Course Syllabus – ISEN 303 Engineering Economic Analysis

Spring 2009 TTH 2:20pm – 3:35pm 203 Zachry

Instructor

Assistant Professor Justin Yates, PhD
Office: 237D Zachry
Phone: 845-1506
Email: jtyates@tamu.edu
AIM: jtyatesTAMU
Office Hours: TTH 3:45 – 4:45
(additional times by appointment)

TA

Cicy Smith
Office: TBA
Email: TBA
Office Hours: TBA
(additional times by appointment)

Prerequisites

Math 152: Engineering Mathematics II

Course Description

Principles of economic equivalence; time value of money; analysis of single and multiple investments; comparison of alternatives; capital recovery and tax implications; certainty; uncertainty; risk analysis; public sector analysis and break-even concepts.

Text


Course Calendar

Class will meet every Tuesday and Thursday from 2:20pm – 3:35pm, except for University Holidays (http://admissions.tamu.edu/Registrar/General/Calendar.aspx). Advanced notice will be given should any other cancellation or reschedule be necessary.

Course Topics

Foundations
Cash Flow Factors, Combining Cash Flow Factors, Nominal and Effective Interest Rates
Decision Making
Present Worth Analysis, Annual Worth Analysis, of Return Analysis (Single Project), Rate of Return Analysis (Multiple Projects), Making Choices: The Method, MARR, and Multiple Attributes

Sensitivity Analysis
Breakeven Analysis, Formalized Sensitivity Analysis

Applications
Replacement and Retention Decisions, Selection of Independent Projects Under Budget Limitation

Advanced Topics
Effects of Inflation, Depreciation Methods, After-Tax Economic Analysis

Grading

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<tr>
<th>Component</th>
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<tr>
<td>Exams</td>
<td>60%</td>
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<tr>
<td>Homework</td>
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<td>Group Project</td>
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Grades

- A: ≥ 90%
- B: 80% - 89%
- C: 70% - 79%
- D: 60% - 69%
- F: < 60%

Exams

There will be a total of three exams given during the course of the semester. The final exam is not mandatory and the student reserves the right to determine whether they will write the final exam. This choice affects grading in one of the following two ways:

Option 1: Exam 1 – 30%, Exam 2 – 30%
Option 2: Exam 1 – 20%, Exam 2 – 20%, Final – 20%

Exam Dates

- Exam 1: Thursday, February 19th, 2009
- Exam 2: Thursday, April 9th, 2009
- Final: Wednesday, May 13th, 2009 1:00pm – 3:00pm
Homework

Approximately 6 – 7 homework assignments will be assigned, with a minimum of one week between the date of assignment and the due date. The lowest homework grade at the end of the semester will be dropped and each remaining homework assignment will carry the same overall weight (i.e. if there are 6 total homework assignments issued, the 5 highest homework grades will be considered at an overall weight of 4% each (5 * 0.04 = 20%)).

AGGIE HONOR CODE: “An Aggie does not lie, cheat or steal or tolerate those who do.”

Homework must be submitted in person at the beginning of class on the assigned due date and must represent solely the work of the submitting individual. Only a university approved and accepted absence on the due date of an assignment negates the aforementioned homework policy. No consideration will be given to assignments turned in late due to unexcused absence from class.

Group Project

Group teams will consist of 4 – 5 individuals responsible for collectively solving a given problem and disseminating their solution approach and findings to the class in the form of a 15 - 20 minute presentation. Group grades will be assessed based on the validity and comprehension of the determined solution methods as well as the organization and professionalism of the presentation. The group assignments will be distributed continuously throughout the semester and presentations will be scheduled during the final class periods of the semester.

Academic Dishonesty

http://www.tamu.edu/aggiehonor/acadmisconduct.htm

Attendance

Attendance will not be taken on a daily basis and is not directly factored in calculation of the final average.

Americans with Disabilities Act Statement

If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities in Koldus 126 (845-1637).