



## **Course Name: Introduction Energy Management**

**Lead Faculty:** Jenny Brinker

**School:** Northeast Wisconsin Technical College (NWTC), Green Bay, WI

**Delivery Mode(s) for Introduction to Energy Management:** As of fall 2018, this is a face-to-face course. Many of NWTC's Energy Management programs are slated to become blended courses (a mix of online and face-to-face).

**Course Duration:** Semester

**# of credits for the Introduction to Energy Management Course:** 3 credits

**Program Name:** Energy Management Technology

**When did the program start?** 2007

**What geographic area(s) do your students come from?** Most students come from Northeast Wisconsin. The program has attracted international students too, as we usually have one or two international students each year.

**Number of Students in Program:** 12

**Demographics:** Percentage distribution

Gender

Male: 67%

Female: 33%

Ethnicity:

Caucasian – 83%

African American – 8%

Hispanic – 0%

Other – 8%

This material is based upon work supported by the National Science Foundation under Grant No. 1600934.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



**What percentage if known - Veterans:** unknown

**Degree(s)/ Diplomas(s) / Certificate(s) Offered:** Energy Management Technology (Technical Diploma and Associate's Degree); Solar Energy Technology (Technical Diploma and Associate's Degree)

**How Many Faculty teach renewable energy courses at your college (note if FT or PT)?** 2 FT

**Description of Your Facilities (be sure to note any special lab facilities used for hands-on training):** 30,000 square foot building used as a living lab. Access to building automation equipment. Student-installed solar each semester. Over 80 kW of solar installed on campus as of fall 2018. Building automation is used to teach students on optimizing building controls for efficiency.

**Have you conducted a job market assessment? If yes, what were the findings?** A job market assessment is done informally each semester as part of our advisory committee meetings. Each advisory board member reports on job opportunities. There have been about 10-12 job opportunities in Northeast Wisconsin each year, and those companies with a national presence report an abundance of energy management jobs across the country.

**What do you think makes your program successful?** Student-driven projects. Each semester we partner with local non-profits to conduct energy assessments such as lighting technology modeling, building automation specifying, and energy audits.

**What are your industry ties? (If you have an industry advisory board, please describe its size and composition).** Our advisory committee is made up of a dozen industry professionals who work for utility, energy control, energy consulting and building automation companies. We meet each semester (twice per year).

**Do you offer internships? What is your placement rate?** Internships are not a formal part of the program, but several students have independently secured internships with local employers.

**Is there any additional information about your program and or school you would like to include (any recent awards, publications, grant awards that pertain to your program etc.)?** Like Madison College and Heartland Community college, our program includes a Study Abroad opportunity for learning about sustainability practices in Belize. In January 2018 our Study Abroad group conducted energy audits at a Junior College and Community Center, and also inspected an abandoned Solar Photovoltaic system to troubleshoot its operation.

This material is based upon work supported by the National Science Foundation under Grant No. 1600934.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



**Program Link:** <https://www.nwtc.edu/programs/fields-of-interest/energy/maintenance-and-operations/energy-management-technology>

**Pictures of Facilities:**



Solar Sunflowers

This material is based upon work supported by the National Science Foundation under Grant No. 1600934.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



Utility Room with floor labels



Instructor Jenny Brinker and class

This material is based upon work supported by the National Science Foundation under Grant No. 1600934.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



Great Lakes Energy Education Center



Students working on solar installation project

This material is based upon work supported by the National Science Foundation under Grant No. 1600934.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.