



NABCEP Solar PV Training at City Tech [view schedule](#)

City Tech Continuing Studies Center has been providing NABCEP Solar PV certification training since 2007. Our comprehensive, hands-on training is designed to give you a broad scope of knowledge as well as the technical ability to design, install and troubleshoot solar PV installations.

For more information, please visit NABCEP.org or contact dsalomon@citytech.cuny.edu

The PV Installation Professional (PVIP) Board Certification is considered the gold standard for PV professionals in the renewable energy industry. Recognized and demanded by organizations worldwide, the PVIP Board Certification validates your competence to perform in the role of PV Installation Professional, which encompasses PV design, installation, operations, commissioning and maintenance.

Solar Training at City Tech consists two courses:

Together, the two courses provide the 58 educational credits needed to sit for the PVIP exam.

NABCEP PHOTOVOLTAIC ASSOCIATE™ ENTRY LEVEL (Solar PV Electrical, Design & Installation)

72 hours, 18 CEUs

This comprehensive program takes students from the math and electrical calculations used to design a PV system, through electrical theory and practice, interconnections, PV installations, operations and maintenance of both grid-tied and stand-alone systems. The class includes an introduction to microgrids and solar + battery storage. [The PV Associate Exam](#) is administered at the conclusion of the class and may be taken on site or at a testing center.

NABCEP ADVANCED PV INSTALLATION PROFESSIONAL EXAM PREP (Classroom Based)

40 hours, 40 CEUs

PVI 205 is a high-level hands-on course for those who intend to take the [NABCEP PV Professional Exam](#). Training is conducted in our City Tech classroom and solar PV labs. The training follows the skills outlined in the NABCEP PV installation professional Job Task Analysis. Topics include: NEC code requirements, configuring and installing utility-interactive, bimodal and off-grid PV systems, safety and system maintenance. Visit NABCEP.org for Installation Professional exam requirements. PVIPs fill a wide range of job positions within the industry, taking responsibility for installations of varying size and complexity. Due to the range of responsibilities and skills that may fall into a Certified PVIP's job duties, this class is broad in scope and covers a variety of conditions- in New York and around the country.

NABCEP ADVANCED PV INSTALLATION PROFESSIONAL EXAM PREP (Hybrid Class- Online and Field based)

40 hours, 40 CEUs

Online Version of Advanced PV class: 30 hours online, 10 hours field-based training.

What is the NABCEP Associate Credential?

The NABCEP Associate Program recognizes individuals who have demonstrated knowledge of the fundamental principles of the application, design, installation, and operation of Photovoltaic, Solar Heating or Small Wind energy systems. A NABCEP Associate Credential (NABCEP Photovoltaic Associate™, NABCEP Solar Heating Associate™, or NABCEP Small Wind Associate™) is earned by passing an examination based on the related [NABCEP Associate Job Task Analysis \(JTA\)](#) or Learning Objectives.

Why become a NABCEP Associate?

As the market grows for Photovoltaic, Solar Heating, and Small Wind technologies, individuals with a NABCEP Associate Credential enhance their employment opportunities with distinguished resumes. Employers have confidence they are hiring or promoting someone who is committed to the profession, and who has a proven understanding of the basic terms and operational aspects of a Photovoltaic, Solar Heating or Small Wind system.

Passing a NABCEP Associate exam qualifies an individual to design, sell, install, or maintain systems in a supervised capacity.

Who should take the NABCEP Associate Exam?

The NABCEP Associate Program is intended for individuals working or seeking employment in the renewable energy industry, including students in renewable energy programs, workers at an early stage in their renewable energy career, experienced professionals new to the renewable energy field, or those in renewable energy jobs for which there is no professional certification.

Obtaining this credential is most often the first step toward a NABCEP Board Certification or added recognition in a field with many career paths to pursue.

City Tech Continuing Studies Center is a NABCEP Provider

There are three pathways to obtaining a NABCEP Associate credential:

- **Education Pathway** — Successfully complete a photovoltaics, solar heating, or small wind training course with a NABCEP Associate Registered Training Provider, and pass the relevant NABCEP Associate Examination.
- **If you are completing the Education Pathway**, you will need to contact the NABCEP Associate Registered Training Provider you took the course with to take the NABCEP Associate Exam. The Provider will register you to take the exam – *you do not need to submit an application to NABCEP.*

[Online practice exams](#) are available for the NABCEP PV Associate Credential Exam.



3. NABCEP PV Installation Professional® (PVIP) Certification Requirements

The NABCEP PV Installation Professional Certification is a voluntary certification that provides a set of national standards by which PV Installation Professionals with skills and experience can distinguish themselves from their competition. Certification provides a measure of protection to the public by giving them a credential for judging the competency of practitioners. It is not intended to prevent qualified individuals from servicing or installing PV systems or to replace state license requirements.

3.1 Eligibility Requirements

To become certified and maintain certification, the Applicant must:

- Be at least 18 years of age
- Meet prerequisites of related experience and education as outlined below
- Complete an application form documenting all requirements
- Sign and agree to uphold the NABCEP Code of Ethics
- Pay Application and Examination Fees to NABCEP
- Pass a written examination
- Once certified, complete continuing education and experience requirements, submit a recertification application, and pay a recertification fee, within the three (3) year recertification timeframe

3.2 Experience Requirements

All systems submitted with the application must meet the following minimum criteria:

- The Applicant shall have performed in a decision-making role (DMR), which had a material impact on the quality and serviceability of the PV installation. This may include individuals employed as lead installers, system designers, project managers, site managers, Foreman, Electricians, System Engineers, and quality assurance / commissioning agents. Due to the variety of decision-making roles that may be involved with any particular system installation, more than one person may qualify for each system; however, each Applicant must document their specific role and level of responsibility for each installation.
- Installations must have been completed within the two (2) calendar years prior to the application submission date.
- All installations must be complete, have a permit and a final approved inspection.
- All systems must have a minimum rating of 1 kW DC (STC).

3.3 Qualifying for the Examination

NABCEP recognizes that professionals in the field of renewable energy and energy-efficient technologies receive their training and work experiences in a variety of ways. NABCEP Staff will review each application to determine compliance with eligibility criteria.

To qualify to sit for the NABCEP PV Installation Professional (PVIP) Certification Examination, **every** Applicant, regardless of background, education or experience, will need to document:

- Completion of a minimum of 10 hours of OSHA Outreach Training Program for the Construction Industry training (or provincial equivalent); **AND**
- Completion of at least 58 hours of advanced training as defined in Section 3.5.2 below
(**NOTE:** These hours of training do not need to be in addition to apprenticeship or degree coursework if the requirements of Section 3.5.2 were met within the curriculum and time-frame); **AND**
- Completion of installations equaling at least 6 Project Credits

Projects Credits are as follows:

System size of 1 – 999kW = **2 Project Credits**

System size of 1MW and up = **3 Project Credits**

3.4 Documenting Experience

For each completed PV system, an Applicant must submit documentation that summarizes system information, document approval by a governing body, and verifies their decision-making role. NABCEP reserves the right to contact system owners/operators, permitting authorities, employers, and sub-contractors to verify the Applicant's work experience and decision-making authority.

3.4.1 System Summary

To document experience as a PV Installation Professional, Applicants are asked to provide a concise description of the system and the work performed, including:

- System location
- Date system completed
- System info (PV array size, number of inverters and total cumulative inverter capacity)
- Name and phone number of installation contractor
- Name and phone number of contractor listed on the permit or inspection
- Name and phone number of Applicant's supervisor
- Description of work performed by the Applicant

3.4.2 Documenting System Installation

To document the system completion date and that the system was installed according to applicable codes, an Applicant must submit a copy of Electrical and/or Building Permit(s) and Final Inspection Report(s) issued by the local Authority Having Jurisdiction (AHJ) for each system submitted*. **In jurisdictions where permits and inspection reports are not issued, the Applicant may submit an inspection report written by an independent qualified electrician recognized by the AHJ, an independent certified electrical inspector or a NABCEP Certified PV System Inspector (PVSII)**.** Inspections may not be completed by the Applicant, Installation Contractor or customer.

**Note: NABCEP cannot accept site plans, drawings and/or permit applications in lieu of the actual approved permits and/or final approved inspections.*

***To locate a NABCEP Certified PV System Inspector, please go to www.nabcep.org/certified-installer-locator.*

3.4.3 Documenting Decision-Making Role

If the Applicant was named on the permit/inspection document(s), no additional documentation is needed to verify they held a decision-making role that had material impact on the installation. If the Applicant was not named on the permit/inspection document(s) but held a decision-making role during the design, project management, installation, and/or commissioning/quality assurance process, the Applicant must submit one of the following:

- A physically signed letter on company letterhead from the person, or a member of senior management from the company, who is named on the permit/inspection document(s). The letter must include the addresses of the installations listed in the Applicant's application and clearly explain the role(s) and decision-making authority the Applicant held for the system design, project management, installation, and/or commissioning/ quality assurance process for the system installation; **OR**

- Design plans and/or line drawings identifying the Applicant as being responsible for the drawing or review of the design; **OR**
- A commissioning or quality assurance report which identifies the Applicant as being responsible for the system commissioning or quality assurance process.

3.4.4 Additional Information and Documentation

NABCEP reserves the right to contact system owners/operators, permitting authorities, and responsible contractors to verify information listed in the application. The NABCEP Application Review Committee decides Applicant eligibility based on application information and documentation submitted in support of the application.

3.5 Training Requirements

3.5.1 OSHA 10 Training

All Applicants must show proof of completion of a minimum of 10 hours of the Occupational Safety and Health Administration (OSHA) Outreach Training Program for the **Construction Industry**, or provincial equivalent. To find an OSHA class, visit: www.osha.gov/dte/outreach/courses.html.

3.5.2 PV Training

PV training must meet the following criteria to be accepted in an application:

- All training must have been completed within the five (5) calendar years prior to the submission of the application.
- All training must have a formal training format, with a teacher-learner structure. This implies a connection between a learner and a learning source. Acceptable training can include web-based training in which the student is separated from faculty and other students but where the learner receives feedback and the student's progress is monitored. All hour requirements are based on "contact hours" between the teacher and the learner.
- A minimum of **fifty-eight (58) prescribed hours** of advanced training is required for each candidate.

Forty (40) hours must with an accredited institution and cover "advanced" PV installation and practices as outlined in the NABCEP PV Installation Professional Job Task Analysis (PVIP JTA). "Advanced" is defined as a course which provides instruction beyond the "basic," "fundamental," or "introductory" PV Installation principles and practices. Courses should be designed for the Professional who is prepared to maintain a decision-making role in the design, project management, installation, and/or commissioning & maintenance of a system. Advanced PV training must be offered by one of the following education providers:

- Institutions accredited by an agency recognized by the federal Department of Education, or Canadian equivalent (Accredited Universities, Colleges, Community Colleges, etc.) (<http://ope.ed.gov/accreditation/search.aspx>)
- U.S. Department of Labor Registered Apprenticeship Training Programs (www.doleta.gov/oa/)

- U.S. Department of Veteran Affairs approved WEAMS Institute (<http://inquiry.vba.va.gov/weamspub/buildSearchInstitutionCriteria.do>)
- Interstate Renewable Energy Council (IREC) Accredited Training Providers for the NABCEP PV Installation Professional Job Task Analysis (<http://www.irecusa.org/credentialing/credential-holders/>)
- American National Standards Institute (ANSI)/IREC 14732 Accredited Certificate Programs (<https://www.ansica.org/wwwversion2/outside/ANRECdirectory.asp?menuID=229>) or ANSI/ASTM 2659 Accredited Certificate Programs (<https://www.ansica.org/wwwversion2/outside/CAPdirectory.asp?menuID=212>) that are based on the NABCEP PV Installation Professional Job Task Analysis
- Training institutions approved by State Contractor Licensing Boards or Canadian Provincial equivalents
- State or Provincial Department of Education or equivalent licensed Vocational / Technical training programs

NOTE: Courses offered by private training organizations or businesses that are not accredited or otherwise recognized by a third-party as described above, **will not** be accepted for the minimum of 40 hours of advanced PV installation and design training.

Eighteen (18) hours may be obtained from non-accredited, non-certified sources such as:

- Courses covering electrical, fire or building codes relevant to the installation of PV systems
- Associate Level coursework through a Registered NABCEP Associate Provider **AND** a passing score on the NABCEP PV Associate (PVA) Exam.
Note: Introductory/Fundamental/Entry Level courses leading to the NABCEP Associate Exam do not qualify for the minimum 40 hours of advanced PV installation and design.
- Additional OSHA or equivalent workplace safety courses above and beyond the required OSHA 10-hour course
- Training programs and courses registered with NABCEP for Continuing Education Credits for the PVIP recertification
- Any other coursework that addresses topics included in the PVIP JTA, such as courses taught by a non-accredited training organization

3.6 Documenting Training

To document training, the Applicant must submit a **certificate of completion** or a **transcript** for each completed advanced training program or course used to meet the minimum training requirements. All certificates of completion and transcripts must clearly state that the course covered subject matter directly relates to advanced PV installation or the National Electric Code (NEC). If the subject matter of the course is not clearly stated in the title, then the Applicant must provide a course outline or syllabus and a signed letter on letterhead from the training provider or instructor which details how many hours were spent covering the PVIP JTA or relevant codes.

3.7 PV Installation Professional Recertification Requirements

Certificants may submit their Recertification Application during the third year of their current certification. Certificants are required to log in to their account to complete and submit a recertification application electronically for review. Certificants will need to log in at my.nabcep.org and enter their user name and password. Once logged in, there will be a gray box on the right-hand side of the screen that says “Recertification / Renewals.” Certificants will need to click on the link in the gray box corresponding to their certification and begin the recertification application. (Please do **not** click under “Existing Application.”)

NABCEP Certified PV Installation Professionals must satisfy the following requirements in order to recertify:

18 hours of continuing education broken down into three sections:

- **6 hours** specific to Electric (NEC) Codes
- **6 hours** specific to the PVIP JTA
- **6 hours** PV Technical or Non-Technical of which 2 hours must be Building and/or Fire Codes

A list of NABCEP registered courses may be found on the [Continuing Education](#) section on the website.

The Certified PVIP must document they had a decision-making role on the installation of completed projects equaling at least **6 project credits** over the course of their three-year certification period.

Projects Credits are as follows:

System size of 1 – 999kW = **2 Project Credits**

System size of 1MW and up = **3 Project Credits**

For each installation, certificants must upload a permit, final approved inspection and verification of a decision-making role (as described in Section 3.4.3 above).

*For further information on Recertification, please visit our [website](#) or see **Section 19** of this Handbook.*