

RENEWABLE ENERGY TECHNICIAN WITH EMPHASIS IN SOLAR PV INSTALLATION AND MAINTENANCE



Department: Construction, Design, and Manufacturing
 Department Chair: Mr. William (Bill) Elarton, Room SQ-122
 (213) 763-3701, cdm@lattc.edu

Award Title	Award Type	Grad. Plan	Required Course Units	Major Elective Units	Total Major Units
Renewable Energy Technician With Emphasis in Solar PV Installation and Maintenance	A.S.	Plan B	38	4	42
Solar PV Installation and Maintenance Technician	C		26	-	26

At least 60 degree applicable units (42 total major units and Plan B units) are required to earn an Associate degree.

For additional related certificates, refer to programs under Energy Systems Technology Fundamentals.

PROGRAM OVERVIEW

LATTC offers a series of courses for individuals interested in working in the new, emerging field of solar energy. The courses enable individuals to be prepared to become certified by North American Board of Certified Energy Practitioners (NABCEP). The solar courses have also obtained NABCEP approval. In addition, one of the courses--Fundamentals of Solar Electricity (ECONMT 105—54 hours)—prepares individuals to be able to take the NABCEP Photovoltaic (PV) Entry Level Certificate of Knowledge test. This Certificate program also prepares individuals and is required to successfully complete other renewable energy or energy efficiency Certificate of Achievement and degree programs at the college. As such, it serves as one of the “stackable” certificates in the renewable energy/energy efficiency certificate and degree pathway.

PROGRAM LEARNING OUTCOMES (PLOs)

Upon completion of the Degree program, students are able to:

- Use hand and power tools to perform solar (PV) installation and maintenances work.
- Demonstrate sustainable industry principles and practices.
- Perform calculations and measurements required for solar (PV) installation and maintenance work.
- Work independently and interdependently to safely accomplish shared professional outcomes.

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Associate in Science Degree
 Major Units: 42

Requirements for the Associate in Science degree in Renewable Energy Technician With Emphasis in Solar PV Installation and Maintenance may be met by completing 42 units of Required Courses with a “C” or better along with general education courses meeting Plan B graduation requirements. Information on the Plan B requirements may be found in the catalog under Graduation/Transfer Requirements.

REQUIRED COURSES

SEMESTER I UNITS Completed

ECONMT 115	Fundamentals of D.C. Electricity	3	<input type="checkbox"/>	_____
ECONMT 116	Hand Tools and Wiring Practices	2	<input type="checkbox"/>	_____
ECONMT 119	Applied Electrical Calculations & Measurement	3	<input type="checkbox"/>	_____
	-or- ECONMT 173 <i>Electrical Mathematics (3)</i>			
	-or- MATH 115 or higher <i>Elementary Algebra (5)</i>			

SEMESTER II UNITS

ECONMT 105	Fundamentals of Solar Electricity	3	<input type="checkbox"/>	_____
ECONMT 129	Fundamentals of Alternating Current	3	<input type="checkbox"/>	_____
ECONMT 100	Occupational Safety	2	<input type="checkbox"/>	_____
CRPNTRY 111A	Construction I	3	<input type="checkbox"/>	_____

SEMESTER III UNITS

REF A/C 100	Project Management	3	<input type="checkbox"/>	_____
ECONMT 110	Renewable Energy Systems	3	<input type="checkbox"/>	_____
CRPNTRY 111B	Construction I	2	<input type="checkbox"/>	_____
ECONMT 205	Solar Energy Installation & Maintenance Principles and Practices	2	<input type="checkbox"/>	_____
BLDGCTQ 010	Energy and Utility Industry Careers	3	<input type="checkbox"/>	_____

SEMESTER IV UNITS

CRPNTRY 148	Computer Assisted Estimating	3	<input type="checkbox"/>	_____
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CODE COURSE OPTION – CHOOSE 1 OF THE FOLLOWING

1 or more courses from the following list of courses UNITS

ECONMT 171	Electrical Codes and Ordinances	3	<input type="checkbox"/>	_____
PLUMBNG 28	Plumbing Code I	3	<input type="checkbox"/>	_____

OTHER COURSE REQUIREMENTS

1 or more courses from the following list of courses UNITS

ECONMT 105	Fundamentals of Solar Electricity	3	<input type="checkbox"/>	_____
REF A/C 110	Solar Thermal Practices	2	<input type="checkbox"/>	_____
REF A/C 165	Thermal Heat Storage	4	<input type="checkbox"/>	_____
BLDGCTQ 7	Weatherization - Practical Energy Efficiency Techniques	3	<input type="checkbox"/>	_____
BLDGCTQ 8	Weatherization - Energy Efficiency Practices	1	<input type="checkbox"/>	_____
BLDGCTQ 9	Energy Auditor – Residential	3	<input type="checkbox"/>	_____
BLDGCTQ 12	Energy Auditor – Residential Practice	1	<input type="checkbox"/>	_____



SOLAR PV INSTALLATION AND MAINTENANCE TECHNICIAN

Certificate of Achievement

Major Units: 26

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A Certificate of Achievement in Solar PV Installation and Maintenance may be earned by successfully completing a minimum of 26 units from the required courses listed below with a "C" or better grade in each course. Upon successful completion of this program, a student will have the basic knowledge and skills for employment in the solar PV area of the energy industry at the entry level. (State Control Number: 31081).

PROGRAM OVERVIEW

Program outcomes include; the use of hand and power tools to perform entry level laborer work within the utility energy sector, demonstration of sustainable industry principles and practices, perform calculations & measurements commiserate to entry level laborer work within the utility energy sector, and work independently & interdependently to safely accomplish shared professional outcomes. Skills gained from the program prepare a student for employment with contractors, individual facilities management companies, and other private or public agencies doing energy efficient building or performing energy upgrade retro-fitting on existing residential and commercial buildings.

Recommended sequence of courses for the Solar PV Installation and Maintenance Technician certificate of Achievement.

REQUIRED COURSE

USEFUL LINKS

LATTC Catalog

<http://college.lattc.edu/catalog/>

LATTC Financial Aid Office

<http://college.lattc.edu/financialaid/>

LATTC Counseling Department

<http://college.lattc.edu/counseling/>

Graduation Plan A

<http://college.lattc.edu/catalog>

Graduation Plan B

<http://college.lattc.edu/catalog>

Construction, Maintenance & Utilities Department

<http://college.lattc.edu/cdm>

SEMESTER I		UNITS	Completed	Semester/Yr
ECONMT 119	Applied Electrical Calc & Measurement	3	<input type="checkbox"/>	_____
or ECONMT 173	Electrical Mathematics	3	<input type="checkbox"/>	_____
or MATH 115 or higher	Elementary Algebra	5	<input type="checkbox"/>	_____
ECONMT 115	Fundamentals of D.C. Electricity	3	<input type="checkbox"/>	_____
ECONMT 116	Hand Tools and Wiring Practices	2	<input type="checkbox"/>	_____
SEMESTER II		UNITS		
ECONMT 129	Fundamentals of Alternating Current	3	<input type="checkbox"/>	_____
CRPNTRY 111A	Construction I	3	<input type="checkbox"/>	_____
CRPNTRY 111B	Construction I	2	<input type="checkbox"/>	_____
ECONMT 100	Occupational Safety			
SEMESTER III		UNITS		
BLDGCTQ 010	Energy and Utility Industry Careers	3	<input type="checkbox"/>	_____
ECONMT 105	Fundamentals of Solar Electricity	3	<input type="checkbox"/>	_____
ECONMT 205	Solar Energy Install & Maintenance P & P	2	<input type="checkbox"/>	_____

You can enroll in these classes by logging on to the Student Information System at <https://college.lattc.edu/register>

For additional information consult a LATTC college counselor.