Engineering Economy
EIN 3354 Section 261V
Class Periods: N/A
Location: Online
Academic Term: Fall 2025

Instructor:
Dr. Mengyu Li
mengyu.li@ufl.edu (Please contact through the Canvas message)
(352)-294-6391
Office Hours: Wednesdays, 10:40 - 11:30 am (online via Zoom Conferences in Canvas)

Graders:
Please contact through the Canvas website. Grader office hours will be held via the Zoom Conferences link in Canvas.

- Leean Shitrit
  - Office Hours: Mondays, 10 – 11 am
- Madison Cannady
  - Office Hours: Tuesdays, 3 – 4 pm
- Vincent Lin
  - Office Hours: Thursdays, 6 – 7 pm
- Andrew McGrath
  - Office Hours: Fridays, 11 am – 12 pm

Course Description
3 credits. Basic principles and applications of economic decision-making between alternatives encountered in engineering projects. Analysis includes methodologies of economics and finance in addition to engineering fundamentals.

This course is part of the Engineering Project Management Certificate offered by the HWCOE. **The certificate requires you to make a B or higher in 2 required courses and one course from an elective list.**

- Required: EGS 4625 Fundamentals of Engineering Project Management
- Required: EIN 3354 Engineering Economy or choice of two others
- Plus one course from a list of approved courses

More information can be found in the file titled Project Management Certificate in course materials or at https://www.eng.ufl.edu/leadership/academic-programs/certificates/undergraduate/ .

Course Pre-Requisites
Pre-Requisites: MAC 2312 (Analytic Geometry and Calculus II), with a minimum grade of C.

Course Objectives

- Evaluate alternatives from a variety of engineering disciplines based on economic equivalence
- Apply both manual and computerized methods for determining analytical justifications of decisions
- Develop customized and interactive project planning tools in Excel

Materials and Supply Fees
Not applicable.

Relation to Program Outcomes (ABET):

Outcome	Coverage*
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	High

2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	
3. An ability to communicate effectively with a range of audiences	
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	High
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative environment, establish goals, plan tasks, and meet objectives	
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies	

- (1) The Engineering Economy course provides the student with the basic mathematical, modeling, and conceptual skills to compare competing design proposals from the point of view of economic efficiency as well as engineering efficiency. Technical proposals must ultimately be expressed and measured in terms of material and manufacturing costs to provide a given product and service and those costs then measured against the likely cash flows to be generated in the market, allowing the overall profitability and financial feasibility of such projects to be assessed.
- (4) The units on federal tax policy, depreciation, and inflation touch upon social and political considerations. Thus tax policy may implicitly favor and encourage corporations to make greater investments in R & D through an orchestrated series of directed tax credits and deductions. The project management portion touches on making informed ethical decisions in both the private and public sector. These topics give information to students to become active leaders in their profession and/or community.

Required Textbooks and Software

- **Microsoft Excel**: Access is required. It is strongly recommended to **download Excel onto your laptop—** UF students have access to the Office Suite.
- **Digital Textbook**: This course uses a digital version of the textbook through **McGraw-Hill Connect**. You will need this platform to complete weekly Connect assignments. EIN 3354 participates in the **UF All Access** program. Students have two options to access Connect materials:

    1. **Opt-in via UF All Access** (charged to your student account)
    2. **Purchase directly** from the McGraw-Hill website

- **Technical Support:** For any questions about McGraw-Hill Connect, call 1-800-331-5094 or visit the Customer Experience Group online at http://mpss.mhhe.com/ via email or chat. Please direct all technical concerns to this group. You will receive a case number for follow-up.

Required Computer

UF student computing requirement: *https://news.it.ufl.edu/education/student-computing-requirements-for-uf/*

Course Schedule*

**This is a tentative outline. The instructor reserves the right to make adjustments as necessary.*

Week	Start	End	Module	Topic	Assignments	Due Date	Notes
1	8/21/2025	8/24/2025	Start Here	Course Introduction	Syllabus Quiz, Quiz 1.1 - Connect Intro	8/31/2025	Welcome to EIN 3354! Canvas/Connect Intro.
2	8/25/2025	8/31/2025	1, 2	Basic Concepts; Excel Intro	Quiz 1.2 - Connect, Quiz 2.1 - Canvas	9/7/2025	
3	9/1/2025	9/7/2025	3	TVM (PV & FV)	Quiz 2.2 - Canvas, Quiz 3.1 - Connect	9/7/2025	
4	9/8/2025	9/14/2025	3	TVM (Normal vs. Compound Interest)	Quiz 3.2 - Connect	9/14/2025	Start HW 1
5	9/15/2025	9/21/2025	3	TVM (Annuity & Gradients)	Quiz 3.3 - Connect, HW 1 - Canvas	9/21/2025	
6	9/22/2025	9/28/2025	4	NPV	Quiz 4.1 - Connect	9/28/2025	Start HW 2
7	9/29/2025	10/5/2025	4	Equiv. Ann Worth	Quiz 4.2 - Connect, HW 2 - Canvas	10/5/2025	Exam Review (during Q&A session)
8	10/6/2025	10/12/2025		**Midterm Exam (10/7)**		10/7/2025	Midterm (Module 1 - 4)
9	10/13/2025	10/19/2025	5	Inflation	Quiz 5 - Connect	10/19/2025	Start HW3
10	10/20/2025	10/26/2025	6	Rate of Return	Quiz 6.1 - Connect, Quiz 6.2 - Connect, HW3 - Canvas	10/26/2025	
11	10/27/2025	11/2/2025	7	Depreciation	Quiz 7 - Connect	11/2/2025	Start HW4
12	11/3/2025	11/9/2025	8	Income Taxes	Quiz 8 - Connect, HW4 - Canvas	11/9/2025	
13	11/10/2025	11/16/2025	9	Project Planning 1			Start HW5
14	11/17/2025	11/23/2025	9	Project Planning 2	HW5 - Canvas	11/23/2025	
15	11/24/2025	11/30/2025	*Holiday*				
16	12/1/2025	12/3/2025		Exam Review			
Exam Week			**Final Exam (12/9)**			12/9/2025	

Important Dates

Oct 7, 2025, Midterm Exam (online)
Dec 9, 2025, Final Exam (online)

Evaluation of Grades

Assignment	Total Points	Percentage of Final Grade
Homework (5)	100 each	35%
Quizzes (15)	25 each	25%
Midterm Exam	100	20%
Final Exam	100	20%
		100%

Grading Policy

Percent	Grade	Grade Points
93 - 100	A	4.00
90.0 – 92.9	A-	3.67
86 - 89.9	B+	3.33
83 – 85.9	B	3.00
80.0 – 82.9	B-	2.67
76 - 79.9	C+	2.33
73 – 75.9	C	2.00
70.0 – 72.9	C-	1.67

66 - 69.9	D+	1.33
63 – 66.9	D	1.00
60.0 – 62.9	D-	0.67
0 - 59.9	E	0.00

Course Format

This is an online course. Lecture notes, assignments, practice exercises, and extra information are all going to be available to you on the class website in Canvas. Exams are also online.

Attendance Policy, Class Expectations, and Make-Up Policy

- **Attendance**: Required for all online exams. Excused absences must follow university policies (https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx) and include appropriate documentation.
- **Class Expectation**: Stay ahead of the game! Some weeks have a lot of material to cover, so plan accordingly.
- **Assignments**: All weekly assignments are due Sunday at midnight. **No late submissions** will be accepted.
- **Exam Make-Up Policy**: Make-ups are allowed only for university-excused absences.

Academic Policies & Resources

To support consistent and accessible communication of university-wide student resources, instructors must include this link to academic policies and campus resources: https://go.ufl.edu/syllabuspolicies. Instructor-specific guidelines for courses must accommodate these policies.

Commitment to a Positive Learning Environment

The Herbert Wertheim College of Engineering values varied perspectives and lived experiences within our community and is committed to supporting the University's core values.

If you feel like your performance in class is being impacted, please contact your instructor or any of the following:
• Your academic advisor or Undergraduate Coordinator
• HWCOE Human Resources, 352-392-0904, student-support-hr@eng.ufl.edu
• Pam Dickrell, Associate Dean of Student Affairs, 352-392-2177, pld@ufl.edu