



“Today’s controls workforce is responsible for delivering much more than reliable operations and/or expected temperature comfort to a particular building area.”

- Charles Cohen - Sustainability Education Director
SIEMENS, Infrastructure & Cities

The Energy Management - Building Controls Option is a rigorous two-year Associate of Applied Science degree. First year core courses are shared with Energy Management and Renewable Energy option students.

Today’s buildings are complex technological structures comprised of interactive systems charged with delivering safe, healthy and affordable physical environments. Building automation integrates these electronic and mechanical systems in order to optimize operations and create an efficient “smart” building.

Many computer programmers who are writing code for newer building automation systems excel at their craft but often have no practical knowledge of the systems they control. The Energy Management - Building Controls Option produces technicians who understand both programming and building systems.

Earn \$38,000-45,000 annually while helping to create a positive change within our built environment

WANT TO BE IN THE DRIVERS SEAT?
Students who have a solid understanding of Direct Digital & Pneumatic systems are trained to implement changes that directly impact operations and building energy usage.



Application or Additional Information

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Lane Community College
Downtown Campus | 101 West 10th Ave
Eugene, Oregon 97401



NWEEI provides professional development opportunities throughout the Northwest, Nationally and Internationally.

This information is available in alternate formats upon request by contacting Disability Services at (541) 463-5150 (voice), (541) 463-3079 (TTY), or disability.services@lanecc.edu (email).

Lane Community College is an equal opportunity/affirmative action institution.

www.nweei.org

ENERGY MANAGEMENT

Building Controls Option

Two Year Associate of Applied Science Degree



We provide a comprehensive technical education that prepares graduates to evaluate commercial building control systems with the goal of system-wide optimization and energy efficient operations.



Graduates Of The Program Are Able To



- » Use typical control system management software to evaluate energy use patterns for residential and commercial buildings.
- » Analyze a variety of commercial HVAC and lighting systems from a controls perspective.
- » Diagnose and troubleshoot existing control systems.
- » Become familiar with modules and electronics commonly used to implement building automation.
- » Develop and evaluate inferences and predictions that are based on collected data.
- » Recommend energy efficiency and alternative control solutions for high energy consuming buildings.
- » Understand the interactions between energy consuming building systems and implement control changes based on that understanding.

In addition to interacting with a building automation system, the new generation of controls mechanics and managers must understand energy procurement and consumption, how buildings interact with both external and internal events, alternative energy sources and their integration into existing systems, remote services and building access, as well as how to deliver an interactive controls system that delivers value to customers.

Our Goal is Your Success!

After completing the program, your goal will be employment and we take that very seriously. We continually seek out and participate in local, regional, and national networking opportunities for one simple reason - to promote our students directly to those who have the ability to provide jobs.

By providing you with a quality education built around an industry approved job task analysis, we are extremely confident that you will be successful.

Some relevant job titles are:

Building Controls

Operator, Programmer, Technician, Sales

Facility Manager

Control System Specialist

Controls Contractor



“Just because you have controls does not mean you are in control!”

Greg Hansen, Lighting Designer - Balzhiser & Hubbard

Note: Required Cooperative Education internships may also be taken during the summer (a maximum of 18 co-op credits).

Prerequisites are required for some courses. Up to date course descriptions are located in the Lane Community College Annual College Class Catalog.

1. Must be completed during first year.
2. Physical Education Activity/Health requirement: 3 credits total.
3. Human Relations/Social Science requirement: 3 credits total.
4. Directed electives to be arranged with program advisor.

Degree Overview

The classes listed below are subject to change. For the most current information, see AAS degree requirements within Lane Community College's annual catalog.

YEAR 1 CLASSES

FALL TERM	CREDITS
Microsoft Excel for Business	4
Blueprint Reading: Residential & Commercial	3
College Algebra (MTH 111) ¹	5
Introduction to Energy Management	3
Sustainability in the Built Environment	3
Fundamentals of Physics (PH 101)	4
Total	22

WINTER TERM	CREDITS
Residential/Light Commercial Energy Analysis	3
Alternative Energy Technologies	3
Co-op Ed: Energy Conservation Seminar	1
Fundamentals of Physics (PH 102)	4
Introduction to Academic Writing	4
Human Relations at Work ³	3
Total	18

SPRING TERM	CREDITS
Air Conditioning Systems Analysis (NRG 121)	3
Energy Efficient Methods	4
Lighting Fundamentals	3
Technical Writing	4
Total	14

YEAR 2 CLASSES

FALL TERM	CREDITS
Commercial Air Conditioning Systems Analysis (NRG 122)	3
Lighting Applications	3
Energy Investment Analysis	3
Directed Electives ⁴	3
Physical Education/Health Requirements ²	1-3
Total	13-15

WINTER TERM	CREDITS
Commercial Energy Use Analysis	4
Energy Control Strategies	4
Co-op Ed: Energy Management Seminar 2	1
Physical Education/Health Requirements ²	1-3
Directed Electives ⁴	3
Total	13-16

SPRING TERM	CREDITS
Building Energy Simulations	4
Energy Accounting	3
Co-op Ed: Energy Management	6
Total	13

Sign Up For The Program. It's Easy!

Fill out a simplified one page application. A high school diploma (or equivalent) and Math 70 (Basic Algebra) is all that is required for entry.

Additional details online at:
<http://www.nweei.org>