

## The University of Jordan Faculty of Engineering Industrial Engineering Department Fall 2024/2025

Course name:	Methods Engineering and work measurement					
Course code:	0906384					
Credits hours	3					
Contact hours/room:	Sunday, Tuesday, Thursday 8:30-9:30					
Course instructor's name F-	Shahd Obeidat					
mail and phone.	Sh.obeidat@ju.edu.jo					
Course Coordinator:	Shahd Obeidat					
Text book:	Groover (2014). Work Systems: The Methods, Measurement and					
	managem	ent of Work.	First edition, Pearson.			
	Freivalds, and Niebel, (2013). Niebel's Methods, Standards and Work					
Other reference(s):	Design, 13th edition, McGrawHill.					
other reference(5).	Mayers, and Stewart, (2001). Motion and Time Study for Lean					
	Manufacturing, third edition, Prentice hall.					
	Study of manufacturing and service methods and processes, analytical					
Course Description:	techniques for of process flow and efficiency, improving processes study of					
	time and	andardization of methods and	time measur	ements,		
	project.					
Providing Department:	Industrial Engineering					
Prerequisite Course:	Statistics	Ι				
Course type	Required course					
	Method		Weight %	Date		
	Mid exam		30			
	Quizzes,		20			
Assessment Methods:	HomeWorks, project					
	Final Exa	hal Exam 50		1		
	#	After successful completion of this course, the student will be able to		SO		
Course Learning Outcomes:		Use the different traditional IE charts		2		
		and diagrams (operation chart, flow				
		process chart, form process chart,				
		worker process chart, operator machine,				
	CLO1	operator multi-machine gang chart left				
		hand right hand chart ) for any				
		process that produce a product or				
		process that produce a product or				
		service.				
	CLO2	Improve the	We the process through the use of $2$			
		the cost red	ost reduction formula (eliminate,			

		combine rearrange, simplify of the		
		different process activities)		
CL		Plan and carryout direct time study.	1	
	CLO4	Plan and carryout work sampling study	1	
	CLO5	Develop standard time	2	
	CLO6	Understand the importance of standard time, and use it to answer different questions (how many machines do we need?, how many operators should we hire?, how fast to move conveyers?, how much will the product cost?etc.	2	
	CLO7	Select the suitable work measurement technique for any process.	1,2	
	CLO8	Define and measure efficiency and effectiveness for any process or organization.	2	

	Week #	Торіс			
	1	Historical background about motion and time study.			
	1	(Frank and Lillian Gilbreth, Fredrick Taylor, Deming, and others)			
	2	Importance of motion and time study.			
	3-4	The lean manufacturing, and introduction to TOYOTA Production System			
	4	Manual assembly line.			
		Charting and diagramming techniques for operations analysis			
Brief list of		Operation charts			
tonics	5-8	Process charts			
topics	5-0	Flow diagrams			
		Activity charts			
		Process map			
	9	Introduction to Work measurement			
	10,11	Direct Time Study			
	13, 14	Work Sampling			
	15	Incentives			
	16	Term project			
	• Do not he	sitate to ask questions.			
	• You are r	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.				
<b>-</b>	Discuss the second	ne assignments among yourselves.			
Important	• Don't Ch	• Don't Cheat; direct copying of others work will NOT be allowed or tolerated and will			
<b>Notes:</b> result in a reduction of grade. If you are found to be cheating in any way, on a					
	or assignment	nent, even signing the roll sheet for another student, you will be given an "F"			
	for the co	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 ex	xcused			

• 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	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	
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	6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
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	7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	