



IE 101 – Introduction to Industrial Engineering (Section 001)
Course Syllabus: Fall 2014
TR 9:30 –10:45 AM, AGIT 211

Instructor: Dr. Andrea Graham
Assistant Professor
Department of Engineering & Technology

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Office Hours: TR 11-1:30pm, W 11:00am – 12:00pm or by appointment

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COURSE INFORMATION

Course Description:

This course introduces and examines the core concepts and methods of industrial engineering. Students will explore the industrial engineering profession and engage in team based hands-on activities that integrate several concepts. Ethics and professional conduct are stressed.

Prerequisites: MATH 1314 and ENG 1301 (or corequisite).

Student Learning Outcomes:

After completing this course, students should be able to:

1. Communicate with understanding the types of work industrial engineers do and how the industrial engineering function fits into the big picture, including society and various organizations.
2. Understand and express a commitment to professional and ethical behavior now and in the future.
3. Understand the concepts of Industrial and Systems Engineering principles through an overview of the topics in the TAMUC industrial engineering curriculum.
4. Demonstrate the ability to analyze a situation in a team environment and use the appropriate tools/techniques of Industrial Engineering to solve the issues and present solutions.
5. Demonstrate knowledge of career planning, interview etiquette and techniques, and resume writing
6. Demonstrate knowledge of IE related student and professional organizations

Materials – Textbooks, Readings, Supplementary Readings:

1. Goldratt, Eliyahu M.; Cox, Jeff (2012). *The Goal: A Process of Ongoing Improvement*, Third Revised Edition. North River Press. [ISBN-13: 978-088427-195-6].
2. *Introduction to Industrial Engineering*, by Jane M. Fraser, online at www.introtoie.com.

COURSE REQUIREMENTS

Instructional / Methods / Activities Assessments

This course will utilize the following elements to assist students in achieving the course learning outcomes. .

1. Weekly homework assignments
2. Quizzes
3. Midterm
4. Written book review
5. Oral presentation of book review
6. Team work (project and in class activity)

Laboratory/Industry Element (If applicable):

There will be featured industry speakers throughout the semester that will present during class time. These sessions require mandatory attendance.

Grading

The **final course grade** will be based upon the following:

- 10% attendance, participation. You start out at 100% score on this component. You will lose 3% for each unexcused absence.
- 20% midterm
- 25% project(s), based on my assessment of the success of the project (same for all team members), my assessment of the contributions of each team member, and the feedback I receive on the peer evaluation form.
- 25% book critique – Written report
- 20% homework assignments
- 10% Quizzes (announced and unannounced)

Summary:

Assignments	10%
Class Participation	10%
Quizzes	10%
Mid-Term	20%
Project (Team Based)	25%
Book Critique	25%

Grading Scale:

A = 90 – 100%
B = 80 - 89%
C = 70 - 79%
D = 60 - 69%
F = >60%

STUDENT EXPECTATIONS

- Students are expected to attend all class periods. Students who do not attend class regularly may find this course to be more challenging than it should be. Students missing more than five class meetings will be assigned a final grade of "F" for the course and will not be allowed to attend any more class meetings, regardless of the reason(s) for the absences. Students are considered absent from a class meeting if they miss any portion of class time. Class time begins when the instructor arrives, but no earlier than the scheduled start of class time. Class time ends when the instructor dismisses class, but no later than the scheduled end of class time.
- Students are expected to make a legitimate attempt to pass the course, as judged by the instructor. Students who do not make a legitimate attempt to pass the course will be assigned a final grade of "F" for the course and will not be allowed to attend any more class meetings.

Any violations of the following student expectations, as judged by the instructor, will result in letter grade reductions to course work grades and/or to the final course grade of the offending student.

- Students are expected to have complete knowledge of and to be fully compliant with the Code of Student Conduct in the current Student Guidebook at <http://www.tamu-commerce.edu/studentlife/guidebook.htm>
- Students are expected to be fully prepared for each class before it meets.
- Students are expected to refrain from any disruptive behaviors during class. This includes (but is not limited to) not being in their seat at the scheduled start time of class; packing up and leaving class before it is dismissed by the instructor; talking or making other noises while the instructor is presenting material or a student is asking a question; sleeping; doing work for another course; reading newspapers, magazines, or other non-course materials; and using a computer at times and for purposes other than those designated by the instructor.
- Students are expected to have cell phones (NO TEXTING), music devices, and pagers turned off during class

TECHNOLOGY REQUIREMENTS

The following technologies will be required for this class.

- A scientific calculator for exams (one with built-in statistical functions).
- Internet access to download class notes, assignments, and readings from the course Web site.
- Some coursework will require computer software for assignments. The software will be freely available for students in the computer labs on campus.

COURSE AND UNIVERSITY PROCEDURES/POLICIES
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Course Specific Procedures:

1. All tests given will be open book and open notes. Tests will be based on the homework assignments and course participation. If you do the assignments and participate in class, you will be prepared for the tests.
2. Homework must be turned in at the beginning of the class on the day it is due. Late assignments will not be accepted.
3. As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.
4. Copyright 2014 Andrea Graham as to this syllabus and all lectures. Students are prohibited from selling (or being paid for taking) notes during this course to or by any person or commercial firm without the express written permission of the professor teaching this course.

Academic Dishonesty:

Texas A&M University-Commerce will not allow plagiarism in any form. The students' course work should be their own. Plagiarism represents disregard for academic standards and is strictly against University policy. If you have a question regarding academic dishonesty and integrity, please talk to the instructor or refer to the *Code of Student Conduct* from Student Guide Handbook.

Drop and Withdrawal Dates: Refer to the 2014-2015 Academic Calendar at <http://www.tamu-commerce.edu/registrar/calendar.asp> for drop and withdrawal dates.

University Specific Procedures:**Students with Disabilities:**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library
Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

TENTATIVE COURSE OUTLINE/CALENDAR

WEEK	DATES	TOPICS	ASSIGNMENTS
Aug 25		-First day of class	
Week 1	8/26, 8/28	-What is IE? - History of Industrial Engineering -Big ideas you will hear frequently	
Sept 1		- Labor Day – University Closed.	
Week 2	9/2, 9/4	- Learning and Teaching (Chp 2-Fraser)	HW 1
Week 3	9/9, 9/11	- Organizations (Chp 3- Fraser)	HW 2
Week 4	9/16, 9/18	- The IE Approach	
Week 5	9/23, 9/25	- The IE Approach -“ <i>Industry Spotlight</i> ” - <i>The Goal</i> book discussion (Chp 1-15)	HW 3
Week 6	9/30, 10/2	- Design or Improve a Production System	
Week 7	10/7, 10/9	- Design or Improve a Production System - The Airplane Lego Exercise	HW 4
Week 8	10/14, 10/16	- Operate a Production System - Midterm	
Week 9	10/21, 10/23	-Operate a Production System - <i>The Goal</i> book discussion (Chp 16-30)	HW 5
Week 10	10/28, 10/30	IE Careers -Career Planning, Resume Writing and Interview Techniques	
Week 11	11/4, 11/6	-Ethics - <i>Industry Spotlight</i>	-
Week 12	11/11, 11/13	-People	
Week 13	11/18, 11/20	- Operations Research and other Mathematical Methods	- Draft of Book Critique -HW 6
Week 14	11/25,	- Business Related Skills	
Nov 27 & 28		- Thanksgiving Break – University Closed	
Week 15	12/2, 12/4	- Business Related Skills	
Dec 4		- Last day of class.	Final Book Critique
Week 16	12/9	- Final Exam : <i>Team Project Oral Presentations</i>	