop an improvement plan, and conduct a site audit of your business. Topics include green facility and LEED certification, Green Meeting Standards, source reduction, quantifying resource usage, green policy, purchasing, marketing, contracting, troubleshooting, audits and more. Your instructor is Evadne Giannini, HospitalityGreen, LLC. Course will be held at SUNY Orange, Middletown campus.

**Tue, Sep 11 - Oct 2 • 1 - 5 pm • To register, contact SUNY Orange at 845-341-9532**
4 sessions • $425 (includes study guide and one year of on-line access to tools from Hospitality Green website)

**NEW! Sustainable Landscape Management**
The class will use real-world and theoretical examples to investigate and understand how changes in landscape practices affect a landscape’s performance and how it contributes to an institution’s overall sustainability. Topics covered include landscape assessment, mowing reduction, waste reduction, institutional composting, stormwater management basics, soil carbon-sequestration, edible and native plant establishment and care, and employee training and satisfaction. Your instructor is Bill Sprengnether, Cardinal Direction Landscape Architecture, PLLC in association with HospitalityGreen, LLC. Course will be held at Dutchess Community College.

**Thu, Oct 18 - Nov 15 • 10 am - noon • To register, contact Dutchess Community College at 845-431-8910**
5 sessions • $380 (includes study guide and one year of on-line access to tools from Hospitality Green website)

**NEW! Environmentally Preferable Purchasing (EPP)**
This course provides participants with the knowledge and skills needed to research, bid, contract and implement an Environmentally Preferable Purchasing (EPP) program. Participants in this program will learn how to assess the products and services used in their company, find and evaluate information about green products and services, identify federal, state and other regulations on green purchasing, calculate the costs and benefits of purchasing choices, and design, implement and manage green purchasing processes. Your instructor is Evadne Giannini, HospitalityGreen, LLC.

**Course will be held at SUNY Sullivan.**
**Fri, Oct 5 - Nov 2 • 1 - 3 pm • To register, contact SUNY Sullivan at 845-434-5750 x4398**
5 sessions • $380 (includes study guide and one year of on-line access to tools from Hospitality Green website)

**NEW! Leading Sustainability Initiatives (Certificate in Green Change Management)**
This course provides participants with the knowledge and skills needed to identify, coordinate, implement and direct environmentally sustainable initiatives. Topics to be addressed include the following: sustainable operations (e.g., waste and chemical management), the built environment and new construction; environmentally preferable purchasing and supply chain management; and resource conservation and community partnerships. Your instructor is Evadne Giannini, HospitalityGreen, LLC.

**Course will be held at Rockland Community College.**
**Wed, Oct 3 - 31 • 3 - 5 pm • To register, contact Rockland Community College at 845-574-4151.**
5 sessions • $380 (includes study guide and one year of on-line access to tools from Hospitality Green website)

**NEW! Greening Food Services**
This program is designed to meet the specific needs of the food service industry. Resources, information, practical lessons and applications from field professionals will be provided to guide participants through the development and implementation of sustainable business practices in food services. Topics to be covered include the following: financially justifying a green policy and operational improvements; waste elimination; energy efficiencies for food preparation and facility management; water conservation; green cleaning; sustainable procurement practices; marketing green; improvements to company culture; and employee training and motivation. Your instructor is Evadne Giannini, HospitalityGreen, LLC.

**Course will be held at SUNY Sullivan.**
**Fri, Oct 5 - Nov 2 • 3:30 - 5:30 pm • To register, contact, SUNY Sullivan at 845-434-5750 x4398**
5 sessions • $380 (includes study guide and one year of on-line access to tools from Hospitality Green website)

To register call 845-339-2025
NEW! LED Lighting Fundamentals

This tutorial is designed for architects, interior designers, engineers, contractors, building managers, and anyone who has a need or an interest in learning about LED lighting. The tutorial is divided into two four-hour sessions. In the first session, following an introduction of the basic theory of operation and manufacturing of LED’s, and of the design considerations when using LED’s for lighting, the instructors will present design and energy savings potential benefits from using LED lights, discuss light fixtures selection and installation to tap these benefits and review the industry standards being developed in support of LED lighting fixtures functionality and reliability and provide guidelines for selection of LED light fixtures for most common applications. In the second session, the instructors will review in more detail LED lamps and driver design and selection, review LED light dimming and control, discuss considerations for retrofitting installations with LED lights to minimize risks of non-compatibility with legacy installations, and study several LED lighting installations.

Upon completion of this course, participants will be able to compare LED lighting fixtures with regard to color consistency and efficacy, evaluate the quality and assess the reliability of LED lighting fixtures, specify LED lighting fixtures to the relevant standards as defined by the IES and ANSI, give considerations to the selection of LED lights and drivers and analyze the economic feasibility of LED lighting fixtures versus conventional lighting.

Your instructors are Jean-Claude Fouere, Renewable Energy / Energy Efficiency Instructor and Michael Stiller, LEED AP of Michael Stiller Design.

Part I: Introduction to LED Lighting
Thu, Oct 25 • 5 - 9 pm
1 session • $150
DCB 207-03 • BRC

Part II: LED Lighting Continued
Fri, Oct 26 • 5 - 9 pm
1 session • $150
DCB 257-01 • BRC

Sustainable Design

Biomimicry in Sustainable Design
Biomimicry is a design philosophy and process that studies nature’s biology and imitates these models to solve human design problems. The course will explore natural forms, measures, and biological processes with examples of how designers can mimic nature’s design lessons with the goal of helping projects reach deeper sustainability. Instructor - Janus Welton, AIA, LEED AP BD+C, CSBA, BSP
Sat, Nov 10 • 9 am - 5 pm
1 session • $175
HSI 577-01 • BRC

Living Home Design
This program introduces and illustrates the imperatives of the Living Building Challenge Certification Program: Seven Petals of SITE, WATER, ENERGY, HEALTH, MATERIALS, EQUITY, and BEAUTY and the 20 imperatives necessary to achieve a Living Home. The course will explore how a Living Home Design Competition winner planned for a cold climate meets the standards of Living Building and how that can be applied here in the Northeast. Instructor - Janus Welton, AIA, LEED AP BD+C, CSBA, BSP
Sat, Dec 8 • 9 am - 5:00 pm
1 session • $175
HSI 578-01 • BRC

Fundamentals for Building a Green Business
Using cutting edge principles for building sustainable teams and businesses you will be guided through a discovery process to assess what your business is, envision the future, design and plan your company, and implement your proposed design. These steps will guide you to have the framework, key elements and practices in place to enable success of your business. Your instructor is Laura Finestone, Certified O.M.D. Professional, Master Leadership Development Consultant.
Sat, Nov 3 • 9 am - 5 pm
1 session • $175
HSI 579-01 • BRC
Water Treatment Plant Operations

These redesigned and updated courses satisfy safety-training requirements under Part 5 of the NY Sanitary Code. Under this code, all NY State Grades A, B, C, and D Water Treatment Plant Operators are required to complete an approved training program as a prerequisite to becoming certified.

NY Dept of Health Reimbursement Program

These certification courses have been approved by the NY State Department of Health for participation in the Water Operator Training Expense Reimbursement Program (WOTERP). To be eligible, the operator must be employed at a Community Water System and/or Nontransient Noncommunity Water System that serves a population of 3,300 or less.

Grade A

Topics include operator qualifications and responsibilities, water quality control, coagulation, sedimentation, filtration, pH and alkalinity adjustment, iron and manganese removal, water softening and chlorination, bacteriological laboratory techniques, emergency planning, safety, hydraulics and pumps and distribution system operation and maintenance.

Tue & Thu, Sep 13 - Dec 18 • 6 - 9 pm
26 sessions • $950
PSP 500-06 • SRC
No class Nov 6 & 22

Grade B

Course is designed for operators of plants providing treatment for disinfection by chlorination, iron and manganese removal, corrosion control, emergency planning, safety, hydraulics and pumps, and includes process calculations.

Tue & Thu, Sep 13 - Nov 13 • 6 - 9 pm
17 sessions • $725
PSP 504-07 • SRC
No class Nov 6

Grade C

This course is designed to provide the student with a basic background in the principles and practices of water treatment.

Mon & Wed, Oct 1 - Nov 14 • 6 - 9 pm
13 sessions • $600
PSP 507-04 • SRC
No class Oct 8

Grade D

This course of study is designed for operators of distribution systems serving greater than 1000 people. Topics include pressure zones, booster stations, storage tanks, fire protection and disinfection.

Mon & Wed, Nov 19 - Dec 19 • 6 - 9 pm
9 sessions • $400
PSP 508-03 • SRC

Coming January 2013:
Waste Water Operations Treatment Program

Environmental Technology Online

Environmental Technology Online offers a variety of online courses. These courses in Homeland Security, Environmental Technology, DOT and HazCom consist of an online text, interactive exercises, self-grading quizzes, and as required, hands-on training and/or final exam. ET Online is offered by SUNY Ulster through Kirkwood Community College. Visit http://www.kirkwood.edu/etonline for complete list and course descriptions.

Hazwoper - 40 Hours (24 hours online/16 face-to-face)
Moderate Risk - 24 Hours
Refresher - 8 Hours
Household Hazardous Waste Worker - 24 Hours (16 hours online, 6 hours face-to-face)
Water/Waste Water online - Selected courses approved for re-certification credit by NY Department of Environmental Conservation and NY Department of Health.

Composting • Landfill • OSHA Courses • Hazmat • Terrorism
Complete list available from songayla@sunyulster.edu

Occupational Safety and Health Standards for Construction 30 Hour – OSHA 500

This course for private sector personnel covers OSHA policies, procedures, and standards, as well as construction safety and health principles. Topics include scope and application of the OSHA construction standards. Special emphasis is placed on those areas that are the most hazardous using OSHA standards as a guide.

Mon - Thu, Jan 21 - Jan 24, 2013 • 8 am - 4 pm
4 sessions • $600
HSI 580-01 • BRC

To register call 845-339-2025
Civilian helicopter flying offers an interesting and challenging career. Working conditions for helicopter pilots have improved dramatically with higher salaries and benefits, newer equipment, and considerably more opportunities.

Helicopter Private Pilot Ground Course
This course provides students with the necessary aeronautical knowledge to meet the prerequisites specified in 14 CFR FAR Part 61.105 and 14 CFR Part 141, Appendix B3 and 4 for the Private Pilot Rotorcraft, Helicopter exam. Your instructor is Heather Howley.
Tue & Thu, Sep 4 - Nov 29 • 6 - 8 pm
24 sessions • $1,599 (payment plan available)
Course includes 2.5 hours of simulator time as listed below (DCB 434)
DCB 965-08 • Stewart International Airport
No class Nov 6 & 22
Required text: available from the instructor for approximately $170
Students on a payment plan will not be issued a completion certificate until they have finished all financial obligations.

Helicopter Private Pilot Simulator Course
The FAA approved helicopter simulator provides realistic training at a fraction of the cost. Simulators and flight training devices work well for teaching Private, Instrument, Commercial, ATP, Instructor, CRM, Crew Training, Recurrent Training and Emergency Maneuver Training. The Simulator teaches systems knowledge, discipline and proper procedures. 2.5 hours are applied towards your actual flight time needed to achieve your Private Pilot license. This program provides students with the necessary aeronautical experience needed to begin your training towards the Private Pilot Rotorcraft Helicopter license. Your instructor is Heather Howley.
Sep - Dec • students will schedule with instructor
5 sessions • $500
DCB 434 • Stewart International Airport

Helicopter Private Pilot Flight Training
This is where it all begins! The Private Pilot’s license is intended for those who want to fly for personal or business use. It’s also the stepping stone for those intending to become a professional helicopter pilot. Get your feet off the ground today! This course consists of 40 hours of flying training in a Robinson R22. Of the 40, at least 10 hours have to be solo. You must be at least 17 years old upon completion of the course. There are weight restrictions for the R22 helicopter.
Sep - Dec • students will schedule with instructor
40 sessions • $12,000 (payment plan available)
DCB 836-06 • Stewart International Airport

Fixed Wing Pilot
The Private Pilot Fixed Wing Ground course will allow you to take the first step to enter the exhilarating world of flying. At the present time there is a shortage of professional pilots being trained nationwide. Whether your goal is to fly for fun or to become a professional pilot, this course will provide the first step in obtaining your pilot’s license. Students must be at least 17 to obtain a pilot’s license and must be able to read and write English. Your instructors are Gary Jon Mulligan and John R. Morrow.

NEW! Fixed Wing Private Pilot Ground or Sport Pilot Ground
This course provides pilots with the required knowledge specified by the FAA 14 CFR Part 61 61.105 in order to take the FAA written examination required for the issuance of a Private Pilot Certificate.
Tue & Thu, Oct 2 - Dec 13 • 7 - 9 pm
20 sessions • $1,600 (payment plan available)
DCB 261-01 • BRC
Required text: available from the instructor for approximately $130
No class Nov 6 & 22
Students on a payment plan will not be issued a completion certificate until they have finished all financial obligations.
Real Estate

Prepare for Your Real Estate Exam
You can choose an a-la-carte course or get the most value for your time and money with a course package. The New York Course Package includes the courses listed below:
New York Real Estate Pre-license Course – 75 Hours · New York Exam Prep
MathMaster · New York Real Estate for Salespersons Book

Educational Requirements:
1. **Coursework:** You must complete the 75-hour New York Real Estate Pre-license Course and pass the final exam. This online series satisfies this requirement.
2. **Final Exam:** At the end of your coursework you must pass a proctored final exam.
3. **State Licensing Exam:** You must pass the New York licensing examination.

Please refer to the New York Department of State website for more information:
http://www.dos.state.ny.us/lcns/realestate/index.html

New York Real Estate Continuing Education Course
You can be on your way to completing your 22.5 hours of New York Real Estate Continuing Education Courses in just one click! Simply select your choice of the format for course delivery and begin the registration process for the New York Real Estate Continuing Education courses. To register, visit us online at:
http://www.careerwebschool.com/new-york/real-estate/1095

Broker and Salesperson Continuing Education Courses
SUNY Ulster is pleased to offer a complete line of continuing education courses for Brokers and Salespersons. These include 22.5 hour renewal packages. To register, visit us online at:
http://www.careerwebschool.com/new-york/real-estate/1095

Professional Sales Skills
There are no shortages of opportunities for skilled salespeople. In good times or bad, companies never stop looking for sales representatives that can help them meet their financial goals. If you’ve always dreamed of becoming successful in sales, this course is exactly what you need. You’ll learn how to turn prospects into buyers, how to provide proper customer service, how to develop a sales plan, and more! Please visit www.ed2go.com/sunyulster for start dates. Course fee is $99.

NYS Approved Home Inspection Qualifying Course
This 140-hour course is for those wishing to become a professional Home Inspector in New York State. The program is broken into four 25-hour modules of classroom instruction and one 40-hour field module. Learn how to either open your own home inspection company or acquire the skills and training necessary to join an established company. This course is taught per the ASHI, NAHI, and CREIA standards, by the American Home Inspectors Training Institute. All textbooks and materials are included. This course is approved for the Training of Veterans. Modules 1 - 4 are approved for CEUs for Professional Engineers. For more information and to register call the American Home Inspectors Training Institute at 1-800-441-9411 or visit online at www.ahit.com or visit www.facebook.com/myahit. Modules 1 - 4 are held at the Business Resource Center in Kingston. Module 5 meets the first day at the BRC. A discount package is available for the purchase of multiple modules. This course is approved for the Training of Veterans. Discount Package: $2,550 All classroom modules 1 - 4; $4,000 All modules 1 - 5

<table>
<thead>
<tr>
<th>Module One: Structural Components, Exterior Components, Roofs</th>
<th>Module Four: Licensing Law, Report Writing, Overview of the Profession</th>
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<tr>
<td>Mon - Wed, Nov 26 - 28 • 8 am - 6 pm</td>
<td>Thu - Sat, Dec 6 - 8 • 8 am - 6 pm</td>
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<td>3 sessions • $700 • BRC</td>
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<tr>
<th>Module Two: Interior Components, Insulation &amp; Ventilation, Electrical Systems</th>
<th>Module Five: Home Inspection Field Work</th>
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<td>Thu - Sat, Nov 29 - Dec 1 • 8 am - 6 pm</td>
<td>Mon - Fri, Dec 10 - 14 • 8 am - 6 pm</td>
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<tr>
<td>3 sessions • $700 • BRC</td>
<td>5 sessions • $1,450 • BRC</td>
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To register call 845-339-2025
Personal Trainer National Certification

There is a shortage of personal trainers in the workforce. Whether a career move or for your own personal knowledge, get all the information you need to become a CERTIFIED PERSONAL TRAINER. This challenging course is taught over a five-week period to increase retention and skill competency. This course is formatted as a 60-hour program and is comprised of 15 hours of lecture, 15 hours of practical training and a 30-hour internship. Completion and certification of CPR/AED are needed to receive the certificate. The National Exam is held in the sixth week. Covered topics include biomechanics, exercise physiology, fitness testing, equipment usage, and health assessment. World Instructor Training School (W.I.T.S.) is the only major certifying body in the country providing comprehensive practical training and internship components. A textbook is required and not included in course fees. Call 888-330-9487 to order and start reading immediately. For additional information visit: www.witseducation.com. This course is approved for the Training of Veterans and MyCAA. Required text: Fitness Professional’s Handbook, 6th Edition, $94. A high school diploma or GED is required.

Personal Trainers need 10 CEUs every two years for recertification.

Sat, Oct 13 - Nov 17 • 9 am - 4 pm
6 sessions • $659 • Includes the cost of the exam
DCB 465-19 • BRC & MAC

W.I.T.S. is an approved CEU provider for the Board of Certification for Athletic Trainers (BOC), the American Occupational Therapy Association (AOTA), National Certification Board for Therapeutic Massage & Bodywork (NCBTMB), Veterans Training and Education, the International Association of Continuing Education and Training (IACET). The American Council on Education has recommended 3 undergraduate academic credits for this course.
NEW! **Sustainable Urban Farming - Permaponics**

Vertically Integrated Farms developed the term “Permaponics”, an Aquaponic approach to Permaculture with a focus on urban sustainability and vitality. In the combination of these farming principals, they found answers to the ultimate sustainable urban farming techniques, designed specifically for urban environment, yet could be practiced anywhere. This class will cover the following:

- **Definition and discussion of sustainability; sustainability as a way of life and the art of relationships in the global ecosystem**
- **Agriculture - What happened to get us where we are now, what’s wrong, and ideas for fixing the situation**
- **Overview of permaculture techniques and food forestry**
- **Urban farming - The art and science of growing soil (composting), crops and livestock in an intensive urban, suburban, or any environment**
- **Aquaponics - growing plants, mushrooms, and fish in closed recirculating water systems**
- **Intensive small scale Aquaculture techniques in the context of Aquaponics**
- **Vertical gardening, including home based techniques for getting the most out of limited space and light**
- **Cultivating mushrooms on urban trash like coffee ground and cardboard, the gourmet varieties**
- **Harvesting wild food, cooking with weeds, edible and medicinal properties of invasive weeds**
- **Optional field trips to tour Hunts Point where all produce, fish and meat markets are located and to visit thepoint.org, an urban farm with aquaponics, aquaculture, vertical garden, cardboard mushroom patches, chickens, and children - all framed with the wonderful works of TATS CRU South Bronx street artists- where community, creativity and food connect.**

After lunch you can stop at the Science Barge in Yonkers. Date will be discussed in class.

**Anya Pozdeeva** is the owner of Vertically Integrated Farms and a co-founder of S.A.V.E. - Society for Aquaponic Values and Education, located in the Bronx, NY. Teaching sustainable ways of living is her passion and profession. She began practicing urban farming in Siberia, Russia in her teens and was involved in gardening and foraging even earlier with her grandmother who taught her about medicinal and edible properties of wild plants in the Ural Mountains at the junction of Asia and Europe. She has studied Biology with a major in Botany. In 1993, Anya relocated to New York City and after taking a detour into the financial world returned to what was truly important to her - Healthy Planet Earth. Currently she teaches urban farming in an afterschool program at THE POINT, Community Development Corporation with her partner and lectures in conjunction with various institutions. www.VIFarms.com & www.SAVEFarms.org

**Fri, Sep 28 • 6 - 8 pm**
**Sat, Sep 29 • 9 - 11 am**
2 sessions • $89
NCC 286-01 • SRC
Optional field trips: $25, lunch and donations

**Register early - do it today!**

Each class has a minimum required enrollment. If you find a class you like, encourage a friend to join you. Sometimes two or three people make the difference in whether or not a course is cancelled.

To register call 845-339-2025