



Career Launchpad Building and Construction Technology

With the Career Launchpad, Hudson Valley Community College has fast-track options that can get you re-skilled for a new or better career!

Course/Program Offerings

3D Modeling wAutoCAD

An introduction to the aspects of computer-based three-dimensional (3D) modeling, using the AutoCAD platform. This includes constructing 3D wireframe models, surface models & solid models to make multi-view drawings.

Related Occupational Outlook Information:

Architecture and Engineering Occupations (<https://www.bls.gov/ooh/architecture-and-engineering/home.htm>)

Machinists and Tool and Die Makers (<https://www.bls.gov/ooh/production/machinists-and-tool-and-die-makers.htm>)

Air Conditioning Systems Service & Repair

This course provides an in-depth study of the practical aspects of residential and light commercial air conditioning equipment and systems. An emphasis is placed on the theory of heat transfer, good service and installation practices, and the use of instruments and gauges to assist in fault diagnosis. This Air Conditioning Service and Repair course provides students with entry-level skills in the field of air conditioning installation, service and repair.

Related Occupational Outlook Information:

Heating, Air Conditioning, and Refrigeration Mechanics and Installers (<https://www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm>)

AutoCAD - Basics

The AutoCAD Basics course is designed for individuals who are interested in learning the fundamentals of design using AutoCAD software. The objective of the course is to provide students with an overview of AutoCAD software tools and how to use them for specific design tasks.

Related Occupational Outlook Information:

Architecture and Engineering Occupations (<https://www.bls.gov/ooh/architecture-and-engineering/home.htm>)

Machinists and Tool and Die Makers (<https://www.bls.gov/ooh/production/machinists-and-tool-and-die-makers.htm>)

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Course/Program Offerings

AutoCAD - Intermediate

Intermediate AutoCAD is designed for individuals who are interested in learning more advanced techniques for using AutoCAD software for design. This course provides students with an overview of AutoCAD software tools, including how to use them for specific design tasks.

Related Occupational Outlook Information:

Architecture and Engineering Occupations (<https://www.bls.gov/ooh/architecture-and-engineering/home.htm>)

BPI Infiltration & Duct Leakage Professional (IDL)

This course is intended for individuals looking to provide required energy code testing and certification of new construction. You will learn the knowledge and skills needed to conduct duct leakage and blower door tests in compliance with IECC and New York State building codes. Training consists of interactive classroom sessions that include activities covering basic building science, energy codes, and testing processes and standards. You will also learn how to analyze the results of blower door and duct leakage tests and determine reporting requirements.

Related Occupational Outlook Information:

Construction and Extraction Occupations (<https://www.bls.gov/ooh/construction-and-extraction/home.htm>)

BPI Building Science Principles

This course is for anyone entering the clean/renewable energy and building performance industries, whether you are a veteran contractor, sales, or support staff, supervisor, distributor or manufacturer. You will learn the knowledge and skills needed to obtain a Certificate of Knowledge in Building Science from the Building Performance Institute. Training consists of interactive classroom sessions that include activities covering heat transfer, insulation, and appliances. You will learn how to analyze the performance of a home and how energy efficiency measures can be utilized to reduce energy use and increase comfort and health.

Related Occupational Outlook Information:

Construction and Extraction Occupations (<https://www.bls.gov/ooh/construction-and-extraction/home.htm>)

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Course/Program Offerings

Building Performance Institute (BPI) Certification Testing

Hudson Valley Community College, as a Building Performance Institute (BPI) Test Center, will conduct BPI field certification testing, as well as written/online exams, on an individual basis. Candidates should contact the college's Workforce Development at the number(s) below to register and make arrangements for their Field Exam.

Related Occupational Outlook Information:

Construction and Extraction Occupations (<https://www.bls.gov/ooh/construction-and-extraction/home.htm>)

Electrical Fundamentals for Heating, Ventilation & Air Conditioning (HVAC)

This course covers the fundamentals of electrical theory including magnetism, circuits, transformers and motors. The emphasis is on motor and controls found in various HVAC equipment.

Related Occupational Outlook Information:

Heating, Air Conditioning, and Refrigeration Mechanics and Installers (<https://www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm>)

Electrical Wiring Principles & Practices

This 32-hour training course provides the student with entry-level electrical skills. The course provides instruction in performing basic electrical tasks, including recognizing distinguishing characteristics of electrical systems and applying design principles and calculations for electrical distribution systems. It also provides the necessary foundation in electricity needed by those who wish to study the field of photovoltaics.

Related Occupational Outlook Information:

Electricians (<https://www.bls.gov/ooh/construction-and-extraction/electricians.htm>)

Heating & Air Conditioning Control Systems

This course covers the fundamentals of electrical theory, including magnetism, circuits, transformers and motors. The emphasis is on motors and controls found in HVAC equipment. Classroom and lab time each week will include lectures and discussions. Reading assignments will be given from the textbook.

Related Occupational Outlook Information:

Heating, Air Conditioning, and Refrigeration Mechanics and Installers (<https://www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm>)

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Course/Program Offerings

Heating Systems Service & Repair

This Workforce Development course provides introductory training and lab activities in various heating systems using gas, oil and electric.

Related Occupational Outlook Information:

Heating, Air Conditioning, and Refrigeration Mechanics and Installers

(<https://www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm>)

Historic Masonry Treatments & Repair

The course, in cooperation with the New York State Historic Preservation Office and Historic Albany Foundation, will provide participants with hands-on training in the traditional trade of masonry restoration, including documentation, cleaning, pointing, repairing and coatings.

Related Occupational Outlook Information:

Masonry Workers (<https://www.bls.gov/OOH/construction-and-extraction/brickmasons-blockmasons-and-stonemasons.htm>)

Historic Plaster Rehabilitation & Repair

This course will provide you with an introduction to the basics of plaster restoration/repair and a working knowledge of basic flat and run plaster skills as they relate to the rehabilitation of historic buildings. You will also be introduced to the concepts of assessment and structural investigation.

Related Occupational Outlook Information:

Plasterers and Stucco Masons (<https://www.bls.gov/oes/current/oes472161.htm>)

Historic Preservation: Carpentry I

This introductory course covers the basics of both preservation carpentry and building conservation, and will provide you with a working knowledge of basic carpentry skills and practices as well as historical construction methods. Construction styles from the 18th to the 20th century will be discussed and studied and you will be introduced to the various styles and forms of buildings which you may encounter.

Related Occupational Outlook Information:

Carpenters (<https://www.bls.gov/ooh/construction-and-extraction/carpenters.htm>)

Construction Laborers and Helpers (<https://www.bls.gov/ooh/construction-and-extraction/construction-laborers-and-helpers.htm>)

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Course/Program Offerings

Historic Wood Window Rehabilitation

The course, in cooperation with the New York State Historic Preservation Office and the Historic Albany Foundation, will provide you with hands-on training in the traditional trade of historic window rehabilitation, including the repair of historic sashes, glazing, frames and weights. You will gain an understanding of fenestration systems used on 19th and 20th century buildings, as well as the basics of the field of historic preservation, weatherization techniques, and where to market your skills.

Related Occupational Outlook Information:

Carpenters (<https://www.bls.gov/ooh/construction-and-extraction/carpenters.htm>)

Construction Laborers and Helpers (<https://www.bls.gov/ooh/construction-and-extraction/construction-laborers-and-helpers.htm>)

LEED Green Associate Exam Prep

This self-paced course introduces key concepts and terms to prepare learners to earn their LEED Green Associate v4 accreditation. The course is divided into modules that explain LEED process, LEED certification, and the knowledge domains associated with the seven LEED rating systems in a simple and straightforward way that can be quickly and easily understood.

Related Occupational Outlook Information:

Careers in Green Construction (<https://www.bls.gov/green/construction/>)

Construction and Extraction Occupations (<https://www.bls.gov/ooh/construction-and-extraction/home.htm>)

Occupational Safety and Health Administration (OSHA) 10 hour training for construction workers

This 10-hour construction safety course is intended for entry-level participants. Each student will receive an OSHA 10-hour Construction Safety wallet card upon successful completion. Training is delivered by a recognized OSHA-10 Construction Safety instructor.

Related Occupational Outlook Information:

Construction and Extraction Occupations (<https://www.bls.gov/ooh/construction-and-extraction/home.htm>)

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Course/Program Offerings

Photovoltaics (Solar) Installation Basics

As an introduction to Solar Energy, students will learn to safely and effectively perform installation tasks as a trained, entry-level worker does in the field. Course topics will include: basic electrical safety, basic measuring, construction safety, electrical grounding and bonding, hand-held power tools, PV racking systems, PV module handling and installation, rooftop safety, and weather proofing.

Related Occupational Outlook Information:

Solar Photovoltaic Installers (<https://www.bls.gov/ooh/construction-and-extraction/solar-photovoltaic-installers.htm>)

Photovoltaics (Solar) Advanced

PV-Advanced is designed for individuals who are preparing for the North American Board of Certified Energy Practitioners (NABCEP) PV Installer certification process. The course follows the NABCEP Study Guide for Photovoltaic System Installers, and includes both theory and hands-on experience.

Related Occupational Outlook Information:

Solar Photovoltaic Installers (<https://www.bls.gov/ooh/construction-and-extraction/solar-photovoltaic-installers.htm>)

PV - Associate ONLINE only

This online version of the PV-Associate Photovoltaics (Solar Power) course covers the fundamentals of photovoltaic (PV) systems design and installation. The objective of the course is to prepare students for the North American Board of Certified Energy Practitioners (NABCEP) PV Associate Exam. The course curriculum complies with NABCEP's Job Task Analysis for the Associate exam.

Related Occupational Outlook Information:

Construction and Extraction Occupations (<https://www.bls.gov/ooh/construction-and-extraction/home.htm>)

PV Associate Blended

The PV-Associate Photovoltaics (Solar Power) course covers the fundamentals of photovoltaic (PV) systems design and installation. The objective of the course is to prepare students for taking the North American Board of Certified Energy Practitioners (NABCEP) PV Associate Exam. The course curriculum complies with NABCEP's Job Task Analysis for the Associate exam.

Related Occupational Outlook Information:

Solar Photovoltaic Installers (<https://www.bls.gov/ooh/construction-and-extraction/solar-photovoltaic-installers.htm>)

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Course/Program Offerings

Revit - Intermediate

This intermediate-level course is a continuation of Introduction to Revit®. Students will learn about important topics such as: creating office templates, custom titleblocks, presentation drawings and the collaboration features available in Revit® Architecture 2015. Upon successful completion of this course, students will be able to manipulate through Revit®, using intermediate skills to develop a set of construction documents.

Related Occupational Outlook Information:

Architecture and Engineering Occupations (<https://www.bls.gov/ooh/architecture-and-engineering/home.htm>)

Revit - Introduction

Introduction to Revit® offers students intensified training in 3D computer-aided drafting (CAD), and building information modeling (BIM), using Autodesk® Revit®. The course provides students with an overview of Revit® software, focusing on light commercial project applications. This training is ideal for individuals/firms interested in updating or switching from 2D CAD to 3D and BIM.

Related Occupational Outlook Information:

Architecture and Engineering Occupations (<https://www.bls.gov/ooh/architecture-and-engineering/home.htm>)

Revit - Mechanical, Electrical & Plumbing (MEP) Basics

Revit MEP Basics enables those who have worked with the software to expand their knowledge in designing for the mechanical, electrical and plumbing trades. We will use office standards with templates that include annotation styles, pre-set views, sheets, schedules, creating basic element types and families. Prior to starting this course, you should be comfortable with the fundamentals of Revit and have a knowledge of basic techniques.

Related Occupational Outlook Information:

Architecture and Engineering Occupations (<https://www.bls.gov/ooh/architecture-and-engineering/home.htm>)

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