

EK409 ENGINEERING ECONOMY  
FALL 2011  
COURSE SYLLABUS

Prof. T. A. de Winter  
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Office Hours: Monday 7-11:15AM, 1-4PM  
Tuesday 7-11:45AM  
Wednesday by appointment only  
Thursday 7-11:45AM  
Friday 7-11:15AM  
Text: Engineering Economy, Thuesen & Fabrycky, 9<sup>th</sup> edition, Prentice Hall, ISBN 0-13-028128-X  
Classroom: 8 St. Mary's Street, PHO 205  
Time: Tuesday, Thursday 12:00-2:00PM  
Season ticket location: Agganis Arena Sect. 112, Row Q, Seat 2

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 an open book in-class exam on Tuesday, October 11, 2011. The take home exam from Thursday, November 10 to Tuesday, November 15 will also be open book. There will be a final take home exam. The average exam grade will count as 60% of the semester grade.

**HOMEWORK:** There will be at least 10 homework assignments which are due on assigned dates. The lowest homework grade will be dropped, the homework average will count 20% of the semester grade.

**PROJECT:** There will be a project, to be done by teams of 6 to 8 students. The project will be the modification of the annual report of a manufacturing company or the preparation of a 2 year business plan for a manufacturing company. The project grade will be 10% of the semester grade.

**FINAL GRADES:** Those students, who on the last day of class have an average of 90% or better, have earned an A in the course and are exempt from taking the final exam. Students with an average of 80% or better are also exempt from taking the final exam, but may, at their discretion, choose to take the final to improve their course average. Students with a course average of less than 80% on the last day of class have not demonstrated evidence of having sufficient working knowledge of the course material and are required to take the final exam.

GRADING SUMMARY:	EXAM AVERAGE	60%
	HOMEWORK	20%
	PROJECT	10%
	ATTENDANCE	10%

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FALL 2011  
LECTURE SCHEDULE

1. Tuesday, September 6
2. Thursday, September 8
3. Tuesday, September 13
4. Thursday, September 15
5. Tuesday, September 20
6. Thursday, September 22
7. Tuesday, September 27
8. Thursday, September 29
9. Tuesday, October 4
10. Thursday, October 6
11. Tuesday, October 11, in class exam
12. Thursday, October 13
13. Tuesday, October 18
14. Thursday, October 20
15. Tuesday, October 25
16. Thursday, October 27
17. Tuesday, November 1
18. Thursday, November 3
19. Tuesday, November 8
20. Thursday, November 10, take home exam handed out
21. Tuesday, November 15, take home exam due
22. Thursday, November 16
23. Tuesday, November 22
24. Tuesday, November 29
25. Thursday, December 1
26. Tuesday, December 6
27. Thursday, December 8, last EK409 class

An attendance sheet will be circulated during each lecture. It is your responsibility to sign the sheet. If the attendance sheet happens to pass your seat before you entered, please sign the sheet at the desk at the end of the lecture.

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LECTURE TOPICS COVERED

1. Contracts, interest relationships
2. Economic equivalence, retirement plans
3. Inflation
4. Financing of new enterprises
5. Stock ownership, stock market, annual reports
6. Comparison of alternate economic choices
7. Decision making among alternatives
8. Replacement alternatives
9. Break-even and minimum cost analysis
10. Indirect cost analysis and allocation
11. Preparation of cost proposals
12. Professional ethics, protocol, conflict of interest
13. Benefit and cost analysis
14. Inventories
15. Accounting systems, double entry bookkeeping
16. Depreciation
17. Income taxes
18. Patents, intellectual property
19. Employment contracts, offers
20. Corporate annual reports

READING ASSIGNMENTS

All reading assignments are from the required text listed above.

TOPIC	PAGES	WEEK*
1. Introduction to Engineering Economy	1-34	-
2. Interest relationships (Chapter 3)	35-65	Sep. 9
3. Economic equivalence (Chapter 4)	72-102	Sep. 16
4. Company startup and stockholders	Handout	Sep. 23
5. Inflation (Chapter 5)	115-139	Sep. 30
6. Bases for comparison (Chapter 6)	152-180	Oct. 7
7. Analysis of alternatives (Chapter 7)	190-225	Oct. 14
8. Evaluating production (Chapter 8)	244-284	Oct. 21
9. Indirect costs and proposals	Handout	Oct. 28
10. Evaluating replacement (Chapter 9)	297-331	Nov. 4
11. Evaluating public activities Chapter 10)	348-374	Nov. 11
12. Accounting and depreciation (Chapter 11)	388-414	Nov. 18
13. Income Taxes (Chapter 12)	420-456	Dec. 2
14. Estimating cost elements (Chapter 13)	468-499	Dec. 9

\*Week ending

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HOMEWORK ASSIGNMENTS

ASSIGNMENT	DUE DATE
1	Wednesday, September 14
2	Wednesday, September 21
3	Wednesday, September 28
4	Wednesday, October 5
5	Wednesday, October 12
6	Wednesday, October 19
7	Wednesday, October 26
8	Wednesday, November 2
9	Wednesday, November 9
10	Wednesday, November 16
11	Wednesday, December 7

All homework assignments will be handed out during the week of the due date. Graded homework can be picked up from the slots next to the office door. Homework can be handed in at the office. If the door is open, just find the homework pile for that assignment. If the door is closed, please slide your homework under the door.

**DO NOT LEAVE YOUR HOMEWORK IN THE MAIL SLOTS NEXT TO THE OFFICE DOOR, THEY ARE FOR GRADED HOMEWORK ONLY!!!**

From time to time supplementary material may be handed out in class. Whenever there is a handout, including homework assignments, it will be circulated through the classroom, and copies will be available on the desktop nearest each door. If, when entering class, you notice a handout on the corner desk, please pick one up on the way to your seat. In the event you happen to miss a handout in class, extra copies of the handout will be available in the rack outside Room 138, 15 St. Mary's Street.

The work you submit for grading is expected to be your own. On your exams you will be expected to affirm that by signing a short statement to that effect, a copy of which is shown on the attached sample exam cover. While homework assignments don't require an individual statement like the exam, they are expected to be your own work and your submission of homework in your name will be deemed to confirm that it is your work. In the first case of apparent 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 on those homeworks. Obvious and flagrant cases may be brought before the Committee on Students.

SAMPLE EXAM COVER PAGE

EK409 ENGINEERING ECONOMY  
SPRING 2010

March 31, 2010

This exam is due on Monday, April 5, 2010 at 12 noon sharp, at the start of the EK409 lecture.

NAME: \_\_\_\_\_

ID # : \_\_\_\_\_

PROBLEM	POINTS
1	_____
2	_____
3	_____
4	_____
5	_____
	_____
TOTAL	_____

STATEMENT

This examination is my own work. I have neither collaborated nor discussed this exam with anyone and I have neither received nor given any help in solving the problems I am submitting for grading.\* I have not had access to anyone else's solution, notes or worksheets for this exam, nor have I given anyone else access to my exam solution, notes or worksheets.\*\*

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\*with the exception of the instructor

\*\*Anyone handing in someone else's exam is deemed to have had access to that exam. If you cannot hand your exam in on time yourself, contact the instructor for advice.

## General Information

In order to bring current relevance to the teaching of engineering courses, to remain up-to-date on the state of the art of various technologies and to satisfy my own curiosity, I subscribe to and read(or scan) a number of publications. Some of these are available in my office for your use. If I am aware of the particular interests of some of my students, I look for and save copies of relevant, current articles about those interests. If you would like to indicate such interests to me on the appropriate line of your registration form for this course, I'll try to spot relevant articles and call your attention to them or provide you with copies for your use and information. Feel free to indicate your interest in a company, industry, technology, product line or one of the publications listed below. A partial list of publications follows.

### Daily:

The New York Times  
The Wall Street Journal  
The Boston Globe  
The Nashua Telegraph

### Weekly:

Time	Fortune
Newsweek	
Business Week	
Aviation Week*	
The New Yorker	

### Monthly:

Popular Science*	Outdoor Life*
Popular Mechanics*	Field and Stream*
Technology News(MIT)*	
The Atlantic*	
Car and Driver*	
Automotive Industries*	
Manufacturing Engineering*	
Mechanical Engineering*	
Marine News*	
Invention and Technology*	
Maritime Reporter*	
Road and Track*	
Marine Technology*	
Yachting*	

### Sporadically:

The Times(London)	Trout and Salmon
Der Spiegel	
International Herald Tribune	

\*Publications marked with an asterisk are routinely available in my office

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CLASS LIST REGISTRATION

Note: This information and statement simply confirm your intention to attend this course, and your receipt and understanding of the syllabus. It is strictly for the use of the instructor.

NAME: \_\_\_\_\_

ID # : \_\_\_\_\_

MAJOR: \_\_\_\_\_

TERM PHONE #: \_\_\_\_\_

e-mail address: \_\_\_\_\_

SPECIAL INTERESTS\*\* \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*\* See general information sheet, preceding page

I acknowledge the receipt of the EK409 ENGINEERING ECONOMY Syllabus for the FALL 2011 semester. I have read and I understand the grading policy and the due dates for exams. I have also read the sample exam cover and I understand the statement which I am expected to sign with each exam in the course.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE