

IME 3090 – Engineering Economy for Mechanical Engineers

Semester: Spring 2010 - CRN 12199, Monday: 10:30 am– 12:10 pm, D0208 Parkview

Instructor: Leonard R. Lamberson, Ph.D., P.E., Professor – Department of Industrial and Manufacturing Engineering

Office Hours: M, 2:00 – 3:00 pm; Room E0207

Catalog Description: Economic decision making from an engineering perspective. This course is designed to provide undergraduate engineering students with sufficient knowledge to perform engineering economy studies. Topics covered include time value of money, decision making criteria, break-even studies, depreciation and taxes, inflation, and life cycle cost analysis.

Prerequisite: MATH 1230.

Textbook: Newnan, D.G.; T.G. Eschenbach and J.P. Lavelle; *Engineering Economic Analysis*, 2009, Tenth Ed., Oxford University Press, www.oup.com, ISBN 978-0-19-533541-5.

Study Guide: *Study Guide for Engineering Economic Analysis*, Tenth Ed., Prepared by Ed Wheeler, Oxford University Press, ISBN 978-0-19-533624-5.

Course objectives:

1. Possess the knowledge to formulate and solve time value of money problems/situations.
2. Be able to identify sources of data and apply appropriate techniques to solve economic problems.
3. Posses the ability to evaluate multiple alternatives to determine the best course of action from an economic standpoint
4. Possess the ability to compute depreciation of tangible assets by a variety of methods and to determine the effect on taxation.
5. Understand the importance of making appropriate economic decisions.

Significant dates:

January 18 (Monday) – MLK day, no class
March 1 – all week – Spring break

Final Examination:

Wednesday, April 28, 2010; 10:15 am – 12:15 pm

Course grade determination:

1. Three scheduled quizzes will be given during the semester. No quiz scores will be eliminated in arriving at a final grade.
2. A final examination will be given.
3. Homework assignments will be posed on a weekly basis on e-learning. Homework is for your own practice. Answers can be found in the study guide.
4. No make up exams/quizzes will be given.
5. You are allowed a one page (both sides) crib sheet for all exams. This must be made up before the exam.

The final class score will be determined using the following scale.

<i>Activity</i>	<i>Weight</i>
Final exam	60%
Quizzes	40%

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The class score will be translated to a numerical grade using the following table:

Course Grade	Point Spread	Limits	
		U	L
A	7.5	100.0	92.5
BA	5	92.5	87.5
B	6	87.5	81.5
CB	5	81.5	76.5
C	7.5	76.5	69.0
DC	5	69.0	64.0
D	9	64.0	55.0
E		Below 55	

General comments:

Bring a calculators to class. We will be doing problems in class and also, it will be needed for exams.

You are not permitted to borrow a calculator, textbook or any other materials during exams.

Topical Coverage and Reading Assignments:

<i>Lecture No.</i>	<i>Date</i>	<i>Topic</i>	<i>Reading</i>
1	1/11/2010	Cash flow diagrams, Time value of money	Ch 2, pg. 56 - ; Ch 3, all; Ch 4, all (skip gradient formulas)
	1/18/2010	MLK day	
2	1/25/2010	Time value of money - continued	
3	2/1/2010	Present worth analysis; Quiz 1	Ch 5, all
4	2/8/2010	Annual cash flow analysis	Ch 6, all
5	2/15/2010	Annual cash flow analysis – continued	
6	2/22/2010	Rate of return analysis	Ch 7, all
	3/1/2010	Spring break	
7	3/8/2010	Rate of return analysis - continued; Quiz 2	
8	3/15/2010	Selecting alternatives	Ch 8, all
9	3/22/2010	Selecting alternatives	Ch 9, all
10	3/29/2010	Depreciation	Ch 10, all
11	4/5/2010	Depreciation – continued; Quiz 3	
12	4/12/2010	Factoring income taxes into the process	Ch 12, all
13	4/19/2010	Income taxes – continued	
	4/26/2010	Exam week	

Academic Integrity:

You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate Catalog (pp. 271-272) [Graduate Catalog (pp. 24-26)] that pertain to Academic Integrity. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Judicial Affairs. You will be given the opportunity to review the charge(s). If you believe you are not responsible, you will have the opportunity for a hearing. You should consult with me if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.