IE 305-001 FACILITIES PLANNING AND MANAGEMENT
COURSE SYLLABUS: SPRING 2014
MWF 11:00am – 11:50am, AGIT211

Instructor:	Pelin Altintas-deLeon, Ph.D. Assistant Professor / Department of Engineering & Technology
Office Location:	Charles J. Austin Engineering & Technology Building Room 215 (AGIT)
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COURSE INFORMATION

Textbook Required: Tompkins, James A., White, John A., Bozer, Yavuz A., and Tanchoco, J. M. A. (2010). *Facilities Planning*. NJ: John Wiley & Sons, Inc.

Course Description:
Study of production facilities, including location, planning, design and maintenance. Emphasis on production systems, machine selection, automation, material handling, storage and warehousing, quality, retrofitting and preventative maintenance. (2012-2013 Undergraduate Catalog, Texas A&M University-Commerce, (http://catalog.tamuc.edu/undergrad/colleges-and-departments/science-engineering-agriculture/engineering-technology/#courseinventory).

Student Learning Outcomes:
After completing this course;
1. The student will define and analyze product, process and schedule design interactions by studying the functions involved in the product development cycle.
2. The student will solve facility design problems through analyzing layout models and design algorithms theoretically and using necessary modern engineering tools.
3. The student will solve facility location problems by applying analytical facilities location methods.
4. The student will prepare and present a facilities planning project report by using facility layout models-algorithms and applying standards of professional and ethical responsibility.
5. The student will design and analyze material handling systems through different material handling equipment and material handling principles used in the warehousing, manufacturing and supporting operations.

COURSE REQUIREMENTS

Instructional / Methods / Activities Assessments

This course utilizes facilitated lectures, and a series of assignments to assist students in achieving the course learning outcomes. The assessment criteria for the stated student learning outcomes will include homework assignments, a term project, four exams, and a final exam.

Grading

Homework	10%	Final Grade:	90 – 100	A
Exam 1	15%		80 – 89	B
Exam 2	15%		70 – 79	C
Exam 3	15%		60 – 69	D
Exam 4	15%		Below 60	F
Project	15%			
Final Exam	15%			

TECHNOLOGY REQUIREMENTS

The following technologies will be required for this class.

- A scientific calculator for exams.
- Microsoft Excel.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures:

1. Exams are no book and closed notes. Use of unauthorized aids on exams will result in a grade of zero.
2. Late homework is not accepted. Homework should be turned in at the beginning of the class on due date.
3. I reserve the right to make changes to this syllabus as needed. The changes will be announced in class.
4. Students are expected to attend all class periods. Students missing more than nine class meetings will be assigned a final grade of 'F' for the course.

University Specific Procedures:

ADA Statement

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

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Code of Student Conduct from Student Guide Handbook).

COURSE OUTLINE / CALENDAR

WEEK	DATE	TOPIC	READING ASSIGNMENT	HOMEWORK
Week1	1/13	First day of the class		
		Introduction to facilities planning	Chp. 1	
	1/15	Facilities Planning Process	Chp. 1	
	1/17	Product design	Chp. 2	
Week2	1/20	MLK day – University closed		
	1/22	Process design	Chp. 2	Assignment1
	1/24	Schedule design	Chp. 2	
Week3	1/27	Flow systems	Chp. 3	
	1/29	Activity relationships	Chp. 3	Assignment2
	1/31	Space requirements	Chp. 3	
Week4	2/3	**EXAM 1**		
	2/5	Basic layout designs	Chp. 6	
	2/7	Algorithmic approaches	Chp. 6	
Week5	2/10	Algorithmic approaches	Chp. 6	Assignment3
	2/12	Algorithmic approaches	Chp. 6	
	2/14	Improvement algorithms	Chp. 6	
Week6	2/17	Improvement algorithms	Chp. 6	
	2/19	Improvement algorithms	Chp. 6	Assignment4
	2/21	Evaluation of layouts	Chp. 6	
Week7	2/24	**EXAM 2**		
	2/26	Introduction to class project		
	2/28	Materials handling	Chp. 5	
Week8	3/3	Materials handling	Chp. 5	
	3/5	Material handling equipment	Chp. 5	
	3/7	Line Balancing, Conveyor Modeling	Chp. 5	
3/10 - 3/14		**NO CLASS- Spring Break**		
Week9	3/17	Warehouse operations	Chp. 7	Assignment5
	3/19	Warehouse space and layouts	Chp. 7	
	3/21	Warehouse layout models	Chp. 10	
Week10	3/24	Storage models	Chp. 10	
	3/26	Automated storage	Chp. 10	Assignment6
	3/28	Order picking systems	Chp. 10	

WEEK	DATE	TOPIC	READING ASSIGNMENT	HOMEWORK
Week11	3/31	**EXAM 3**		
	4/2	Single facility location problems	Chp. 10	
	4/4	Single facility location problems	Chp. 10	
Week12	4/7	Multiple facility location problems	Chp. 10	Assignment7
	4/9	Multiple facility location problems	Chp. 10	
	4/11	Multiple facility location problems	Chp. 10	
Week13	4/14	Evaluating facilities plans	Chp. 11	
	4/16	Evaluating facilities plans	Chp. 11	Assignment8
	4/18	Selecting the facilities plan	Chp. 11	
Week14	4/21	**EXAM 4**		
	4/23	Term project		
	4/25	Term project		
Week15	4/28	Term project		
	4/30	Term project		
	5/2	Term project		
Week16		**F I N A L E X A M**		