The University of Jordan
School of Engineering
Industrial Engineering Department
Fall semester 2024-2025

Course name:	Facilities Planning and Material Handling			
Course code:	0906425			
Credits hours	3			
Contact hours& room\office hours:	Sunday, Tuesday, Thursday 9:30-110:30 am			
Course instructor's name, E-mail, and phone:	Nibal Albashabsheh, Ph.D. n.albashabsheh@ju.edu.jo 22938			
Course Coordinator:	Nibal Albashabsheh, Ph.D.			
Text book:	Facilities Planning, Tompkins and others, 4th Ed., Wiley and Sons, 2010.			
Other reference(s):	"Operations Management: Process and Supply Chains", By: Lee L. Krajweski and Others, Pearson, Eleventh Edition, 2015.			
Course Description:	This course is designed to introduce Strategic Facilities Planning, Location Selection. Product, Process and Schedule Design. Flow, Space and Activity Relationships, Personnel Requirements. Material Handling. Layout, Computer-Aided Layout. Warehouses.			
Providing Department:	Industrial Engineering			
Prerequisite Course:	0906421			
Course type	Mandatory			
Assessment Methods:	Method	Weight %	Date	
	Midterm	30	TBDL	
	Quizzes	20	TBDL	
	Projects/HomeWorks	10	TBDL	
	Final Exam	40	TBDL	
Course Learning Outcomes:	#	After successful completion of this course, the student will be able to	SO	
	CLO1	To understand significance of strategic facilities planning process and developing strategies for various types of facilities.	1	
	CLO2	To determine the interrelationship between product, process and scheduling design.	2	
	CLO3	To provide the necessary considerations, flow system, activity relationship and space requirements in determining the necessities in a facility.	2	

	Week #	Topic
Brief list of topics	1	**Introduction:** Facilities Planning Defined, Significance of Facilities Planning, Objectives of Facilities Planning, Facilities Planning Process, Strategic Facilities Planning, Developing Facilities Planning Strategies.
	2-3	**Product, Process, and Schedule Design:** Introduction, Product Design, Process Design, Schedule Design, Facilities Design.
	4-5	**Flow Systems, Activity Relationships, and Space Requirements:** Introduction, Flow Systems, Material Flow System, Departmental Planning, Activity Relationships, Space Requirements.
	6-9	**Personnel Requirements:** Introduction, The Employee– Facility Interface, Restrooms, Food Services, Health Services, Office Facility Planning.
	10-12	**Material Handling:** Introduction, Scope and Definitions of Material Handling, Material Handling Principles, Designing Material Handling Systems, Unit Load Design, Material Handling Equipment, Estimating Material Handling Costs, Safety Considerations.
	13-15	**Layout Planning models and Design Algorithms:** Introduction, Basic Layout Types, Layout Procedures, Algorithmic Approaches, Department Shapes and Mail Aisles, Multi-Floor Facility Layout, Commercial Facility Layout Packages, the impact of Change, Developing Layout Alternatives.
	16	**Warehouse Operations:** Introduction, Missions of a Warehouse, Functions in the Warehouse, Receiving and Shipping Operations, Dock Locations, Storage Operations.
Important Notes:	• Do not hesitate to ask questions. • You are required to bring a notebook and take notes in classes. • Students are expected to attend every class session and they are responsible for all material, announcements, schedule changes, etc., discussed in class. • Discuss the assignments among yourselves. • Don't Cheat; direct copying of others work will NOT be allowed or tolerated and will result in a reduction of grade. If you are found to be cheating in any way, on an exam or assignment, even signing the roll sheet for another student, you will be given an "F" for the course. There will be no exceptions. • All cases of academic dishonesty will be handled in accordance with university policies and regulations. JU policy requires the faculty member to assign ZERO grade (F) if a student misses 15% of the classes that are not excused, and 20% of the classes that are excused. • Students are expected to be ready to take a quiz any time they have a class. There will be no make-up quizzes or homework.	

	Any students with disabilities who need accommodations in this course are encouraged to speak with the instructor as soon as possible to make appropriate arrangements for these accommodations.

The B.Sc. in industrial Engineering program enables students to achieve, by the time of graduation the following program learning outcome (SOs)	
1	*an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics*
2	*an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors*
3	*an ability to communicate effectively with a range of audiences*
4	*an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts*
5	*an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives*
6	*an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions*
7	*an ability to acquire and apply new knowledge as needed, using appropriate learning strategies*