Course Title: EGM 140  Energy Project Costs and Funding Solutions

Instructor:

Credit Hours: 3

Prerequisites: EGM 105

Course Description: This course provides an overview of the costs associated with “going green” and available funding mechanisms for sustainability related building projects. Students will examine cost premiums for a variety of sustainability measures and budgeting strategies for pursuing energy efficiency in a world of diminishing revenues. Selected case studies include college dining halls, laboratories, student centers, athletic facilities, and dormitories. Real world examples illustrate the advantages and disadvantages of a variety of funding mechanisms including federal and state incentives, loans that feature low interest rates and extended paybacks, utility provider incentive programs, regional conservation initiatives, and performance contracts.

Day and Time: Format: This is a hybrid course. The excerpt below from the college catalogue defines a hybrid class as such:
Hybrid classes at Mount Wachusett Community College are a mix of classroom time and online learning. The face to face classroom time is about one third of the total class hours. The remaining time is to be done through online activities, discussion boards, blogs, modules, quizzes, tests, etc. The mix of classroom and online learning will equal the time and tasks that meet the learning goals and objectives for the course.
We will use Blackboard to coordinate our online activities (details below).

2.) Additional shorts texts (articles, etc.) as assigned

Instructor:

Office Hours:

General Course Goals: At the end of this course students will be able to:

1.) Develop an awareness of the variety of funding solutions and budgeting strategies associated with the pursuit of sustainability
2.) Understand basic economic measures such as net savings, net benefits, cost-benefits ratios, and payback periods

3.) Develop analytical skills required to assess overall costs and benefits associated with “going green” over the course of a project’s lifetime

4.) Create basic cost analysis spreadsheets required to assess energy conservation measures

5.) Understand the variability of costs between different project types

**Methods of Instruction:**
The course will be conducted in the style of a seminar and will rely heavily on student-generated discussion. Additionally, course content will be explored through lectures, readings, demonstrations, case studies, guest speakers, reviewing external web-sites, and assignments. This course requires students to communicate through e-mail and the Blackboard course delivery system. Much of the learning of the course material is through inquiry; looking information up, experimenting, asking, reflecting, and discussing rather than traditional lecture and exams. Because of this, the course is labor intensive. You will be engaged in many activities; learning by doing.

**Course Outline:**
Unit Topics by week

1 The Big Picture: Sustainability
2 Financing Energy Projects: An Overview
3 Basics of Energy Project Financing
4 Performance Contracting
5 Power Purchase Agreements (PPA)
6 Forecasting and Leveraging Avoided Expenditures
7 Going Local: State and Municipal-Level Financing
8 The Case for Green Buildings
9 Revolving Loan Funds
10 TOPIC OF STUDENTS' CHOICE (or, Life Cycle Analysis)

Note: Units may span more than one week’s time.

**Class Meeting Schedule and Topics:**

**Grading Policy:**
Discussion (both in class and online)
Reading Responses and Assignments
Final Exam

**Class Discussion:**
A large part of class is discussion-based and, therefore, the learning environment is linked to the experiences and insights you and your colleagues offer. To help drive a productive discussion,
you will be expected to develop discussion questions each week as part of your reading responses.

**Directions for Blackboard Access:**
To access Blackboard (Bb):
1. Log on to http://iconnect.mwcc.edu
2. Enter your username and password. (If you do not have your MWCC credentials yet, click on the
   “Activate Your Account” link at the bottom of the page and follow the directions)
3. When in iConnect, click on the Bb icon.
4. Click on the Course Title listed under “My Courses.”
For MWCC email or other technical issues, contact the toll-free 24/7 MWCC support center at
866-520-7129 or email helpdesk@mwcc.edu.

**Directions for MWCC E-mail Access:**
MWCC has created an email account for each student. All email correspondence through the
Blackboard course site will be sent to the student’s MWCC email. To receive or send MWCC email, log on to your iConnect portal page as described above and click on the Gmail icon.
To simplify things, students may easily redirect email from their MWCC accounts to any other
email address that they designate.

If you want to automatically forward your MWCC email to an account that you use daily:
1. Log in to your MWCC email account.
2. Select Settings at the top of any mail page.
3. Select Forwarding and POP/IMap along the top of the Settings box.
4. Select the action you'd like your messages to take: “Forward a copy of incoming mail
to” [enter the email account you want the mail forwarded to.]
5. To be safe, select the option “keep Mount Wachusett Community College’s copy in
the Inbox.” By doing this, you will have all of your course related email backed up
safely in case you need it. You have over 7.4 GB of storage, so you should never run
out of archival space.
6. You also can set up filters to forward messages that meet specific criteria.
7. Click Save Changes.

**MWCC’s LaChance Library - Access information:**
**Articles:**
As an MWCC student, you have access 24 hours a day to all of the MWCC Library online article
databases. To get to these resources and search articles from reference books, newspapers,
magazines, and scholarly/academic journals, visit the Library's webpage,
http://library.mwcc.edu and click on “Find Articles.” In order to access the Library's online
databases from an off-campus location (home, your office, another library, etc.) you’ll need to
enter either your 8 digit MWCC student ID number or your 14 digit MWCC library card barcode number.
Books, Videos, CDs, etc.: 
In order to look up books, videos, etc. on a topic, you will need to use the Library catalog. The MWCC Library catalog is available from the Library's webpage (http://library.mwcc.edu), by clicking on the link to "Find Books and More" and is also located at http://cmars.cwmars.org/search~S38/. If it is not convenient for Distance Learning students to visit the MWCC LaChance Library to check out resources located through the catalog, items may also be sent to a local public libraries throughout the state of Massachusetts. For out of state students, books may be sent in the mail as well. Please contact the library for specifics on public library pick up and mailing.

If you do not have a MWCC Library card, you may want to request one. There are a number of ways to accomplish this:
1. Apply for your Library card via email by following the instructions at: http://www.mwcc.edu/Html/Library/distance.html
2. You can also call the Library at 978-630-9125 to request a card
3. If you prefer to fax, please send your name, address, telephone number, and student id number to: 978-630-9556

The library will contact you within one business day with your barcode number. Further instructions as well as the actual library card will be mailed to you shortly thereafter.

For assistance in locating articles, books or other information sources please contact us:
• By telephone - 1-888-884-6922 (toll free)
• Via email - library@mwcc.mass.edu (account is checked at least once daily at 7:30 am, Mon-Fri)
• Using chat – Visit the Ask A Librarian icon on the library’s webpage
• In person, when the library is open –

**Electronic devices and policies**
Please turn off cell phones or set them to vibrate before coming into the classroom.

Attendance and Participation Policy:

You are expected to attend all meetings of the course each week and participate in online discussions. An ongoing spirit of active participation is your best assurance of success. If extenuating circumstances force you to miss a class, please inform me in advance if possible, or upon your return to class. You are responsible for making up any material missed. More than ONE unexcused absence may result in a reduction of your final grade. More than TWO absences may result in your being withdrawn from the course without credit.

**Plagiarism and Scholastic Dishonesty:**
Students are responsible for knowing Mount Wachusett Community Colleges' policy on student conduct and academic dishonesty, found at http://www.mwcc.mass.edu/PDFs/catalog.pdf See college handbook for complete discussion. "In sum, it is the submission of a report or paper with the deliberate intent to deceive. Plagiarism is not tolerated at the College" (Student Handbook 48).

**Statement of Disabilities:**
MWCC affirms its commitment to complying with Section 504 of the Rehabilitation Act of 1973 which states that “No otherwise qualified handicapped individual in the United States”...shall,
solely by reason of a temporary or on-going disability condition, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

Students with documented disabilities (physical, emotional, learning and/or others) who believe that they may need accommodations in this class are encouraged to contact the Counselor for Students with Disabilities in Room 135, extension 120, as soon as possible to ensure that such accommodations are implemented in a timely fashion.

**Student Responsibilities:**
Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus, and in the community at large. The responsibility to secure and to respect general conditions conducive to the freedom to learn is shared by all members of the academic community—students, faculty, and staff members. The orderly operation of the college or classroom would suggest that students:

- Be prepared academically for each class
- Attend class regularly
- Arrive at class on time and remain until the end of the class
- Consult with their instructor prior to class if it is necessary to leave class early
- Adhere to the college policy prohibiting food, drink, smoking, and use of tobacco in the classroom
- Treat all college property with respect
- Leave the classrooms and laboratories neat and tidy
- Respect the rights of others to an education and not disturb the learning process in any way
- Obtain a copy of the student handbook and become familiar with college policies and procedures

**Successful Students’ Guidelines and Thoughts for Academic Success:**
Successful students exhibit a combination of successful attitudes and behaviors as well as intellectual capacity. Successful students...

1. Are responsible and active. Successful students get involved in their studies, accept responsibility for their own education, and are active participants in it!
2. Have educational goals. Successful students have legitimate goals and are motivated by what they represent in terms of career aspirations and life’s desires.
3. Ask questions. Successful students ask questions to provide the quickest route between ignorance and knowledge.
4. Learn that a student and a professor make a team. Most instructors want exactly what you want: they would like for you to learn the material in their respective classes and earn a good grade.
5. Don’t sit in the back. Successful students minimize classroom distractions that interfere with learning.
6. Take good notes. Successful students take notes that are understandable and organized, and review them often.
7. Understand that actions affect learning. Successful students know their personal behavior affects their feelings and emotions which can affect learning. Act like you you’re disinterested and you’ll become disinterested.
8. Talk about what they’re learning. Successful students get to know something well enough that they can put it into words.
9. Don’t cram for exams. Successful students know that divided periods of study are more effective than cram sessions, and they practice it.
10. Are good time managers. Successful students do not procrastinate. They have learned that time control is life control and have consciously chosen to be in control of their life.

**Tutoring and Academic Support:**
Many students find that college coursework provides new academic challenges. Students who wish to deepen their understanding of course concepts, extend their skills, and improve their performance in this course are encouraged to use the free tutoring and other support services available in the Academic Support Center at the Gardner campus located in the LaChance Library. Tutorial services are provided free of charge to enrolled students and include face-to-face and e-tutoring (online tutoring), drop in help with math and writing, subject area tutoring as well as other services. You are encouraged to visit the Academic Support Center for a tour and full explanation of the services available. You may contact:
Director, Academic Support Center, 978-630-9856

***Instructor reserves the right to make any necessary adjustments to this syllabus.***