

ALTERNATIVE ENERGY TECHNOLOGY - SOLAR TECHNOLOGY MAJOR, ASSOCIATE OF APPLIED SCIENCE

Curriculum Code #6355

(Not offered 2024-2025)

Division of Engineering, Business and Information Technologies (<http://catalog.lorainccc.edu/academic-programs/engineering-business-information-technologies/>)

The solar technology program encompasses a wide range of electrical, mechanical and computer skills required to compete in the emerging alternate energy – solar technology industry. Typical job responsibilities will include design, testing, R&D, service, maintenance and installation assignments. Lorain County Community College has articulation agreements with colleges and universities including programs offered by Lorain County Community College's University Partnership.

First Year

Fall Semester		Hours
ALET 111	INTRODUCTION TO ALTERNATIVE ENERGY	3
ELCT 111	ELECTRICAL CIRCUITS I	3
ENGL 161	COLLEGE COMPOSITION I	3
MTHM 155	TECHNICAL MATHEMATICS I	4
SDEV 101	INTRODUCTION TO THE LCCC COMMUNITY ²	1
TECN 111	TECHNICAL PROBLEM SOLVING	3
Hours		17

Spring Semester

ALET 112	ALTERNATIVE ENERGY MECHANICAL SYSTEMS ¹	4
ALET 113	OSHA 10 CONSTRUCTION SAFETY	1
ELCT 227	NATIONAL ELECTRIC CODE ¹	2
ENGL 164	COLLEGE COMPOSITION II WITH TECHNICAL TOPICS ¹	3
ENGR 120	INTRODUCTION TO ENGINEERING	1
MTHM 156	TECHNICAL MATHEMATICS II	4
Hours		15

Second Year

Fall Semester

ALET 223	PHOTOVOLTAIC SYSTEMS ¹	4
ELCT 121	DIGITAL ELECTRONICS ¹	4
ELCT 233	ELECTRONIC DEVICES I ^{1,3}	4
PHYC 150	GENERAL PHYSICS I ¹	4
Hours		16

Spring Semester

AETC 241	INSTRUMENTATION AND CONTROL ¹	3
ALET 222	SOLAR THERMAL SYSTEMS ¹	4

Arts and Humanities Elective ⁴	3
Social Science Elective ⁵	3
Hours	13
Total Hours	61

1

Indicates that this course requires a prerequisite.

2

A student must register for the orientation course when enrolling for more than six credit hours per semester or any course that would result in an accumulation of 13 or more credit hours.

3

Indicates a student may substitute from this list: CMNW 101, CMNW 141, CMNW 145 or work-based learning (ALET 287, ALET 288 and/or ALET 289) for the equivalent number of credit hours for this course.

4

Select any Arts and Humanities Ohio Transfer 36 (<http://catalog.lorainccc.edu/academic-information/transfer-module-requirements/>) course.

5

Select any Social Science Ohio Transfer 36 (<http://catalog.lorainccc.edu/academic-information/transfer-module-requirements/>) course.

Program Contact(s):

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For information about admissions, enrollment, transfer, graduation and other general questions, please contact your advising team (<https://www.lorainccc.edu/admissions-and-enrollment/advising-and-counseling/>).

Program Learning Outcomes

1. Demonstrate knowledge, skills, and use of appropriate tools in residential and industrial solar installations
2. Apply math, science, and engineering technology principles to solve problems in solar applications
3. Complete solar installation effectively
4. Write technical reports
5. Work productively as an individual and as a member in problem solving team in an installation environment
6. Prepare for attainment of Wind Turbine industry required certifications in OSHA, NFPA 70E, Rigging; NABCEP
7. Demonstrate professional and ethical behavior with the understanding of social, cultural and political issues
8. Effectively communicate technical ideas, problem solving procedures and decision making with others