The University of Jordan
School of Engineering
Industrial Engineering Department
2nd semester 2024/2025

Course name:	Engineering Workshops
Course code:	IE 0966111
Credits hours	1
Contact hours & room\office hours:	101 workshops (theoretical)/Workshopes (practical)
Course instructor's name, E-mail, and phone:	Eng.Rawan Al-Tarawneh rtarawneh@ju.edu.jo
Course Coordinator:	
Text book:	Workshop/Manufacturing practices
Other reference(s):	1. Kalpakjian et al., Manufacturing processes for Engineering materials, 5th edition, Prentice hall. (2010) 2. Serope Kapakjian and Steven Schmid (2006). Manufacturing Engineering and Technology, 6th edition. Prentice Hall. 3. Groover et al. Fundamental of modern manufacturing, international edition, Prentice-Hall Inc.(2010)
Course Description:	General introduction to engineering workshops, tools, and common measurement instruments, general safety, introduction to machining operations, forming operations, casting operations, and welding operations, describing common machine tools, furnaces, tools and dies, practical exercises including fitting, forging, carpentry, casting, welding, mechanical saws, shearers, drills, lathes, milling machines, shapers and grinders.
Providing Department:	Industrial Engineering
Prerequisite Course:	None
Course type	Mandatory : Faculty requirement

Assessment Methods:

Method	Weight %	Date
Midterm Exam	30%	
Reports & Quizzes	30%	
Final Exam	40%	

Course Learning Outcomes:

#	After successful completion of this course, the student will be able to	SO	
CLO1	Recognize safety requirements in engineering workshops.	4	
CLO2	Distinguish between common engineering materials and their classifications	6	
CLO3	Knowing various common manufacturing processes.	6	
CLO4	Understanding various operations and tools.	2,6	
CLO5	Distinguished between various common machine tools.	2,6	
CLO6	Familiarize students with carpentry operations, tools, and machines.	2,6	
CLO7	Recognized ethical and professional responsibilities.	4	
CLO8	Adopt engineering knowledge gained from this course to feel real life production	2,6	
CLO9	Practice teamwork experience	5	
CLO10	Familiarize the students with basic measuring instruments necessary for production processes.	2,6	

Brief list of topics	Week #	Topic

	1	Course orientation and safety requirements awareness
	2-3	Measuring and powering tools
	4	Metal cutting process
	5	Metal cutting process
	6	Carpentry operations, machines and tools
	7	Mid-term Exam
	8	Welding technology
	9-10	Casting process
	11	Sheet metal process
	13	Final Exam week
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 home works. • 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 program student outcomes that support the program educational objectives. The Attainment of these outcomes prepares graduates to enter the professional practice of engineering. Student outcomes are outcomes (1) through (7; the description of these outcomes is shown in this table .and any additional outcomes may be articulated by the program.
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