



Industrial Engineering Department
Faculty of Engineering
King Abdulaziz University

IE256: Engineering Management

COURSE SYLLABUS

Instructor: Dr. Ahmed A. Bakhsh	Term: Spring 2015
Office: Engineering Building ENG40, Room 44E86	Class Meeting Days: Mondays, Wednesdays
Phone: (012) 640-2000 Ext: 72417	Class Meeting Hours: 11:00 AM – 12:20 PM
E-Mail: aabakhsh@kau.edu.sa	Class Location: ENG40 N/A
Office Hours:	Section Number: GA
Mondays & Wednesdays: 1:00 PM – 3:00 PM, and by appointment	

I. University Course Catalog Description

Role of engineers in management of organizations. Managerial functions related to production, inventory and human resources. Project planning and control. Case studies pertaining to engineering problems.

II. Course Overview

This course is designed to teach engineers, scientists, and other technologists the basic management skills they will need to be effective throughout their careers.

III. Course Objectives

In this course, students will be able to

1. An ability to apply knowledge of math, science and engineering in engineering management
2. An ability to work efficiently in Teams
3. An ability of using Managerial Skills in Engineering
4. An ability of Learning to Learn (long life learning)
5. An ability to communicate effectively in written/oral communication skills
6. An ability to use the techniques, skills, and modern engineering tools necessary for engineering management practices
7. An ability to use soft skills

IV. Course Prerequisite

Students must have successfully passed an undergraduate-level course in Engineering Economy (IE255, or an equivalent course), or students must have received consent from the instructor to enroll in this course.

V. Messages and Email

Within the first two weeks of class, **students are required to establish initial email contact with the instructor** (aabakhsh@kau.edu.sa). **ALL emails must start the Description field with IE256, Your Last Name, and A Brief Description. Do Not Leave This Field Blank!**

I acknowledge all emails received, so if you don't hear back from me in a reasonable time, please call as I haven't received your message.

VI. Attendance

Missing class will affect your grade. If you miss a session, it is your responsibility to find out what materials were covered, what assignments were made, and what handouts you missed.

VII. Credit Hours

(2:3,0)

VIII. Course Texts

Required: *MGMT (6th Edition)*
Chuck Williams
Cengage Learning, 2013
ISBN-10: 1285091078
ISBN-13: 978-1285091075

Reference: *Managing Engineering & Technology (6th Edition)*
Lucy C. Morse & Daniel L. Babcock
Prentice Hall, 2013
ISBN-10: 0133485102
ISBN-13: 978-0133485103

IX. Course Topics

Topic
1. Introduction to Engineering & Management
2. Historical Development of Engineering Management
3. Planning & Forecasting
4. Organizing
5. Project Management
6. Motivation and Leading Technical People
7. Controlling/ Financial Controls
8. Engineering Ethics

X. Course Requirements

Team Case Study: Each student as part of a team will be required to complete a semester-long course case study. The course case study will be completed in teams of 6 to 7 students. Each student-team will be responsible for completing case study deliverables including a PowerPoint slides.

XI. Course Grading

Course Item	Percent of Final Grade	
Attendance & Class Participation	5%	
IG Assessments 5+3.75 (4@8.75% each)	35%	
Exams (3@15% each)	45%	
Team Case Study		
PowerPoint Slides	10%	
Presentation	5%	
	Total	100%

IMPORTANT NOTE: In addition to the instructor's own assessment of the Course Case Study, **the instructor will also use peer evaluations** to assign individual grades to each member of a team for the Course Final Report.

When submitting the case study, **each team member will complete and submit directly and confidentially to the instructor a separate peer evaluation of the performance of each member (including a self-evaluation) over the duration of the case study.** Students that complete the case study individually do not complete a peer evaluation.

The final class grade will be determined by the sum of the above components:

• A+	95-100	• C	70-74
• A	90-94	• D+	65-69
• B+	85-89	• D	60-64
• B	80-84	• F	0-59
• C+	75-79		

All grades will be posted in the instructor website (<http://aabakhsh.kau.edu.sa/>). Students are responsible for making sure that grades are correct.

XII. Grading Objections

All objections to grades should be made IN WRITING WITHIN ONE WEEK of the work in question. Objections made after this period has elapsed will NOT be considered – NO EXCEPTIONS.

XIII. Important Dates to Remember

First Day of Classes (Spring 2015):	Sunday, January 25
Last Day for Late Registration:	Thursday, March 26 (by 11:59 PM)
First Day of Spring Break:	Sunday, March 22
Last Day of Spring Break:	Thursday, March 26
Last Day of Classes (Spring 2015):	Thursday, May 21
Final Examination Period start:	Sunday, May 24
Final Examination Period end:	Thursday, June 4
First Day of Classes (Fall 2015):	Sunday, August 23

XIV. Expectations for IG Assessments:

IG Assessments - 35% Individual and Group Assessments: there are about four classes that IG assessments will take place. Each individual assessment weight 5% and each group assessment weight 3.75%. The individual assessment is kind of individual quiz that will take about 20 minutes for each while the group assessment is kind of interactive group activity which an instant group of about six students sitting next to each other are formed and they are responsible to analyze the educational video to answer the questions offered after.

XV. Expectations for Team Case study:

Case Study - 15% Group Presentation and Discussion Lead: In groups of six to seven, you are required to prepare a case study presentation. Specific case studies shall be assigned to each team. You may use a different case study that interests you and that is of value to class. However, you need to discuss it with your instructor. The case study may be on a business, a technical business environment, or management of technology and innovation. You are expected to address issues such as, for example: challenges, decisions or measures taken by the management to deal with current or upcoming situations.

Be prepared for a 20 min presentation and a 5 min discussion lead. All students in each team are required to actively participate in the presentation and discussion lead. It is preferable that all team members attend on their presentation day. If any of the students are unable to physically be in class, they need to notify the instructor and arrangements will be made for a presentation via the Web. Most likely Skype will be used for this purpose. The software is available on the web, free and easy to use. It can be downloaded at the following link: <http://skype.com>

Guidelines for the Group Presentation and Discussion Lead will be discussed in class and posted in the instructor website (<http://aabakhsh.kau.edu.sa/>).

You will need to submit your PowerPoint slides prior to your presentation. You can submit the file via email (aabakhsh@kau.edu.sa). The title of the documents should be precisely as follows:

IE256-GPXX-Case Study Title.ppt (where XX is the group number)

Tentative Class Schedule*
IE256: Engineering Management
Spring-2015

Week	Date	Key Topics/ Activities/ Homework	Readings
1	Jan 26	Registration	
	Jan 28		
2	Feb 2	Syllabus/Team members / Course Enter Exam	
	Feb 4		
3	Feb 9	1. Introduction to Engineering & Management <i>Team members are assigned*</i>	Ch1
	Feb 11		
4	Feb 16	2. Historical Development of Engineering Management	Ch2
	Feb 18	IG Assessment 1 -- Covers topic 1	
5	Feb 23	3. Planning & Forecasting <i>Case Study is assigned *</i>	Ch5 + Handout
	Feb 25		
6	Mar 2	Exam 1 -- Covers topics 1-3	
	Mar 4		
7	Mar 9	4. Organizing	Ch3 + Ch9
	Mar 11		
8	Mar 16	IG Assessment 2 -- Covers topic 4	
	Mar 18	Guest Speaker	
9	Mar 23	SPRING BREAK	
	Mar 25		
10	Mar 30	5. Project Management	Handout
	Apr 1		
11	Apr 6	Exam 2 -- Covers topics 4-5	
	Apr 8		
12	Apr 13	6. Motivation and Leading Technical People	Ch13
	Apr 15		
13	Apr 20	IG Assessment 3 -- Covers topic 6	
	Apr 22		
14	Apr 27	7. Controlling/ Financial Controls	Ch16 + Handout
	Apr 29	Exam 3 -- Covers topics 6-7	
15	May 4	8. Engineering Ethics <i>PowerPoint slides and peer evaluation file are due *</i>	Ch4 + Handout
	May 6	IG Assessment 4 -- Covers topic 8	
16	May 11	Presentations	
	May 13		
17	May 18	Prep.	
	May 20		
18	May 25	University Final Examination Period	
	May 27		
19	Jun 1		
	Jun 3		

* This schedule is subject to changes as necessary. Changes will be announced in class and posted in the instructor website (<http://aabakhsh.kau.edu.sa/>).