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AT THE ENERGY INNOVATION CENTER

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A photograph of two students, a man and a woman, working on electrical equipment in a classroom. The man is in the foreground, wearing a grey t-shirt, and is focused on a task. The woman is behind him, wearing a red t-shirt, looking on. The background shows a wall with electrical panels and equipment, including a large panel with the name 'Hampden' written on it. The entire image has a red overlay.

**CCAC'S CLASSROOM AT THE ENERGY INNOVATION CENTER FEATURES CURRENT, INDUSTRY-STANDARD EQUIPMENT. THE HANDS-ON LEARNING SPACE UTILIZES BOTH A CLASSROOM AND LABORATORY SETTING, ALLOWING STUDENTS TO IMMEDIATELY SHARPEN THEIR NEWLY LEARNED SKILLS.**

**STUDENTS CAN CHOOSE FROM TWO AREAS OF INSTRUCTION: SOLAR AND RENEWABLE ENERGY OR HEATING, VENTILATION AND AIR CONDITIONING/ REFRIGERATION. BOTH SUBJECTS ARE TAUGHT BY INSTRUCTORS WITH REAL-WORLD EXPERTISE IN THESE HIGH-DEMAND AREAS.**

**CREDIT AND NONCREDIT SKILLED TRADES COURSES ARE CURRENTLY OFFERED AT THE EIC. CREDIT COURSES CAN BE USED TOWARDS A CERTIFICATE OR DEGREE, WHILE NONCREDIT CLASSES PROVIDE IMMEDIATE VOCATIONAL SKILLS.**



## NONCREDIT

### Solar Energy Systems Overview

This 40-hour course will introduce students to various alternate energy sources. Topics include basic understanding and operation of photovoltaic energy systems, wind turbine systems, solar thermal systems, solar furnaces and hydrogen fuel cells; the application of electrical and mechanical principles to the wiring and operation of those systems; and the real application of the systems to supporting electrical and heat generation for home and business use.

Students will gain knowledge and practice hands-on skills in the EIC's Renewable Energy Lab.  
EIC XGH-528-5301 \$390 5 Sessions 8:00 AM–4:00 PM F 2/5/16 Blackford

### HVAC–R Helper Overview

This course provides an overview for students who are mechanically inclined and interested in learning an in-demand trade. HVAC–R helpers assist certified furnace and air conditioning technicians with daily work duties. Nine areas of expertise will be covered: HVAC–R safety; refrigeration tools and materials; hand tools; instruments; fastening devices and hangers; the basic refrigeration cycle; electrical fundamentals; motors; and refrigerants servicing.

EIC XCE-217-5101 \$960 15 Sessions 11:00 AM–2:30 PM M 2/29/16 Snak

## CREDIT

CCAC's Heating and Air Conditioning program is intended for students to study, in a hands-on environment, the installation, service and maintenance of heating and air conditioning equipment. The seven courses in this program teach the fundamental concepts of electricity, refrigeration, heating and air conditioning, plus installation and preventive maintenance and EPA certification preparation. Special attention is given to the integration of green technologies.

The following courses for this program will be offered at the EIC during the spring 2016 term:

### HAC 120 Acquiring & Using HVAC Technical Documentation

This is a course in the application of computer programs to acquire and use heating, ventilation and air conditioning (HVAC) technical information. Topics include computer terminology used in building control systems, accessing professional society research and manufacturer and wholesaler web sites for sales literature, service literature, parts information and product-data specifications. Additional topics include storing, downloading, saving, and printing information as well as job searching.

HAC 120 WHEIC MTW 8:00 AM–12:30 PM 1/25/16–1/27/16

### HAC 101 Basic Electrical Wiring

This course prepares students in the principles of electricity, wiring, electrical controls and motors as they relate to refrigeration, air conditioning and heating in residential and commercial settings. Emphasis is on electricity, electrical components and circuits.

HAC 101L WHEIC MTWR 8:00 AM–11:00 AM 1/28/16–3/1/16

HAC 101 WHEIC MTWR 11:30 AM–1:45 PM 1/28/16–3/1/16

### HAC 201 Heating Systems (prerequisite: HAC 101)

This is a course in the major components of gas, oil, electric and hydronic heating systems as they relate to residential and commercial settings. Emphasis is on control devices and troubleshooting.

HAC 201L WHEIC MTWR 8:00 AM–11:00 AM 3/2/16–4/11/16

HAC 201 WHEIC MTWR 11:30 AM–1:45 PM 3/2/16–4/11/16

### HAC 202 Air Conditioning Systems (prerequisite: HAC 101)

This is a course in the design and function of components of residential and commercial air conditioning. Topics include whole house and window air conditioners, rooftop units, heat pumps and air cleaning systems. Electrical controls, wiring, troubleshooting and psychrometrics are discussed.

HAC 202L WHEIC MTWR 8:00 AM–11:00 AM 4/12/16–5/12/16

HAC 202 WHEIC MTWR 11:30 AM–1:45 PM 4/12/16–5/12/16



For additional information about CCAC at the EIC, contact Sylvia Elsayed at **412.788.7534** or **selsayed@ccac.edu**.

Energy Innovation Center  
1435 Bedford Avenue  
Pittsburgh, PA 15219



**OUR GOAL IS YOUR SUCCESS.**

**Community College of Allegheny County (CCAC)**

CCAC annually educates more than 30,000 credit students through 155 degree, certificate, diploma and transfer programs and offers thousands of students access to noncredit and workforce development courses. The learning-centered institution's mission is to provide affordable access to quality education and offer a dynamic, diverse and supportive learning environment that prepares the region's residents for academic, professional and personal success in our changing global society. CCAC's quality programs enable students to transfer credits to nearly 500 colleges and universities and support regional workforce needs with accessible instruction available day, evening, weekend and online in Allegheny County and beyond. Visit [ccac.edu](http://ccac.edu) to learn more.

Notifications of nondiscrimination and contact information can be found at [ccac.edu/nondiscrimination](http://ccac.edu/nondiscrimination).

