



WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

ENGINEERING ECONOMICS

ENGR - 2308 - 87

PROF. PAULINA SIDWELL

NOTE: This is an ONLINE course.

NOTE: This is a Summer course.

Course Description:

Methods used for determining the comparative financial desirability of engineering alternatives. Provides the student with the basic tools required to analyze engineering alternatives in terms of their worth and cost, an essential element of engineering practice. The student is introduced to the concept of the time value of money and the methodology of basic engineering economy techniques. The course will address some aspects of sustainability and will provide the student with the background to enable them to pass the Engineering Economy portion of the Fundamentals of Engineering exam.

Prerequisites and/or Corequisites:

Students must have a C or better in MATH 2413—Calculus I

Course Notes and Instructor Recommendations:

This is a very fast-paced online course. It is not “less work” or “easier” than the face-to-face semester-long version. It has the same assignments and content as the 16-week course, but you must complete it over 5 weeks. Therefore, expect to spend 3 to 4 hours *per day* on this class, including weekends. You will need to follow the course calendar closely. You can work ahead, but make sure you don’t fall behind; it is very difficult to catch up given how fast the course goes in a summer session.

Instructor Information:

Instructor Name: Paulina Z. Sidwell

MCC E-mail: psidwell@mclennan.edu

Office Phone Number: (254) 299-8544 [Note: I am rarely in the office during the Summer]

Office/Teacher Conference Hours: By appointment only, and via Zoom.

Appointments are typically available Monday – Thursday from 12 pm to 3 pm.

You can make an appointment here: <https://calendly.com/psidwell>

*The best way to contact me, by far, is email. I will typically respond to email within 24 hours during weekdays (Mon – Thurs) and 48 hours within weekends (Fri – Sun).

Required Text & Materials:

*Note: This course uses Inclusive Access, meaning that your course materials have been included in the course fees and thus do not need to be purchased separately.

Title: Engineering Economy MyLab with Pearson e-text

Author: Sullivan, Wicks, & Koelling

Edition: 17th

Publisher: Pearson

MCC Bookstore Website: <http://www.mclennan.edu/bookstore/>

Additional requirements:

Students must have a reliable computer and internet connection. Students must be able to demonstrate basic computer literacy skills such as keyboarding, sending and receiving email, using a web browser. Students need to be proficient with a word processor and using spreadsheet software (AKA Word and Excel). Additionally, you will need a calculator of your choosing that is NOT a financial calculator.

Methods of Teaching and Learning:

Students will learn through online lectures and reading the textbook, as well as through independent research, work on online homework, proctored exams, and a case study, which will require a written report. Additional methods may be used as opportunities present themselves.

Course Objectives and/or Competencies:

Upon successful completion of this course, students will:

1. Apply different methods to calculate the time value of money. *(All Chapters)*
2. Construct cash flow diagrams for a given problem. *(Ch. 4, 5, 6, 8, 9, 10, 11)*
3. Estimate total revenue, total cost, and break even points. *(Ch. 1, 2, 3, 11)*
4. Calculate the uniform series payment, given principal, interest rate, and pay period *(Ch. 4, 5, 6)*
5. Perform project evaluation, including cost/benefit analysis. *(Ch. 10)*
6. Articulate principles of taxation and depreciation. *(Ch. 7)*
7. Perform capital budgeting, cost comparisons, and replacement analyses. *(Ch. 9, 13)*
8. Solve problems at a level consistent with expectations of the engineering economics portion of the Fundamentals of Engineering exam. *(All homework and tests)*

Course Outline or Schedule:

You are responsible for everything in the modules listed in the detailed calendar below. You should watch the videos associated with each section on or before the dates listed so you will have time to complete the related assignments. Any changes in this schedule will be announced on Brightspace or through email.

ENGINEERING ECONOMICS

ENGR 2308 SECTION 87

Module	Topics	Chapter	Activities	Due date
1	Introduction Cost Concepts Cost Estimation Techniques	1, 2, & 3	Orientation Quiz Homework 1	Thursday, July 13
2	Simple and Compound Interest Single Cash Flow Equivalence Equivalence for Repeated Cash Flows Arithmetic and Geometric Gradient Nominal and Effective Interest Rates	4	Homework 2 Discussion Board 1	Sunday, July 16
3	Present Worth Analysis Annual Worth and Future Worth Rate of Return and Payback Period Spreadsheets and Case Studies	5	Homework 3	Wednesday, July 19
4	Comparing Alternatives The Study Period Useful Lives Equal to the Study Period Useful Lives Different Among Alternatives	6	Homework 4 Discussion Board 2	Sunday, July 23
Test 1	Test 1 Information Test 1 Review Technology Check	1 - 6	Test 1	Monday, July 24
5	Benefit-Cost Analysis Breakeven Analysis Sensitivity Analysis	10 & 11	Homework 5 Milestone 1	Wednesday, July 26
6	Historical Depreciation Methods MACRS Income Taxes After-Tax Economic Analysis	7	Homework 6 Milestone 2	Sunday, July 30
7	Price Changes Inflation/Deflation Foreign Exchange Rates	8	Homework 7	Wednesday, August 2
8	Replacement Analysis Economic Life Probabilistic Risk Analysis Decision Trees	9 & 12	Homework 8 Milestone 3	Sunday, August 6
Test 2	Test 2 Information Test 2 Review	7 – 12	Test 2	Monday, August 7
9	Course Review Final Exam Information	1 – 12	Milestone 4 Discussion Board 3	Tuesday, August 8

Final Exam due Thursday, August 10th at 11:59 pm

Course Grading Information:

Component	Percentage
Homework	40%
Discussion Boards	5%
Case Study	15%
Test Average	40%
Total	100%

A: 90%+ B: 80% – 89% C: 70% – 79% D: 60% – 69% F: 0% – 59%

Homework: All homework will be done on MyLab Engineering, accessible only through Brightspace. There is a link to the assignment directly within each Module. Homework is due at 11:59 pm on the date the syllabus indicates. Late homework will be accepted but penalized: there will be a 5 percent homework grade deduction for every day the homework is late (only for questions answered after the deadline). The last day to turn in homework is Monday, August 7th by 11:59 pm. The full gradebook can be found on Brightspace.

Case Study: Case studies are a great way to apply Engineering Economics concepts to more complex situations than those given in the homework. You will be given a case study to solve, for which you will need to work with Excel, write a report, and record a short presentation. More information will be provided on BrightSpace.

Discussion Board: There will be three discussion board interactions that you must complete. The first one will be part of the introduction to the course, and the others will be related to the case study. Additional information about the expectations and the content of these discussion boards will be provided on BrightSpace.

Tests: All tests will be closed book, closed notes. You will be allowed a 3 by 5 index card with notes. You also are allowed your calculator. You will be given an official Test Handout before your first test. It is your responsibility to print it out and have it with you when you take the test. You may **not** write on the handout. Tests will be taken on Brightspace using Respondus Monitor with Lockdown Browser, for which you will need access to a computer with a webcam. You must submit your work for each of the Tests within 5 minutes of completion. Not submitting

your procedures will result in a ZERO on the test. Tests 1 and 2 will have a time limit of 100 minutes, and the Final has a time limit of 120 minutes. The lowest out of the three test grades will be dropped. More details about the tests will be available on Brightspace.

Academic Dishonesty. Any student that is found guilty of academic dishonesty such as cheating, plagiarism, or collusion, will receive the zero grade on every test or assignment involved. For repeated violations, a guilty student can be assigned a failing grade in this course and can be recommended for suspension from the McLennan Community College District.

Late Work, Attendance, and Make Up Work Policies:

Attendance will be based on participation in the course. You should have activity (homework or test) in the course each Module. A report will be run after each Module to determine activity in the class. Any Module in which no work is logged will count as an absence. This will not be enforced for students who are ahead of the week's activities. After three Modules of inactivity, you can be dropped. If you are dropped before the official drop date (August 2), you will receive a grade of W. If you are dropped after the official drop date, you will receive a grade of F, unless there are highly unusual circumstances.

MCC allows for "excused" absences caused by (1) authorized participation in official College functions, (2) personal illness, (3) an illness or a death in the immediate family, or (4) the observance of a religious holy day. It is your responsibility to let me know the reason for an absence the day you return to campus and provide sufficient documentation (doctor's note, email from coach, etc.). To get consideration to take a missed exam, you must provide documentation that you were unable to take the test for the entire time the test was available.

Drop/Withdraw Policies:

If you wish to drop this class, you must email me from your MCC student account before 5 pm on the last day for student-initiated drops, with the request "Please drop me from COURSE ID and SECTION NUMBER." An email that says something like, "I would like to drop..." or, "I was thinking about dropping..." or, "I was wondering if I should drop..." will **not** be considered a drop request. If the email does not come from your student account, or if the request is verbal, we cannot drop you.

After submitting your request, you must verify the drop was processed, notifying me in writing within 48 hours of your original request if it was not. Otherwise, you will stay on the roster for

the rest of the semester and be awarded the grade earned. Drops past the drop date are only done in documented, extreme, life-crisis circumstances, which usually involve withdrawing from school entirely.

Student Behavioral Expectations or Conduct Policy:

Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance, and an attitude that seeks to take full advantage of this educational opportunity.

This is an online course, and as such, “the classroom” includes all interaction between students (like the ones on the discussion board), and interaction between students and the instructor (such as emails, assignments, etc). It is essential that your interactions during this course are always professional and courteous. Aggressive and/or overly negative comments will not be tolerated. I reserve the right to delete (and give zeroes) to any comments in the discussion boards that I deem unprofessional. For more information, visit <https://www.rasmussen.edu/student-experience/college-life/netiquette-guidelines-every-online-student-needs-to-know/>

[Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)

(<https://www.mclennan.edu/highlander-guide/policies.html>)

Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

Updated 11/04/2022



ACADEMIC RESOURCES/POLICIES

Accommodations/ADA Statement:

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit www.mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu 254-
2998122
Room 319, Student Services Center

Title IX:

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the acting Title IX Coordinator at titleix@mclennan.edu or by calling, Dr. Claudette Jackson, (Diversity, Equity & Inclusion/Title IX) at (254) 299-8465. MCC employees are mandatory reporters and must report incidents immediately to the Title IX Coordinator. Individuals may also contact the MCC Police Department at (254) 299-8911 or the MCC Student Counseling Center at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>.

Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

Academic Support and Tutoring is here to help students with all their course-related needs. Specializing in one-on-one tutoring, developing study skills, and effectively writing essays. Academic Support and Tutoring can be found in the Library and main floor of the Learning Commons. This service is available to students in person or through Zoom from 7:30 am - 6:00 pm Monday through Thursday and 7:30 am - 5:00 pm on Friday. You can contact the Academic Support and Tutoring team via Zoom (<https://mclennan.zoom.us/j/2542998500>) or email (ast@mclennan.edu) during the above mentioned times.

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact either MCC CREW – Campus Resources Education Web by calling (254) 299-8561 or by emailing crew@mclennan.edu or a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Both are located in the Completion Center located on the second floor of the Student Services Center (SSC) which is open Monday-Friday from 8 a.m.-5 p.m.

Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff. To schedule an appointment, go to https://mclennan.co1.qualtrics.com/jfe/form/SV_07byXd7eB8iTqJg. Both the Completion Center and Paulanne's Pantry are located on the second floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to

<https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html> to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

MCC Academic Integrity Statement:

Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:

Go to <https://www.mclennan.edu/center-for-teaching-and-learning/FacultyandStaffCommons/requirements.html> for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Email Policy:

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails. For more information about your student email account, go to www.mclennan.edu/studentemail.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication

method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

You can find help on the McLennan website about connecting your McLennan email account to your mobile device:

- [Email Setup for iPhones and iPads](#)
- [Email Setup for Androids](#)

Forwarding Emails:

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

For more helpful information about technology at MCC, go to [MCC's Tech Support Cheat Sheet](#) or email helpdesk@mclennan.edu.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.