

EGR 2302 FALL 2009- Section 02 ENGINEERING ECONOMICS SYLLABUS

General Information

Instructor: Dr Abdelaziz Berrado

Office: R 01 Bldg 6.

Phone: 2122.

Email: A.Berrado@aui.ma

Course Email: egr2302@aui.ma (to be used to submit online quizzes)

Lectures: TR 14:00-15:20 in R 106 Bldg 06

Office hours: W16:30 – 18:30 & TR 10:30-12:30 & 15:30-17:00

Please honor these office hours and come *prepared*

Home page: <http://www.aui.ma/personal/~A.Berrado/EGR2302.htm>

Prerequisite: MTH1303

Co-requisite: None

Offered in Semester: 1 & 2

Credit Hours: 3 Hrs

Catalogue description:

The time value of economic resources, engineering project investments analysis and the effect of taxes on engineering project decisions.

About the course:

This course deals with the application of economic analysis models for decisions between alternatives. In particular we approach problem solving by considering the time value of money. In general, a dollar of revenue or expense today is not equivalent to a dollar of revenue or expense three years from now. Concepts in this class are equally applicable to engineering, business and financial systems problems.

Required textbook:

Engineering Economy 6th edition, by Leland Blank and Anthony Tarquin, 2005

Learning aids:

The textbook has a web site that provides resources to aid you in learning the material in this class. It includes selected solutions to textbook problems, true-false questions, matching quizzes, multiple choice quizzes, learning objectives of each chapter and additional computer exercises. Feel free to use the resources of the web site to assist in your learning process. You will locate it at :

<http://www.mhhe.com/blank6>

To get into the student edition, **Username: blankstudent**

Password: blank6e

Course objective:

Enable students to perform economic evaluation and develop cost models for integration with design and operational problem solving.

Intended learning outcomes:

At the end of this course, a student should be able to:

1. have acquaintance with the subject of economic analysis, i.e. be able to formulate the problem, analyze it, search for alternative solution, select the preferred solution.
2. have a mastery of the notion of time value of money including the concepts of present worth, future worth, annuities, gradient series, geometric series.
3. be able to tackle reality issues and practical applications such as changing interest rates, inflation, loan payment operations and bond problems.
4. be familiar with methods of measuring investment worth.
5. be able to compare alternatives using the methods of measuring investment worth.
6. have an acquaintance with the economic analysis used in the public sector and government agencies.
7. be able to include depreciation in economic analysis.

Course structure and other important comments:

1. **Grading:** The course will consist of **two 100-point examinations**, and **100 points of homework assignments, pop quizzes, class attendance and participation** and a **comprehensive** final exam worth **200 points** making a maximum earned point total of 500 points. **Students with 450 or more points will receive an A; between 400 and 450 will receive a B; 350-400 will receive a C; 300-350 will receive a D; and students who total below 300 will receive an F.** The course structure and grading policy do not allow for the “earning” of additional credit or for the awarding of “bonus” points based on effort.
2. **Student’s efforts:** Besides class hours, every student should devote at least 6 hours a week to grasp the content of the book and the class notes, to work out the examples, and to do homework exercises. **You are welcome and highly encouraged** to see me during my office hours if you need any help with this class.
3. The instructor will make lecture notes (slides and other material) available on his website at the following address: <http://www.aui.ma/personal/~A.Berrado/>. The purpose of these lecture notes is to help the students summarize the material presented in class only, and cannot by any means substitute for regular attendance, active participation, and in-class note taking by the students.
4. **Homework:** The homework assignments will be announced in class and completed homeworks need to be submitted by the start of class on the due date. **Late homework will not be accepted. Only printed hard copies of the homework are acceptable; electronic versions will not be accepted.** It is your responsibility to obtain the assignments if you miss class. If you cannot come to class on the day of submission of homework, have your homework turned in through one of your classmates.
5. **Academic integrity: Homework, Quizzes and Exams are to be accomplished without any form of outside assistance. For example, sharing answers, using answers from prior semesters, copying from others work, copying from the solution key, etc. are all inappropriate and will be considered cheating. All cases of cheating will be reported to the Dean’s office as a violation of the academic integrity policy and will be punished appropriately.**

6. **Exams:** The exam dates are set and will not be changed. The content/coverage of the exams may be altered to reflect the rate of material presented in class. Makeup exams will not be given.
7. **Announcement:** All announcements regarding changes in the class will be made in class and posted on my homepage.
8. Regular attendance is essential. Students who miss a class are responsible of all the work, notes, handouts, and assignments they miss. **Please refer to the attendance policy section below.**
9. In order not to disturb the lecture, the students should always arrive on time and avoid leaving the class early. **Arriving late to the class 3 times** will account for **one unexcused absence.** Furthermore, everybody is asked to keep cell phones off during class sessions and abstain from unnecessary and unauthorized conversation.

PS Please note that the schedule below is tentative and when necessary changes will be adapted appropriately.

Course Outline:

<u>Sessions</u>	<u>Topics</u>	<u>Readings</u>
1-2	Introductory Material/Foundations of Engineering Economy	Ch 1
3-8	Factors: How Time and Interest Affect Money	Ch 2
9	Combining Factors	Ch 3
EXAM I(Session 10)		October 6th
11-12	Nominal and Effective Interest Rates	Ch 4
13 - 14	Present Worth Analysis	Ch 5
15	Annual Worth Analysis	Ch 6
16 - 17	Rate of Return Analysis	Ch 7
18 -19	Rate of Return Analysis	Ch 8
EXAM II(Session 19)		November 5th
21	Benefit/Cost Analysis	Ch 9
22-23	Effects of Inflation	Ch 14
24 – 26	Depreciation Methods	Ch 16
27 - 29	Other topics	
FINAL EXAM (to be decided)		Dec 13th-18th

Holidays:

September 21-22 Holiday: Aid Al Fitr

November 26-30 Holiday: Aid Al Adha

December 11 Last Regular Class Day