Zarqa University
Faculty of Engineering Technology
Mechanical Engineering Department

Course Information	0905505 Facilities Planning and Design		
	3 Credits	Compulsory	Fall 2014
	Prerequisites by Course: Engineering Economics and Management		
	Co-requisites by Course: -		
	Prerequisites for: -		
	Schedule: Lecture, 9:30-11:00, MW, L314		
Instructor	Prof. Dr. Bassam Al-Helou		
Contact Information	heloub@zu.edu.jo, Office L240, Phone: 05-3821100-2083		
Office hours	12:30-14:00M, 12:00-13:00T, 08:30-09:30W; or by appointment		
Textbook	Facilities Planning. Tompkins, White, et.al. John Wiley, 4th edition, 2010.		
References and Resources	1. Heragu, Facilities Design, PWS Publishing Company. 2. Francis, McGinnis & White, Facilities Layout and Location, Prentice Hall. 3. Sule, Manufacturing Facilities, 2nd Ed., PWS Publishing Company. 4. James and Alcorn, A Guide to Facilities Planning, Prentice Hall. 5. Black, The Design of the Factory with a Future, McGraw Hill.		
Evaluation Criteria	**Activity**	**Percent (%)**	
	Project	10	
	First Exam	20	
	Second Exam	20	
	Final Exam	50	
Course Description	Facilities planning through layout design. Product flow, space-activity relationships, personnel requirements, and material handling are considered, as well as receiving, shipping, warehousing, and integration with manufacturing. Facilities planning models are explored. Computer applications in facility planning and layout.		
Intended Learning Outcomes	**Course Outcome**		**[%]**
	Explain the "Winning Facilities Planning Process"		10%
	Determine product, process, and schedule design interactions & Develop personnel requirements		20%
	Analyze flow, space, and activity relationships with impact to material handling and layout alternatives		20%
	Integrate receiving, shipping, warehousing with manufacturing and supporting operations		15%
	Apply standards of professional and ethical responsibility		15%
	Prepare and present a detailed facilities planning project report and layout documenting all steps taken (Define problem, Generate alternatives, Analyze, Select) + justification of your final recommendation		20%
Relationships to Program Outcomes	a. Ability to apply knowledge of mathematics, science, and engineering (M)		

<table>
<tr><td></td><td colspan="3">b. Design and conduct experiments as well as analyze and interpret data (H)
c. Design a system, components, or process to meet desired needs (H).
d. Function on multidisciplinary teams.
e. Ability to identify, formulate, and solve mechanical engineering problems (H)
g. Communicate effectively. (M)
j. Possess knowledge of contemporary issues. (H)
k. Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice (H)
l. Adhere to safety rules and regulations. (H)</td></tr>
<tr><td rowspan="4">Contribution to the Professional Components</td><td colspan="2">Mathematics and Basic Sciences</td><td>-</td></tr>
<tr><td rowspan="2">Engineering Topics</td><td>Engineering Sciences</td><td>40%</td></tr>
<tr><td>Engineering Design</td><td>60%</td></tr>
<tr><td colspan="2">General Education</td><td>-</td></tr>
<tr><td rowspan="9">Course Outline</td><td colspan="2">Subject</td><td>Hours</td></tr>
<tr><td colspan="2">Facilities planning through layout design.</td><td>10</td></tr>
<tr><td colspan="2">Product flow, and Activity Relationships
Exam I (up to end of week 5)</td><td>10</td></tr>
<tr><td colspan="2">Material Handling</td><td>10</td></tr>
<tr><td colspan="2">Strategic Facilities</td><td>5</td></tr>
<tr><td colspan="2">Exam II (up to end of week 11)
Facilities planning models are explored</td><td>5</td></tr>
<tr><td colspan="2">Computer applications in facility planning and layout</td><td>5</td></tr>
<tr><td colspan="2">Review, Final Exam</td><td>3</td></tr>
<tr><td></td><td colspan="3"></td></tr>
<tr><td>Policies:</td><td colspan="3">Attendance
Attendance will be checked each class. Students are expected to attend each lecture. University regulations will be strictly followed for students exceeding the maximum number of absences.
Homework
- Homework assignments are due at the beginning of class the day they are due.
- No late homework will be accepted unless prior arrangement have been made with the instructor
- No make-up allowed on homework.
- You can consult each other regarding homework solution s however each assignment must be your own solution. Verbatim or duplicates assignments will be regarded as cheating.

Class participation and behavior
- Classroom participation is a part of learning; it is only by asking questions and talking through ideas that you can come to fully understand the material
- Please do not engage in behavior which detracts from the ability of other students to learn. Such behaviors include arriving at class late, speaking or whispering while the instructor and students are discussing ideas or asking questions, reading messages newspapers in class, cell-phones ringing, etc.</td></tr>
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Week	Date	Sec	Topic	Homework	Due date
1	13/10/2014				
2	22/10/2014				
3	27/10/2014				
4	3/11/2014				
5	10/11/2014				
6	17/11/2014				
7	24/11/2014		**Exam I (up to end of week 6)**		
8	1/12/2014				
9	8/12/2014				
10	15/12/2014				
11	22/12/2014				
12	29/12/2014		**Exam II (up to end of week 12)**		
13	5/01/2015				
14	12/01/2015				
15	19/01/2015				
16	26/01/2015		Final Exam		