

Syllabus Fall 2022

Economy for Engineers & Scientists - CE 2326 – 003 **T-R**

CRN 19304; Aug 22, 2022 – Dec 1, 2022; In Class and Online Sync/Asynchronous

Instructor: L.G. Perez, Ph.D.
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 Office Hours: TR 30 minutes after class or by appointment
 Class Hours: TR 12:00: pm – 1:20 pm
 Classroom: Liberal Arts Building 222

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.

Grade Determination

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

	Exams	Quizzes	Journal Checks	Homework Checks	Participation	Final	Total
Number	4	1	1-2	1-2	1	1	
Points	12	4	6 each	4 each	4	24	
Total	48	04	12	08	04	24	100

Class Policy

Attendance is mandatory. 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. You will need to bring a 10% interest table with you to all exams, quizzes and the final. All communication devices including calculators with a communications capability are disallowed during exams.

All devices with a communications capability will need to be stowed away during exams.

Students are required to take exams in the classroom and 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 takes the exam other than in the classroom or 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.

Prior to leaving from an exam, students must show their grade to the instructor. A Final Exam grade of less than 30 will result in a final course grade of no higher than a 69.

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 will 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 still available in the El Paso area. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.

		TR FALL 2022 LECTURE SCHEDULE			8/15/2022
week	Date	Where	Topic and Section	Sections	
1	Tues	8/23/2021	LA 222 / Zoom	Chap 1 Introduction, Foundations of Engineering Economy	10
	Thur	8/25/2021	LA 222 / Zoom	Chap 2 Factors: How Time and Interest Affect Money	5
2	Tues	8/30/2021	LA 222 / Zoom		
	Thur	9/1/2021	LA 222 / Zoom		
3	Tues	9/6/2021	LA 222 / Zoom	EXAM 0 Chap 1-2	
	Thur	9/8/2021	LA 222 / Zoom	Chap 3 Nominal and Effective Interest Rates	8
4	Tues	9/13/2021	LA 222 / Zoom		
	Thur	9/15/2021	LA 222 / Zoom		
5	Tues	9/20/2021	LA 222 / Zoom	Exam 1 Chap 1, 2 and 3	
	Thur	9/22/2021	LA 222 / Zoom	Chap 4 Present Worth Analysis	6
6	Tues	9/27/2021	LA 222 / Zoom		
	Thur	9/29/2021	LA 222 / Zoom	Chap 5 Annual Worth Analysis	4
7	Tues	10/4/2021	LA 222 / Zoom	Chap 6 Rate of Return Analysis	8
	Thur	10/6/2021	LA 222 / Zoom		
8	Tues	10/11/2021	LA 222 / Zoom	Exam 2 Chap 4, 5, 6	
	Thur	10/13/2021	LA 222 / Zoom		
9	Tues	10/18/2021	LA 222 / Zoom	Chap 7 Benefit / Cost Analysis and PS Projects	5
	Thur	10/20/2021	LA 222 / Zoom		
10	Tues	10/25/2021	LA 222 / Zoom	Chap 8 Breakeven, Payback, Sensitivity, and Risk Analysis	6
	Thur	10/27/2021	LA 222 / Zoom		
11	Tues	11/1/2021	LA 222 / Zoom	Chap 9 Replacement and Retention Decisions	
	Thur	11/3/2021	LA 222 / Zoom	Exam 3 Chap 7 - 9	
12	Tues	11/8/2021	LA 222 / Zoom	Chap 10 Effects of Inflation	5
	Thur	11/10/2021	LA 222 / Zoom	Chap 11 Cost Estimation and Allocation	6
13	Tues	11/15/2021	LA 222 / Zoom		
	Thur	11/17/2021	LA 222 / Zoom	Chap 12 Depreciation Methods	4
14	Tues	11/22/2021	LA 222 / Zoom		
	Thur	11/24/2021	LA 222 / Zoom	Thanksgiving Holiday	

15	Tues	11/29/2021	LA 222 / Zoom	Exam 4 Chap 10 - 13	
	Thur	12/1/2021	LA 222 / Zoom	Final Homework, Journal Review	
	Thu	12/2/2021	LA 222 / Zoom	LAST DAY OF CLASSES	
16		Dec 6, 2022 1:00 pm	LA 222 / Zoom	FINAL EXAM	