

TECHNOLOGY STUDIES: ENERGY MANAGEMENT CERTIFICATE

Program code: ENMC-CC-COT

Location: Tunxis

Program Description

The Certificate in Energy Management offers students a hands-on curriculum utilizing the college's facilities as a "living laboratory" to provide a career path that aligns with commercial and/or industrial energy management practices. A traditional Engineering job requires a 4-year degree. The certificate folds seamlessly into the 2-year Tech Studies, Energy Management Option Associate Degree and allows students to complete the required coursework needed to fulfill the duties and responsibilities of an "Energy Manager", while still maintaining a level of General Education coursework that they could transfer to a 4-year college should that student desire the opportunity to expand their work to a 4-year Bachelor's Degree. This certificate path is more economical for the students of Connecticut to obtain the needed information to be successful in the field, yet they can continue their education at the university level if desired.

Learning Outcomes

1. Demonstrate a basic understanding of energy, its measurement and varied approaches to conserving/saving.
2. Demonstrate a basic understanding of commercial building systems and be able to explain their operation, interactions, and their energy use.
3. Perform energy analysis on potential conservation measures in commercial/industrial settings, and incorporate both conceptual and technical understanding in their project reports.
4. Demonstrate an increased proficiency with spreadsheets, charts, and graphs in Excel.
5. Practice technical writing and oral skills and will create technical documents.

The Energy Management certificate provides students with a choice of "focus" in either Lighting or Commercial HVAC. These areas are identified as two significant areas of energy use in commercial/industrial structures. Students choose based on interest, employment prospects, or employer direction. Through the degree, students will achieve credits in both areas. The choice in the certificate allows for a direct path and employability.

This certificate is "stackable" into the more extensive Technology Studies: Energy Management option AS degree. Each course in the certificate is either part of the degree or serves as a pre-requisite to move students forward. Using the NRG 1133 Lighting Fundamentals and Applications pathway option in the certificate could allow for WIOA eligibility as the certificate could then be completed in 2 semesters.

This certificate and the degree are funded with a grant from the CT Department of Energy and Environmental Protection. Those funds allowed Tunxis to create a scholarship in which students are direct beneficiaries of the funds we receive. The scholarship allows students to earn all required credits for the certificate and/or degree at no cost

(tuition, fees, books, etc.) for those who qualify. The NRG 1133 Lighting Fundamentals and Applications course prepares students to sit for an industry-standard credentialing exam through the Illuminating Engineering Society (IES). Additional industry-standard credentials are frequently considered/reviewed.

Additional information about the Energy Management program and careers in the field can be found in the FAQ document linked here.

The graduation requirements to earn this certificate are described in this catalog's Academic Policies & Procedures section.

Certificate Requirements

Code	Title	Credits
Required Courses		
NRG 1101	Introduction to Energy and Systems	3
MATH 1010	Intermediate Algebra	3
PHYS 1201	General Physics I	4
NRG 1123	Energy Efficiency Methods	3
NRG 1122	Commercial HVAC Systems and Analysis	3
or NRG 1133	Lighting Fundamentals and Applications	
Total Credits		16

- Technology Studies: Energy Management, AS