

INTRO. TO ENERGY MANAGEMENT

Catalog #10-481-114 & Class #83385

Starts: August 29, 2018 Ends: December 12, 2018

INSTRUCTOR INFORMATION

Instructor: Jenny Brinker

Office: EE101F

Telephone: 920-498-7100

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Office Hours: Wednesdays 12:30PM – 4:30PM, please schedule an appointment

Course Description: This course provides the opportunity for the learner to develop the knowledge skills process and understanding of the need for energy management as an integral part of society at all levels. The course will present the various opportunities available to energy management students through lectures, video and guest speakers.

Credits: 3

Class Schedule: Wednesdays 9:30 AM - 12:20 PM

Location: Green Bay Campus, Room EE203

Pre-requisites: None

Textbook:

Capehart, B., Turner, W., and Kennedy, W. Guide to Energy Management,

Supplies: A personal computer would be helpful. PC's are available in the Energy Center.

Academic Coaching at NWTC

Academic Coaching is available for most courses at NWTC. On the Green Bay Campus, visit us at the Student Success Center in SC215 or check us out at www.nwtc.edu/academiccoaching for more information.

COURSE COMPETENCIES: You have the opportunity to learn the following skills in this course:

1. Describe energy and its different forms.
2. Explore the history of energy production and cost in the U.S. and Wisconsin since 1900
3. Define units of measuring energy and convert between them.
4. Explain how energy is billed by utilities.
5. Identify how and where energy is used in buildings.
6. Examine the social and environmental impacts of energy production and consumption.
7. Determine Codes and Standards applicable to energy use in buildings.
8. Describe the energy auditing process.
9. Create an outline of an effective energy management program.
10. Investigate monitoring techniques used to measure and monitor energy use in buildings.
11. Explore career and educational opportunities for energy management professionals.

EMPLOYABILITY SKILLS: In addition to specific job-related training, NWTC has identified core abilities that are transferable and go beyond the context of a specific course. This class addresses the following employability skills:

- *Communicate Effectively*
- *Work Cooperatively and Professionally*
- *Think Critically and Creatively*
- *Solve Problems Effectively*
- *Value Individual Differences and Abilities*
- *Demonstrate Personal Accountability*
- *Demonstrate Community and Global Accountability*

Student Responsibilities: As a student of NWTC, you are expected to adhere to the policies of the College, as outlined by the Student Handbook (please see below).

- You are responsible for the duties set forth in this class and to communicate any questions, comments or concerns you have to me.
- You are required to monitor your NWTC Student Email account. Acceptable means of communication include e-mail, voicemail or through online discussion forums.
- You are responsible to log into your Starfish portal to monitor your success progress
- You can expect a reply to communication within 1-2 business days.
- Use of correct grammar and punctuation is required in all written communications.

Student Policies: Please refer to the NWTC Student Handbook for further definitions and consequences of these behaviors, available through Student Services, the NWTC Bookstore or by visiting <http://www.nwtc.edu> and click on **Current Students** tab.

Please be fully aware of the following Student Handbook policies:

- Academic Integrity (includes Plagiarism, cheating and collusion)
- Affirmative Action/Equal Opportunity Statement
- Assessment
- Copyright Notice
- Refund Policy
- Student Code of Conduct
- Withdrawal from a Class or Program
- Student Rights
- Sexual Misconduct (Title IX)
- Pregnancy and Childbirth (Title IX)
- Accommodation for Religious Beliefs Policy

NWTC is committed to embracing the worth of every individual and promoting a respectful environment. Discrimination and harassment of protected categories in its employment and educational programs is prohibited. For questions or concerns, contact Mohammed Bey, Director of Diversity & Inclusion/Title IX Coordinator, at (920) 498-6826 or mohammed.bey@nwtc.edu.

Appropriate Use of Technology: Treat the classroom as a professional environment in which you will be an active participant. Cell phones should be turned off during class unless we're using them as part of a class activity. (If you are expecting an emergency phone call, you may leave your phone on "vibrate" mode; take the call outside of class.) Personal laptops and tablets for taking notes and assisting with assignments are encouraged, but don't use class time to surf the web for entertainment.

Disability Act Statement: NWTC complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. Please contact Student Accommodations Services for more information regarding the support services available to you, call 920-498-6904.

Syllabus Changes: As your instructor, I retain the right to make changes based on the timeline of the class, feedback from learners and/or logistical issues and will inform you as soon as a change is made.

Attendance and Participation In a face-to-face class, we learn from each other in an interactive, real-time format, and we need to make the most of this opportunity. Responsible participation includes preparing for class, attending each class, contributing positively to class discussions and other activities, turning in assignments on time and following the course calendar.

Field Trips: This class may include field trips to locations off campus. I'll provide as much advance notice as possible. In these situations, you are responsible for your own transportation. Carpooling is recommended.

Special Events: You will have the opportunity to attend the following optional conferences and events during this semester. (Attending these events is a great learning opportunity, but attendance is not required.) **NOTE:** Other field trips may be available and will be posted in the Announcements section of Blackboard.

September 15, 2018	Sustainability Fair, Brought to you by Sustain Door, 12pm - 6pm Location: Crossroads at Big Creek 2041 Michigan St, Sturgeon Bay, WI 54235 http://www.crossroadsatbigcreek.com/
October 6 th , 2018	National & Wisconsin Solar Tours, 10:00 a.m. - 4:00 p.m. http://www.midwestrenew.org/solartour http://www.ases.org/tour/
November 14, 2018	STEAM Engine VII https://www.steamenginegb.com/ <u>STEAM ENGINE United States Steam Engine LLC</u> www.steamenginegb.com Learn about STEAM in this meetup/confrencee from peers in our community organized by STEAM Engine.
Ongoing	Focus on Energy – Events and Training (state wide) https://focusonenergy.com/about/events

Energy and Conservation Club (#405)

is a great way to get involved with many school projects in this subject area.

<https://www.nwtc.edu/student-experience/student-involvement/clubs-and-organizations/energy-conservation-club>

Advisors: Jenny Brinker & John Hippensteel

Jenny.Brinker@NWTC.EDU & John.Hippensteel@NWTC.edu

Grading Policy: You can earn full credit for an assignment by submitting it in Blackboard by the assigned due date. If you submit an assignment late but within 7 days of the due date, you can earn up to 50% credit. For each day that the assignment is late, you will lose 7% of the possible credit. This penalty is deducted after the assignment is graded. For example, suppose you hand in an assignment worth 20 points, and your normal score would be 16 points, but it was handed in two days late. Your actual score would be:

16 points – (2 x 7%) (two days late) = 13.76 points, or 14 points rounded off. **After 7 days, you will not earn any credit.**

Grading Scale: Grades will be entered in the Blackboard online environment. It is the student's responsibility to ensure that all assignments are submitted in a timely fashion and meet expectations described in the assessment instructions.

Percentage	Grade
91-100	A
81-90	B
71-80	C
51-70	D
0-50	F

Class Outline: See Course Calendar below. Due dates will be followed in this course to provide an opportunity for us to build a collaborative learning community. In order to do this, it helps to be working on the same things at the same time so we can learn from one another as we go through this process. Therefore staying with the group is a vital component to the successful completion of this course.

Classes will not be held Thanksgiving week--November 19-November 25, 2018.

Description	Points	Due Date
Article Summary	10	As assigned-See Blackboard
Energy Efficiency Wall of Fame	15	As assigned-See Blackboard
Energy Journal	10	Sept. 5
"What is Energy?" worksheet	10	Sept. 5
Energy Conversion Matrix	10	Sept. 12
EPA Energy Star Website Questions & Pledge	10	Sept. 12
Energy Conversions & Beyond Worksheet (Class is flipped: Watch video before class. Complete worksheet in class.)	10	Sept. 19
Quiz #1 (Open book)	20	Sept. 26
Book Review, 2-3 page paper	20	Oct. 3
Electric Appliance Calculator	10	Oct. 3
Electricity 101 Presentation	15	Oct. 10
Electricity 101 Quiz (Online, open book)	10	Oct. 17
Utility Tariff Sheet Comparison	10	Oct. 24
Commercial Electric Rate	10	Oct. 31
Quiz #2 (Open book)	20	Nov. 7
Portfolio Manager	10	Nov. 14
Energy Audit Quiz (Online, Open book)	10	Nov. 28
Heat Transfer Problems (Class is flipped: Watch video before class. Complete worksheet in class.)	10	Nov. 28
Heat Transfer Worksheet (Class is flipped: Watch video before class. Complete worksheet in class.)	15	Nov. 28
Motor Problems (Class is flipped: Watch video before class. Complete worksheet in class.)	10	Dec. 5
Heating and Cooling Efficiency (Class is flipped: Watch video before class. Complete worksheet in class.)	10	Dec. 5
Employability Skills Assessment	21	Dec. 12
Final Project, "Legacy of Energy Savings at NWTC"	50	Dec. 12
TOTAL	331	

Student Agreement: After you have read the syllabus, please send me an e-mail with the following statement: *I confirm that I have read the course syllabus and agree to the class policies, procedures, due dates, and all the other information communicated in the syllabus.*