



WACO, TEXAS

**COURSE SYLLABUS
AND
INSTRUCTOR PLAN**

**ENGINEERING ECONOMICS
ENGR 2308 – T001**

**PAULINA Z. SIDWELL
APRIL K. ANDREAS**

NOTE: This is a Blended/Hybrid course.

NOTE: This is a travel 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.

This is an International Engineering Experience course. This means that a portion of the class will involve traveling overseas and learning about the international aspects of Engineering Economics.

Prerequisites and/or Corequisites:

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

Instructor Information:

Instructor Name: Professor Paulina Sidwell

MCC E-mail: psidwell@mclennan.edu

Office Phone Number: (254) 299-8544

Office Location: S 144

Office Hours: Online Tuesday
and Thursday 11am-1pm and RM
144 Monday and Wednesday
11am-1pm

<https://calendly.com/psidwell>

Instructor Name: Dr. April K. Andreas

MCC E-mail: aandreas@mclennan.edu

Office Phone Number: (254) 299-8130

Office Location: S 221

Office Hours: Online hours Monday and
Wednesday 4-6pm and RM 221 Tuesdays 1-3pm

<https://calendly.com/akandreas>

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, and using a web browser. Also, a scientific calculator will be allowed for tests.

Requirement for the Overseas Experience portion of the class:

- A passport valid through December 2024
- Approved travel visas (if applicable)
- A smart phone with an international data plan, including about 100 MB per day, and about 100 texts and about 100 minutes of talk total

Methods of Teaching and Learning:

As this is a travel/flex course, there will be multiple avenues for learning. Most of the course content will be taught prior to the trip, via online videos and face-to-face meetings. Additionally, students will learn through independent research, work on online homework, reports, exams, and independent and team research projects. Teaching while on the International Engineering Experience (IEE) portion will take place during scheduled activities, daily meetings at breakfast and dinner, and during downtimes while in transit (airports, buses, etc.) The IEE portion can best be described as experiential learning; you must be present to learn.

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 Chapters*)

Course Attendance/Participation Guidelines:

If a student is not in attendance in accordance with the policies/guidelines of the class as outlined in the course syllabus as of the course census date, faculty are required to drop students from their class roster prior to certifying the respective class roster. A student's financial aid will be re-evaluated accordingly and the student will only receive funding for those courses attended as of the course census date.

Before the 60% point of the semester, a student who is absent for 25% or more of a face-to-face or blended course or who misses 25% or more of assigned work for an online course will be withdrawn from the course with a grade of W. A student may also request to be withdrawn with a grade of W before the 60% point of the semester. After the 60% point of the semester, the student may request to be withdrawn if the student is passing, or be assigned the final grade earned at the end of the semester after grades have been updated to reflect missing work.

Course Outline or Schedule:

To complete the materials for this course, students must work on modules and complete activities based on the following calendar. **Duolingo work (150 XP) is due every Friday.**

Week Beginning	Friday & SI Info (Bring smart phone to all mtgs)	Module	Engr Econ Topic	Due by 11:59 pm Friday
Mon, Jan 8	Mtg #1, 1/12: 1 pm – 4 pm <ul style="list-style-type: none">• Orientation• Set up phones• Travel Guide Project	Week 1	Ch 1: Introduction	<ul style="list-style-type: none">• Syllabus Quiz
Mon, Jan 15	SI 1 Recommended: All about Outlines	Week 2	Ch 2-3: Cost Concepts, Estimation Techniques	<ul style="list-style-type: none">• HW 1: Ch 1 - 3
Mon, Jan 22	SI 2 Recap: For Realzies on Outlines	Week 3	Ch 4: Time Value of Money part 1	<ul style="list-style-type: none">• HW 2: Ch 4 pt 1• Paper Step 1 – Logistics & Outline Draft

Week Beginning	Friday & SI Info (Bring smart phone to all mtgs)	Module	Engr Econ Topic	Due by 11:59 pm Friday
Mon, Jan 29	Mtg #2, 2/2: 1 pm – 4 pm <ul style="list-style-type: none"> • Names Quiz • GooseChase • Dallas Scavenger Hunt Assignment 	Week 4	Ch 4: Time Value of Money part 2	<ul style="list-style-type: none"> • HW 3: Ch 4 pt 2 • Paper Step 2 – Logistics & Outline Reviews
Mon, Feb 5	SI 3 Recommended: Turning an Outline Into a Paper	Week 5	Test 1 Review Study!	• Test 1 (Ch 1 – 4)
Mon, Feb 12	FRIDAY Mtg #3, 2/16: 8 am – 10 pm (full day) Dallas Scavenger Hunt (counts as a quiz)	Week 6	Ch 5: Evaluation a Single Project	• HW 4: Ch 5
Mon, Feb 19	SI 4 Recap: Staying Motivated	Week 7	Ch 6: Comparison and Selection Among Alternatives	• HW 5: Ch 6
Mon, Feb 26	SI 5 Recommended: Last Minute Panic as Motivator	Week 8	Ch 10 - 11: Benefit-Cost Analysis, Breakeven Analysis, Sensitivity Analysis	• HW 6: Ch 10 - 11
Mon, Mar 4	No meeting due to spring break	Week 9	<i>Spring Break!</i>	• Paper Step 3 – Full Paper (Due Sunday, 3/10)
Mon, Mar 11	Mtg #4, 3/15: 1 pm – 4 pm <ul style="list-style-type: none"> • Take Map Quiz • Take Basic Timeline Quiz • Determine roles for travel • A first look at packing 	Week 10	Test 2 Review Study!	<ul style="list-style-type: none"> • Test 2 (Ch 5, 6, 10 & 11) • Check Brightspace for rolling paper review due dates
Mon, Mar 18	SI 6 Recap: Spelling, Grammar, and Sources	Week 11	Ch 7: Depreciation, Income Taxes	<ul style="list-style-type: none"> • HW 7: Ch 7 • Check Brightspace for rolling paper review due dates

Week Beginning	Friday & SI Info (Bring smart phone to all mtgs)	Module	Engr Econ Topic	Due by 11:59 pm Friday
Mon, Mar 25	SI 7 Recap: Reviewing Content and Flow	Week 12	Ch 8: Price Changes, Exchange Rates	<ul style="list-style-type: none"> • HW 8: Ch 8 • Check Brightspace for rolling paper review due dates
Mon, April 1	SI 8 Recommended: What do I do with all these revisions?	Week 13	Ch 9: Replacement Analysis	<ul style="list-style-type: none"> • HW 9: Ch 9 • Paper Step 5 – Incorporate All Revisions
Mon, April 8	Mtg #5, 4/12: 1 pm – 4 pm <ul style="list-style-type: none"> • Take Current Events Quiz • Ethics and Behavioral Expectations • Packing and Logistics 	Week 14	Ch 12-13: Probabilistic Risk Analysis, Capital Budgeting	<ul style="list-style-type: none"> • HW 10: Ch 12, Ch 13
Mon, April 15	SI 9 Recommended: Big Boss Meeting Prep	Week 15	Test 3 Review Study!	<ul style="list-style-type: none"> • Test 3 (Ch 7, 8, 9, 12 & 13) • Paper Step 6 – For bonus
Mon, April 22	Mtg #6, 4/26: 1 pm – 4 pm <ul style="list-style-type: none"> • Final logistics • Safety & financial considerations • Customs • Public transportation • Phone/App Check 	Week 16	Final Exam Review	<ul style="list-style-type: none"> • Final Exam (Comprehensive) • Paper Steps 7 & 8 – Check Brightspace for special deadlines

Course Grading Information:

Grade Distribution	
Due prior to travel	85%
- Homework	15%
- Tests	30%
- Quizzes	10%
- Research Paper & Edits	15%
- SI Attendance	5%

- Duolingo Progress	10%
Due during/after travel	15%
- GooseChase Points	10%
- Research Paper Final	5%
Total	100%

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

Pre-trip Work

Homework: All homework will be done online through MyLab Engineering, which is integrated into the Brightspace course. The homework exercises are available from the beginning of the semester and are due according to the calendar above. Homework is due at 11:59 on Friday of the end of the week as indicated by the syllabus. Late homework will be accepted, but penalized for every day that it is late. The last day in the semester to complete homework is Friday, April 26 at 11:59 pm.

Tests: There will be a total of four tests (the fourth test is the final exam). All tests will be closed book, closed notes. A 3 by 5 inch index card may be used as a formula sheet (both sides) as well as a calculator. Compound interest tables and depreciations tables (AKA the Test Handout) will be provided via Brightspace, and each student is responsible to print out a set and bring it to the test. Nothing can be hand-written on the Test Handout. Tests must be taken via Respondus Monitor by the end of the week (Friday) in which they are assigned as found in this Instructor Plan. The lowest test grade will be dropped. If you get less than 60% on any of the first three tests, you must meet with Professor Sidwell before you are allowed to take the subsequent test. Failure to meet with Professor Sidwell will result in an automatic zero on the next test, which will jeopardize your ability to participate in the travel portion of the course.

Quizzes: There will be several quizzes through the semester. Details will be provided in class.

Individual Chapters and Edits: As part of this course, you will be developing an engineering travel guide. Details will be provided in class.

Supplemental Instruction: You will be required to attend Supplemental Instruction. There will be 9 total sessions, and you must attend at least five to get full credit.

Duolingo Progress: For safety reasons, it is imperative that students have a “basic knowledge” of the language(s) of the locations we will visit. Details will be provided in class.

*Even if you fall behind, you must still complete all German language study requirements. **If you do not have a passing Duolingo average by Friday, April 26, 11 pm, you will not be allowed on the travel portion of the course and will not be eligible for any refunds.*** In the case that you are not allowed to travel due to non-completion of language study requirements, your professors will make adjustments to the syllabus that may still allow you to earn credit for the course.

During and Post-trip Work

GooseChase Points: We will be using the app GooseChase (available on Apple and Android mobile systems) to keep track of a variety of “scavenger-hunt-like” tasks that will require you to get involved with your surroundings and people you will meet along the way. There are well over 150 points available. Students will be graded out of 100 points, with a max score of 110%. Additional details will be provided in class.

Research Paper: After travel, students will make appropriate revisions to their paper. These revisions will be due soon after we return to the U.S. Details will be provided in class.

A Note About Traveling and Intellectual Curiosity

While not every stop every day is going to be desperately fascinating to you, it is important that you do not impede others’ ability to appreciate the experience by poor attitude and/or behavior. We reserve the right to reduce your final grade in the class for attitudes and behaviors that have a negative effect on the logistics (including being late or missing an activity altogether), the trip participants, or locals. Details will be provided in class.

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. Academic dishonesty in any class may result in your dismissal from this course, including the travel portion.

Late Work, Attendance, and Make Up Work Policies:

Late assignments will not be accepted, unless a specific penalty has been set by the instructors (for example, for homework assignments). If you have to miss class on the day that something is due, you must turn it in early. If you are legitimately ill during an assessment, you must email Professor Sidwell the morning of the exam (before you miss it), and provide a doctor's note **the first day** you are back in class in order to receive consideration for a makeup exam.

Attendance and participation in all activities is mandatory, both in the US and abroad.

Prior to travel

- Late: To avoid being counted late, you must arrive early to the classroom and be ready to go, prior to when the meeting is scheduled to start
 - Each late arrival will result in a 3-point reduction of your final grade in the course
- Absent: defined as missing more than 15 minutes of a meeting
 - One unexcused absence for any of the face-to-face meetings (as defined by MCC absence policy), you will drop one letter grade
 - Two or more unexcused absences, you will likely be removed from the course and will be ineligible for a refund

During travel

- Late: To avoid being counted late, you must arrive early to the meeting point ready to go, so that at the designated meeting time, the group can move to the next location
 - Each late arrival will result in a 3-point reduction of your final grade in the course
- Absent: defined as failing to make a departure, resulting in the missing of an entire activity
 - One unexcused absence, you will drop one letter grade
 - Two or more unexcused absences, you will likely be removed from the course. You will be ineligible for a refund, and will no longer be able to travel with or associate with the group.
 - If you have missed an activity a particular day, you will stay at the hostel for the entirety of that day. Your roommates can bring food, groceries, etc., to you, but you are expected to stay in the hostel and rest so you are in the best of health to join us the next day.
- If you are sick, you have to message us ***AT LEAST 30 MINUTES BEFORE*** we are meeting so we have time to see what can be done to help you

ENGINEERING ECONOMICS

ENGR 2308 SECTION T001

If you are dropped before the official drop date, 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. If you are dropped from the course, you will not be allowed to participate in the travel portion of the course as an Engineering Economics student.

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.).

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. Additionally, since this is travel course, there are behavior expectations during the trip. During the semester, the instructor will explain to the students what these expectations are and will provide a form for students to sign, which will certify they understand and agree to the rules and the consequences for breaking them.

[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.

**Your professors reserve the right to change any term on this syllabus
at any time during the semester.**

10/09/2023



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)299-8122
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 Title IX Coordinator at titleix@mclennan.edu or by calling, Dr. Claudette Jackson, (Accommodations/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 may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>

Additionally, Title IX provides rights and protections for pregnant and newly parenting students. 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. You can contact the Academic Support and Tutoring team via Zoom or email (ast@mclennan.edu) by going to our website (<https://www.mclennan.edu/academic-support-and-tutoring/>)

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 success@mclennan.edu.

Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff. To schedule an appointment, go to <https://calendly.com/paulannespantry-mcc/15min>.

The CREW, Success Coaches, and Paulanne's Pantry are all located on the second floor of the Student Services building in Success Coaching Services.

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:

Please view our [Academic integrity statement](#) for more information about academic integrity, dishonesty, and cheating. The unauthorized use of artificial intelligence (AI) for classwork can be a violation of the College's General Conduct Policy. Whether AI is authorized in a course and the parameters in which AI can be used in a course will be outlined by each instructor.

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

Go to <https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-Staff-Commons/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](#) 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.