

SYLLABUS

IE 302 ENGINEERING ECONOMY (SUMMER 2007)

M thru F: 9:35-10:50AM (101 Leonhard)

INSTRUCTOR INFORMATION:

Wenny Chandra (wenny@psu.edu)

Office: 362 Leonhard / Tel: (814) 865 8026

Office Hours: Monday through Thursday 1-2pm or by appointment

OVERVIEW: This is an introductory course in Engineering Economy dealing with principles and methods for analyzing the economic feasibility of alternatives leading to engineering, business, or personal decisions.

TOPICS COVERED: time value of money, economic equivalence, personal money management, economic analysis of business and engineering alternatives (Present Worth, Annual Worth, Rate of Return), inflation, depreciation, taxes, replacement analysis, benefit-cost analysis of public projects.

OUTCOMES: By the end of this course, students are expected to acquire the ability to apply time value of money, evaluate systematically the economic merits of the proposed alternatives, and select the cost-effective engineering solutions (ABET outcome 2.1). Students will also have some knowledge of contemporary issues: topics on personal finance such as loans, individual tax laws, and retirement savings plans such as 401k, SRA, IRA, and annuities (ABET outcome 4.2)

PRE-REQUISITES: Math 141 (Calculus II)

TEXTBOOK (REQUIRED):

Fundamentals of Engineering Economics by Chan S. Park, Prentice Hall, 2004

Website: www.prenhall.com/park

OTHER REFERENCES:

1. **Engineering Economy** by L.T. Blank and A.J. Tarquin, 6th ed., McGraw Hill, 2005.
2. **Engineering Economy** by W.G. Sullivan, E.M. Wicks, and J.T. Luxhoj, 13th ed., Prentice Hall, 2006.
3. **Contemporary Engineering Economics** by Chan S. Park, 4th ed., Prentice Hall, 2007.
4. **Excel for Engineering Economics** by R.W. Larsen and Chan S. Park, Prentice Hall, 2003.
5. **Engineering Economy and the Decision Making Process** by J.C. Hartman, Prentice Hall, 2007.
6. **Engineering Economic Analysis** by D. G. Newman, T. G. Eschenbach, and J. P. Larelle, 9th ed., Oxford University Press, 2004.

COURSE REQUIREMENTS:

Quiz (4)	15%
Homework (6)	15%
Case Study (2)	10%
Midterm	25%
Final (July 2 nd)	35%

GENERAL INFORMATION:

1. Course webpage will be maintained on ANGEL (www.angel.psu.edu). All course material (lecture notes, homework, solutions) will be posted.
2. Reading assignments (see course plan below) represent material covered in class daily, students are expected to read them before class.
3. Homework will be given for every chapter and due at the beginning of the class (see course plan below for due dates)
4. Two case studies illustrating large practical problems will be assigned. They will be graded for correctness, effort, and professional presentation. They should be done in groups of 2.
5. Weekly quizzes and midterm will be done in-class. Closed-book and notes, formulas and tables will be given.
6. Request for quiz/midterm makeup must be made **prior** to the quiz/midterm and supported by appropriate documentation.
7. Final is comprehensive. Exact time and location as determined by University schedule.

DISABILITY POLICY: It is Penn State's policy to not discriminate against qualified students with documented disabilities in its educational programs. If you have a disability-related need for modifications in the course, contact both the instructor and the Office for Disability Services (116 Boucke) at the beginning of the semester.

ACADEMIC INTEGRITY: Academic integrity is the pursuit of scholarly activity free from fraud and deception and is the educational objective of this institution. Academic dishonesty includes, but is not limited to, cheating in exams, plagiarism, fabrication of information or citations, facilitating acts of academic dishonesty by others, unauthorized possession of exams, submitting work of another person, or work previously used without informing the instructor, or tampering with the academic work of other students. Any violation of academic integrity will be thoroughly investigated and dealt with severely according to the limits of the Academic Misconduct Code.

TENTATIVE DAILY COURSE PLAN AND CHAPTER READING

Month	Date	Day	Chapter Reading	Homework/Quiz	
May	Week 1				
	22	Tue	1.1-1.4		
	23	Wed	2.1-2.2		
	24	Thr	2.3-2.5.3		
	25	Fri	2.5.4-2.7	HW 1	
	Week 2				
	28	Mon	Memorial Day Holiday		
	29	Tue	3.1-3.2		
	30	Wed	3.3	Q1	
	31	Thr	3.4		
June	1	Fri	5.1-5.2	HW 2	
	Week 3				
	4	Mon	5.3		
	5	Tue	5.4	Q2	
	6	Wed	6.1		
	7	Thr	6.2		
	8	Fri	6.3	HW 3	
	Week 4				
	11	Mon	7.1-7.2		
	12	Tue	Midterm		
	13	Wed	7.3		
	14	Thr	7.4		
	15	Fri	4.1	HW 4	
	Week 5				
	18	Mon	4.2		
	19	Tue	8.1	Q3	
	20	Wed	8.2-8.3		
	21	Thr	8.4-8.5		
	22	Fri	11.1-11.2	HW 5	
	Week 6				
	25	Mon	11.3-11.4		
	26	Tue	12.1	Q4	
	27	Wed	12.2		
	28	Thr	Case Study	HW 6	
	29	Fri	Revision/Q&A		
	Week 7				
	July	2	Mon	Final	