

MODERN MANUFACTURING METHODS

1	Course Title:	MODERN MANUFACTURING METHODS	
2	Course Code:	MAK4102	
3	Type of Course:	Optional	
4	Level of Course:	First Cycle	
5	Year of Study:	4	
6	Semester:	8	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. Nurettin Yavuz	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Tel: 0 224 294 0651 Mail: nyavuz@uludag.edu.tr	
17	Website:		
18	Objective of the Course:	The goals of this course is the scientific principles of modern manufacturing methods.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Know and understand existing modern manufacturing methods.
		2	Compare modern and traditional manufacturing methods.
		3	Understand application area, advantage and disadvantage of modern manufacturing methods.
		4	Understand forming with the modern manufacturing methods.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Introduction		
2	Operation with Electric Discharge		

3	Operation with Electric Bombardment			
4	Operation with Laser Beams			
5	Chemical and Electrochemical Operation			
6	Ultrasonic Operation			
7	Operation with Ion Beams			
8	Repeating courses and midterm exam			
9	Electro Hydraulic Forming			
10	High Speed Forging			
11	Electromagnetic Formation			
12	Surface Plating			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	3.00	42.00
Practicals/Labs		0	0.00	0.00
Self study and preperation		Fundamentals of Modern Manufacturing Materials, Processes and Systems / (Mikell P. Groover, Prentice Hall)		
Homeworks		0	0.00	0.00
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams		1	20.00	20.00
Others		1	21.00	21.00
Final Exam		1	25.00	25.00
Total Work Load				150.00
Total work load/ 30 hr				5.00
Midterm Exam		1	40.00	
ECTS Credit of the Course				4.00
Quiz		0	0.00	
Home work-project		0	0.00	
Final Exam		1	60.00	
Total		2	100.00	
Contribution of Term (Year) Learning Activities to Success Grade		40.00		
Contribution of Final Exam to Success Grade		60.00		
Total		100.00		
Measurement and Evaluation Techniques Used in the Course				
24	ECTS / WORK LOAD TABLE			

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	0	5	4	0	0	0	2	0	3	0	0	0	0	0	0
ÖK2	0	0	5	4	0	0	0	2	0	3	0	0	0	0	0	0
ÖK3	0	0	5	4	0	0	0	2	0	3	0	0	0	0	0	0
ÖK4	0	0	5	4	0	0	0	2	0	3	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			