DEPARTMENT OF INDUSTRIAL ENGINEERING
COURSE SYLLABUS

COURSE TITLE	*ENGLISH CODE/NO*	*ARABIC CODE/NO.*	*CREDITS*			
			Th.	*Pr.*	*Tr.*	*Total*
Facilities Planning	**IE 453**	453 هـص	3	2	-	3
Pre-requisites:	IE 342, IE 352					
Course Role in Curriculum	*Required or Elective:*		Required Core Course			

Catalogue Description:
Fundamentals of facilities planning. Facilities design. Flow, space and activity relationships. Material handling systems. Layout planning models. Warehouse operations. Quantitative facilities planning models. Preparing, presenting, implementing and maintaining facilities plan**.**

***Textbooks*:**
Facilities Planning (4th edition) by Tompkins, White et al.
John Wiley, New Jersey, 2010, ISBN 0-471-41389-5

***Supplemental Materials*:**
Manufacturing Facilities Design and Material Handling (3rd edition),
Fred E. Meyers and Mathew Stephens, Pearson Prentice Hall,
New Jersey, 2005, ISBN 0-13-112535-4

***Course Learning Outcomes*:**
By the completion of the course the student should be able to:

1. Understand the integrated nature of the discipline
2. Apply the knowledge of flow process analysis to develop the material movement strategies.
3. Identify and develop different facilities layouts and solve real life industrial problems
4. Emphasize the importance and role of facilities planning in cost reduction and increased productivity
5. Work individually or within a team and communicate effectively to perform the assigned tasked (Homework/Group Project.

	***Topics to be Covered*:**	***Duration in Weeks***
1	Introduction to Facilities Planning	1
2	Product, and Schedule Design	1
3	Flow, Space, and Activity relationships	2

4	Material Handling	2
5	Layout Planning Models	2
6	Warehouse Operations	1
7	Facilities Planning Models	2
8	Supply Chain Management	2
9	Implementing and Maintaining the Facilities Plan	1

Student Outcomes addressed by the course: (Put a √ sign)

(a)	an ability to apply knowledge of mathematics, science, and engineering	
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	
(d)	an ability to function on multidisciplinary teams	√
(e)	an ability to identify, formulate, and solve engineering problems	√
(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	
(h)	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	
(i)	a recognition of the need for, and an ability to engage in life-long learning	
(j)	a knowledge of contemporary issues	√
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	

Key Student Outcomes assessed in the course: (d) (e) and (j)

Instructor or course coordinator: Dr. Mohammed A Balubaid
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