MANUFACTURING METHODS

1	Course Title:	MANUFACTURING METHODS	
2	Course Code:	MAK3014	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	3	
6	Semester:	6	
7	ECTS Credits Allocated:	5.00	
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:	Doç. Dr. RUKİYE ERTAN	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Doç. Dr. Rukiye Ertan Bursa Uludağ Üniversitesi Otomotiv Müh. Böl. 16059 Görükle/Bursa e-mail: rukiye@uludag.edu.tr tel: 0 224 2940653	
17	Website:		
18	Objective of the Course:	To give information about the principles of traditional manufacturing methods, introduction of factors affecting manufacturing and application areas.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Students will have a basic knowledge about production methods.
		2	They can design the production process and propose solutions to production-related problems.
		3	Gains the ability to determine the method and process for manufacturing a product.
		4	Have the infrastructure to follow current and contemporary issues in manufacturing methods.
		5	
		6	
		7	
		8	
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Introduction to manufacturing processes and basic concepts	

2	Principles of casting technique and classification of casting methods	
3	Sand casting method (pattern, mold, core materials)	
4	Permanent mold casting, die casting, centrifugal casting	
5	Principles of metal forming	
6	Forging	
7	Exam	
8	Rolling, Extrusion	
9	Wire drawing, Sheet metal forming	
10	Introduction to joining processes, Oxyfuel gas welding	
11	Shielded metal arc welding (MIG/MAG, TIG), Submerged arc welding	
12	Other welding methods	
13	Soldering	
14	Final Exam	

22	Textbooks, References and/or Other Materials:	John A.S., “Introduction to Manufacturing Processes”, Mc GrawHill. Lyndon E., Mark E., “Manufacturing with Materials”, Butterworth Scientific. Gültekin N. “ Kaynak Tekniği”,1996 Yurci M.E., “Talaşsız Şekil Verme”, YTÜ Yayınları Kalpakjian S., Schimd S. "Manufacturing Processes for Engineering Materials", 2007
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	30.00
Quiz	1	10.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	3	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**

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	14	6.00	84.00
Homeworks	1	1.00	1.00
Projects	0	0.00	0.00
Field Studies	2	8.00	16.00
Midterm exams	1	2.00	2.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			147.00
Total work load/ 30 hr			4.90
ECTS Credit of the Course			5.00

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	4	5	3	0	3	3	5	4	2	2	1	0	0	0	0
ÖK2	0	4	5	5	0	3	3	5	4	5	2	1	0	0	0	0
ÖK3	0	4	5	5	0	3	3	5	4	5	2	1	0	0	0	0
ÖK4	0	4	5	3	0	3	3	5	4	5	2	1	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High