Alanya Alaaddin Keykubat University | Rafet Kayış Faculty of Engineering
Mechanical Engineering Department

SYLLABUS

Code/Name	MCE 306/ Manufacturing Processes II
Type	Required
Credit/ECTS	3/5
Hour per Week	4 (4+0+0)
Level/Year	Undergraduate/3
Semester	Spring
Classroom	D204
Content	Metal working, hot working and cold working processes. Principles of metal casting. Welding and joining processes. Bulk deformation processes. Sheet-metal working processes. Forging, extrusion, drawing, and rolling. Chip removal processes. Non-traditional machining processes. Manufacturing systems and automation. Machine shop practices.
Prerequisites	
Textbooks	***Primary*** - Groover, M., Fundamentals of Modern Manufacturing: Materials, processes, and systems, John Wiley, 1999 ***Supplementary*** - . S. Kalpakjian and S.R. Schmid, Manufacturing Processes for Engineering Materials, Prentice - Hall, 2008.
Objectives	1. Recognize, understand and develop working knowledge of broad range of manufacturing processes that are used in the industry. 2. To compare the existing technologies used in casting, shaping, forming, property enhancing, joining and assembly process. 3. To apply the limitations and advantages of different manufacturing processes with an economic point of view to the industry. 4. To learn how component can be manufactured in sustainable manner and learn about the environmental hazards of different manufacturing processes.
Course Outcomes	In this course you will be able to: CO1 Apply appropriate manufacturing processes for a product and determine its parameters CO2 Analyze process dynamics and performance of different manufacturing processes.

Weekly Schedule of Topics

W	Topic
1-3	Rubber Processing Technology, Mechanical Assembly
4-6	Composites and Shaping Processes for Polymer Matrix Composites
7-8	Powder Metallurgy
9-10	Fundamentals of Welding
11-13	Welding Processes
14	Brazing-Soldering-and-Adhesive-bonding

Contribution to Program Outcomes*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	1	3	1	2	2	0	3	2
CO2	3	3	3	1	3	1	2	2	0	3	3

* Contribution Level | 0: None | 1: Very Low | 2: Low | 3: Medium | 4: High | 5: Very High

Special Conditions	• Students work in groups for presentation and assignment. • The consequence of violation of the attendance rule is to receive a grade of **NA.**
Requirements	Basic knowledge of a dynamic analysis software
Evaluation	Midterm Exam 25% Quizzes 25% Final Exam 50% Total 100%
Course Policy	1. You must attend at least 70% of the sessions including add-drop period. 2. Be in the class on time. 3. English should always be used to communicate with one another. 4. Mobile phone should be switched off and put away during the class. 5. You cannot talk to your friends during class no matter what the subject is.
Cheating & Plagiarism	• Copying or letting someone to copy your work on exams, assignments, or reports is cheating. • Cutting and pasting text, figures and tables from the web sources or any other electronic source is plagiarism. • The consequence of academic dishonesty is to receive a grade of **F** for the course.

Instructor

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Room	233	Office Hours	

Prepared by Bertan Beylergil