## EK409 ENGINEERING ECONOMY SPRING 2015 COURSE SYLLABUS Prof. T. A. de Winter

Office : 15 St. Mary's Street, Room 138 Phone: (617) 353 9893(office) (603) 878 2760(home) Fax: (617) 353 5548 email tdw@bu.edu Office hours: Monday, Wednesday 7AM-8AM, 10AM-NOON, after 2PM\* Tuesday 7AM- NOON, 1PM-3:30PM Friday: 7AM-NOON • By appointment only Text: Engineering Economy, Thuesen and Fabrycky, 9<sup>th</sup> edition ISBN 0-13-028128-X Classroom: Photonics PHO 211

Time: Mondays and Wednesdays 12:00NOON-2:00PM

## GRADING

ATTENDANCE: Attendance will be taken and will count as 10% of the semester grade. If you have 2 or fewer absences, you will get full credit for attendance.

EXAMS: There will be a takehome exam from October 2 to October 7, a takehome exam from November 6 to November 11 and a final exam, also takehome. The final exam will be optional for those students who have a better than 80% in the course at the end of the semester. While the final exam schedule is not ready yet, those students taking the final can fax it in, and do not have to be on campus to take the exam. The exam average will count as 60% of the semester grade.

HOMEWORK: There will be at least 10 homework assignments. The lowest homework grade will be dropped, the homework average will count as 20% of the semester grade.

PROJECT: There will be a project, to be done by teams of 5-7 students, to modify the annual report of a company which manufactures a product. The project grade, except in rare cases, will be same for every member of a team and will count as 10% of the semester grade.

FINAL GRADES: Those students, who have an average of 90% or better, have earned an A in the course and are exempt from taking the final. Students with an average of 80% (a B) or better are also exempt from taking the final exam, but may, at their option, choose to take the final exam to improve their course average. Students who have less than an 80% average in the course are required to take the final.

| GRADING SUMMARY: EXAM AVI | ERAGE 60% |
|---------------------------|-----------|
| HOMEWOR                   | RK 20%    |
| PROJECT                   | 10%       |
| ATTENDA                   | NCE 10%   |

#### EK409 ENGINEERING ECONOMY SPRING 2015

#### LECTURE SCHEDULE

- 1 Wednesday, January 21
- 2 Monday, January 26
- 3 Wednesday, January 28
- 4 Monday, February 2
- 5 Wednesday, February 4
- 6 Monday, February 9
- 7 Wednesday, February 11
- 8 Tuesday, February 17\*
- 9 Wednesday, February 18
- 10 Monday, February 23
- 11 Wednesday, February 25, take home exam
- 12 Monday, March 2, take home exam due
- 13. Wednesday, March 4
- 14. Monday, March 16
- 15. Wednesday, March 18
- 16. Monday, March 23
- 17. Wednesday, March 25
- 18. Monday, March 30
- 19. Wednesday, April 1 takehome exam
- 20. Monday, April 6, exam due
- 21. Wednesday, April 8
- 22. Monday, April 13
- 23. Wednesday, April 15
- 24. Monday, April 20
- 25 Wednesday, April 22
- 26. Monday, April 27
- 27. Wednesday, April 29, last EK409 class

Monday, February 16 is a holiday, on Tuesday, February 17 a Monday schedule of courses will be held

An attendance sheet will be circulated in class each day. It is your responsibility to sign the sheet before the class is adjourned. If you arrived in class after the sheet has passed your seat, be sure to sign the sheet at the desk before leaving the classroom. Excessively and regularly late students may not get full credit for attendance by signing the attendance sheet after the end of class. No laptops are allowed during any of the EK409 lectures.

## EK409 ENGINEERING ECONOMY SPRING 2015 LECTURE TOPICS

- 1. Contracts, proposals, quotations, purchase orders
- 2. Interest relationships, examples
- 3. Financing of startup companies
- 4. Stock ownership, stock market, optioos
- 5. Inflation
- 6. Comparison of alternative economic choices
- 7. Decision making among alternatives
- 8. Incremental return on investment
- 9. Replacement alternatives
- 10. Break-even and minimum cost analysis
- 11. Indirect cost categories and allocation
- 12. Preparation of cost proposals
- 13. Professional ethics, protocol, conflict of interest
- 14. Benefit and cost analysis
- 15. Inventories
- 16. Accounting, bookkeeping, annual reports
- 17. Depreciation
- 18. Income taxes, corporate and individual
- 19. Patents, intellectual property
- 20. Employment contracts, offers, employee status

# READING ASSIGNMENTS

| TOPIC<br>1, Introduction to Engineering Economy<br>2. Interest relationships (Chapter 3)<br>3. Economic equivalence<br>4. Company startup and stockholders<br>5. Inflation (Chapter 5)<br>6. Bases for comparison (Chapter 6)           | PAGES<br>1-34<br>35-65<br>72-102<br>Handout<br>115-139<br>152-180 | WEEK*<br>Jan. 30<br>Feb. 6<br>Feb. 13<br>Feb. 20<br>Feb. 27 |
|---|---|---|
| <ul><li>7. Analysis of alternatives (Chapter 7)</li><li>8. Evaluating production (Chapter 8)</li><li>9. Indirect costs and proposals</li></ul>  | 190-225<br>244-284<br>Handout                                     | Mar. 6<br>Mar. 20<br>Mar. 27                                |
| <ul> <li>10. Evaluating replacement (Chapter 9)</li> <li>11. Annual Reports</li> <li>11. Evaluating public activities (Chapter 10)</li> <li>12. Accounting, depreciation (Chapter 11)</li> <li>13. Income taxes (Chapter 12)</li> </ul> | 297-331<br>Handout<br>344-374<br>388-414<br>420-456               | Apr. 3<br>Apr. 10<br>Apr. 17<br>Apr. 24<br>May 1            |

\* week ending

## EK409 ENGINEERING ECONOMY SPRING 2015 HOMEWORK ASSIGNMENTS

| ASSIGNMENT | DUE DATE            |
|------------|---------------------|
| 1          | Friday, January 30  |
| 2          | Friday, February 6  |
| 3          | Friday, February 13 |
| 4          | Friday, February 20 |
| 5          | Friday, March 6     |
| 6          | Friday, March 20    |
| 7          | Friday, March 27    |
| 8          | Friday, April 10    |
| 9          | Friday, April 17    |
| 10         | Friday, April 24    |
| 11         | Friday, May 1       |

Graded homeworks can be picked up from the slots across from the office door. Homeworks can be handed in at the office. If the door is open, there is a homework stack on the chair next to the door. If the door is closed, please slide your homework under the door.

# DO NOT LEAVE YOR HOMEOWRK IN THE MAIL SLOTS NEXT TO THE OFFICE DOOR, THEY ARE FOR GRADED HOMEWORKS ONLY.

From time to time, additional material will be handed out in class. When there is a handout, including homework assignments, it will be circulated through the classroom, and copies will be available on the desktops nearest the doors. If, when entering class, you notice a handout on the corner desk, pick one up on the way to your seat. In the event you miss a handout in class, extra copies will be available in the office or in the slots outside the door.

The work you submit for grading and credit is expected to be your own effort. On your exams you will be required to affirm that by signing a short statement to that effect, a copy of which is shown on the attached sample exam cover page. While homework assignments don't require an individual signed statement like the exam, they are expected to be your own work and your submission of the homework in your name will be taken as confirmation of this. In the first case of plagiarism on homework, the homework grade will be evenly divided among the students in question. In subsequent cases involving the same students, a zero grade will be given. Obvious and flagrant recurrence may be brought before the Committee on Students.

# EK409 ENGINEERING ECONOMY TAKEHOME EXAMINATION SPRING 2015 DATE

# THIS EXAM IS DUE AT THE START OF CLASS AT NOON

| NAME    |        |
|---------|--------|
| ID #    |        |
| PROBLEM | POINTS |
| 1       |        |
| 2       |        |
| 3       |        |
| 4       |        |
| 5       |        |
|         |        |
| TOTAL   |        |

# STATEMENT

This examination is my own work. I have not had access to anyone else's exam solution, notes or working papers, nor has anyone else had access to my exam solution, notes or working papers. I have not collaborated or discussed this exam with anyone. I have neither given nor received any help in solving the problems I am submitting for grading with the exception of any discussion with the course instructor.

SIGNATURE

DATE