Contents
Engineering Economics (ENGR 211P) ................................................................. 1
Purpose .................................................................................................................. 1
Part I – Motivation (R.F. de la Mare) ................................................................. 2
Part II – Fundamentals (Milton C. Shaw) ........................................................... 2
Part III – Economic Analysis (A. Kayode Coker) ................................................. 2
Part IV – Sensitivity Analysis (Lawrence D. Norris) .......................................... 2
Assessment .......................................................................................................... 3
Q&A ...................................................................................................................... 3

Engineering Economics (ENGR 211P)
(Hadi) Mohammad Hadi Hafezi
PhD student of Engineering Mechanics

University of Arizona at Tucson, 85721
The easiest way to reach me is by email: hafezi@email.arizona.edu
Office: 318 G (CE Building)
Recitation TBD
Office hours (by Appointment)

Purpose

“This course prepares the student to consider the economic dimensions in the evaluation of engineering alternatives. Hence it is particularly useful in the analysis and decision stages of the engineering design process. Emphasis is on the analytical consideration of money and its impact on the areas of system operations and acquisition. By the end of the course, the student will be prepared to analyze complex decision problems and will have sufficient background to perform well on the engineering economics section of the Fundamentals of Engineering Exam”

Dr. Jeff Goldberg
Part I – Motivation (R.F. de la Mare)
Books for engineering economics Education
(1 Days)

Homework 1
Quiz 1

Part II – Fundamentals (Milton C. Shaw)
(4 Days)
Interest
Capital
Inflation
Depreciation
Kelvin’s law
Dimensional analysis

Homework 2
Quiz 2

Part III–Economic Analysis (A. Kayode Coker)
(9 Days)
Examples of the use of engineering
Project evaluation
Worked Example 1
Worked Example 2

Homework 3
Quiz 3

Part IV – Sensitivity Analysis (Lawrence D. Norris)
(9 Days)
Time Value of Money: Concepts and Formulas
Decision and evaluation criteria for investments and financial projects
Sensitivity Analysis
Decision Tree Analysis of Investments and Financial Projects
Accounting Fundamentals

Homework 4
Quiz 4
Assessment

_Quiz (5 pts/each)_

_Homework 1 (5pts)_

The 500-words essay in the importance of engineering economics
You have to follow the specific template (see D2L for details).
Reference MUST be chosen carefully and appropriately from
http://www.sciencedirect.com

_Homework 2 (15 pts)_

Part II of lecture, problems, 13.1 to 13.17 (each/1 point)

_Homework 3 (15pts)-Project_

Write an Excel macro in order to duplicate results in problem 9-1 and 9-2 (Part III of lecture)

_Homework 4 (20pts)_

Redo worked examples in Part IV of lecture.
(e.g. Part IV, Pages 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 386, 387)

_Final exam (25pts)_

Please be advised that there is in person exam (location/time TBD).

Q&A

_I’m struggling with the course. Where can I get more help?_

The Discussion and the office hours are the primary places to get help. I strongly encourage you to attend, get help quickly!

_When is the homework due?_

Please read Homework solution guidelines (in D2L). If homework is to be late for any reason, you must make arrangements with me as soon as possible. It is up to my discretion whether to accept late homework.
Project details:

- You need to submit the Macro written by Excel file in D2L.
- Deadline: First Monday of 4th week by 5:00 PM Arizona time).
- My late policy was simple: it's late, it's a zero grade, no exceptions.

Final Presentation (ONLY 3 minutes)

- You need to record your voice to narrate your slide show (D2l submission)
- You may want to use PowerPoint - Need helps: look at http://uits.arizona.edu/content/microsoft-it-academy

Presentation format

- Introduce yourself (Quickly)
- Overview of project (1 minute)
- How to write a macro for Problems 9-2 and 9-3 (1 minute)
- Conclusions and recommendations (1minute)

Note that your presentation MUST demonstrate that you understand Problems.