

Syllabus Spring 2022

Economy for Engineers & Scientists - CE 2326 - 004

CRN 22903; Jan 18, 2022 – May 05, 2022; In Class, Online Sync/Asynchronous

Instructor: L.G. Perez, Ph.D.
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 Office Hours: MWF 30 minutes after class or by appointment
 Class Hours: **MWF 11:30 am – 12:20 pm**
 Classroom: Quinn Hall 212

Course Description

This course covers the basics of economic analysis from an engineering perspective. Because cost is such an important component in decision-making, various techniques for comparing alternatives on an economic basis are presented. Other topics include depreciation, inflation considerations, cost estimating, and sensitivity analysis. After completing the course, the student should be able to identify which alternative should be selected from two or more mutually exclusive alternatives on the basis of economic considerations.

Objective

Understand basic economic concepts (e.g., time value of money, present worth, rate of return, cost estimation, inflation, etc.) and their application in engineering.
 Identify which alternative should be selected on the basis of economic considerations.

Textbook Information

Required Text: Basics of Engineering Economy, 3rd ed, 2021
 Authors: Leland Blank and Anthony Tarquin

Organization and Method of Instruction

The course will be taught using two venues (in the classroom, on-line Sync/ Asynchronous). Refer to the syllabus as a guide of how lectures will be delivered (at UTEP or BB Zoom) Use of Blackboard, archived presentations and web-based instruction may be used.

Web-based Instruction Site:

<http://engineering.utep.edu/enge/ie3326.htm>

USERNAME: ILUVIT

Password: 2EZ4ME

Grade Determination

≥ 90 -----	A
80 - < 90 -----	B
70 - < 80 -----	C
60 - < 70 -----	D
<60 -----	F

	Exams	Quizzes	Journal Checks	Homework Checks	Final	Total
Number	4	2	2+	2	1	
Points	12+	5	5	5	20	
Total	50	10	10	10	20	100

Extra credit TBD.

Class Policy

You will be on your honor as future engineers. All exams, quizzes and the final are closed book. Note cards or other resources are NOT allowed. Tables and formula sheets will be provided if needed. Calculators with a communications capability are not allowed during exams. All devices with a communications capability will need to be stowed away during exams.

Students will not be allowed to leave the room once the exam has started. A failing grade will be assigned to the student's exam for any student that leaves the room during an exam. Please attend to bathroom requirements before start of an exam. Once you begin the exam, quiz or survey, you must complete it.

Grading appeals must be submitted to the instructor, in writing via email, no more than two weeks after the grade is returned or made available to the student. **Do not miss exams. Make-up exams will not be given.** Excuses such as weddings (other than your own) or quinceneras will **NOT** be valid excuses to miss a test or the final exam. In the event of a pre-mediated absence from an exam for such reasons as university sponsored activity, severe family emergencies or hospitalization, the instructor must be notified as early as possible **before** the date of the exam via email with documentation.

Academic Integrity

Academic regulations and procedures are governed by university policy. Students must abide by university rules on Academic Integrity and Scholastic Dishonesty. All students must do their own work on quizzes and exams. Any student **warned and/or suspected** of cheating will not be eligible for extra credit and participation points may be deducted. Students found cheating will face severe consequences. If any one student is found cheating, all extra credit is void for the entire class.

Special Accommodations

The University of Texas at El Paso provides, upon request, appropriate academic accommodation for students with disabilities. Please coordinate with the Center for Accommodations and Support Services instructor and the instructor early to ensure accommodations are provided in a timely manner. For more information, contact the Center for Accommodations and Support Services (<http://sa.utep.edu/cass/>).

COVID-19 PRECAUTION STATEMENT

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.

Class Schedule (Red classes are at Quinn 212)

		SPRING 2022 LECTURE SCHEDULE			08/01/21
week	Date	Where	Topic and Section	Sections	
1	Mon	1/17/2022			
	Wed	1/19/2022	Quinn 212	Chap 1 Introduction, Foundations of Engineering Economy	7
	Fri	1/21/2022	Zoom		
2	Mon	1/24/2022	Zoom		
	Wed	1/26/2022	Quinn 212	Chap 2 Factors: How Time and Interest Affect Money	5
	Fri	1/28/2022	Zoom		
3	Mon	1/31/2022	Zoom		
	Wed	2/2/2022	Quinn 212	Chap 3 Nominal and Effective Interest Rates	8
	Fri	2/4/2022	Zoom		
4	Mon	2/7/2022	Zoom		
	Wed	2/9/2022	Quinn 212		
	Fri	2/11/2022	Zoom	Chap 4 Present Worth Analysis	6
5	Mon	2/14/2022	Zoom		
	Wed	2/16/2022	Quinn 212	Exam 1 Chap 1, 2 and 3	
	Fri	2/18/2022	Zoom		
6	Mon	2/21/2022	Zoom	Chap 5 Annual Worth Analysis	4
	Wed	2/23/2022	Quinn 212		
	Fri	2/25/2022	Zoom	Chap 6 Rate of Return Analysis	8
7	Mon	2/28/2022	Zoom		
	Wed	3/2/2022	Quinn 212		
	Fri	3/4/2022	Zoom		
8	Mon	3/7/2022	Zoom	Chap 7 Benefit / Cost Analysis and PS Projects	5
	Wed	3/9/2022	Quinn 212	Exam 2 Chap 4, 5, 6	
	Fri	3/11/2022	Zoom		
9	Mon	3/14/2022	Zoom	Spring Break	
	Wed	3/16/2022	Quinn 212	Spring Break	
	Fri	3/18/2022	Zoom	Spring Break	
10	Mon	3/21/2022	Zoom		
	Wed	3/23/2022	Quinn 212	Chap 8 Breakeven, Payback, Sensitivity, and Risk Analysis (not all sections)	6-8

	Fri	3/25/2022	Zoom	Cesar Chavez Holiday No Classes	
11	Mon	3/28/2022	Zoom		
	Wed	3/30/2022	Quinn 212		
	Fri	4/1/2022	Zoom	Chap 9 Replacement and Retention Decisions	5
12	Mon	4/4/2022	Zoom		
	Wed	4/6/2022	Quinn 212	Exam 3 Chap 7 - 9	
	Fri	4/8/2022	Zoom	Chap 10 Effects of Inflation	5
13	Mon	4/11/2022	Zoom		
	Wed	4/13/2022	Quinn 212	Chap 11 Cost Estimation and Allocation	4
	Fri	4/15/2022	Zoom	Spring Study Day	
14	Mon	4/18/2022	Zoom		
	Wed	4/20/2022	Quinn 212	Chap 12	
	Fri	4/22/2022	Zoom		
15	Mon	4/25/2022	Zoom	Chap 13 After - Tax Economic Analysis	3
	Wed	4/27/2022	Quinn 212	Final Homework, Journal Review	
	Fri	4/29/2022	Zoom		
16	Mon	5/2/2022	Zoom		
15	Wed	5/4/2022	Quinn 212	Exam 4 Chap 10 – 13, May 5 Last Day Classes	
	Fri	5/6/2022	Zoom	DEAD DAY	
	Wed	5/11/2022	Quinn 212	FINAL EXAM 1:00 PM – 3:45 PM	
16	Wed	5/18/2022		Grades Due	