AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Manufacturing Methods and Machine Tools								
Course Code	BSM338		Couse Level	First Cycle (Bachelor's Degree)					
ECTS Credit	5	Workload	125 *(Hours)*	Theory	2	Practice	2	Laboratory	0
Objectives of the Course	This course has been prepared to meet a need for a fundamental knowledge on the subject of machining methods. It describes the basic principles of the design of tools and machines for the material removing, pressworking casting, joining and inspection etc. processes. After the theoretical explanation, students will work in Workshop to improve their skills. Some practical workshop trainings and technical excursions are carried out. Some problems and homeworks are assigned.								
Course Content	Definition of Technology and its Components; Transfer of Technology; Definition of mechanics and importance on the machine construction, planning of machine workshop • Measure and control; to Mark out • Cutting; Cutting outside and inside screw threads • Fine mechanics (polishing, brushing, scarping, rectify, reaming, filing, to give a fine edge to a cutting instrument, fitting, Grinding, Broaching, Honing, Lapping,); • Drilling machine • Planing and shaping machine • Lathe • Milling machine • Classification of welding; Gas welding, Arc welding (TIG-WIC) MIG, MAG Welding); Resistance Welding (Spot welding, seam welding, Flash butt welding); Hard- and soft soldering • Forging, Hammer (dropforging), Forging machine, Forging presses, Casting • NC (Numerical Control) and CNC (Computerized Numerical Control) machines and their industrial applications (beginning level); Companing classical and CNC machines								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment								
Name of Lecturer(s)	Prof. Türker SARAÇOĞLU								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	Önal, İ., 2004. Mekanik Teknoloji. Ege Üniversitesi, Ziraat Fakültesi Yayınları (Ders Kitabı), Yayın No: 554, İzmir.
2	Akkurt, M., 1985. Takım Tezgahları. Talaş Kaldırma Yöntemleri ve Teknolojisi. Birsen Yayınevi, Cağaloğlu- İstanbul.

Week	Weekly Detailed Course Contents	
1	Theoretical	Machine safety, Definition of techonology and components; Technology transfer; Definition of mechanics and importance on the machine construction; Planing of mechanicak workshop; Machines cutter and materials, clasification of machine tools.
2	Theoretical	Measure and control
3	Theoretical	to Mark out , cutting, etc.,
4	Theoretical	Drilling machine
5	Theoretical	Cutting outside and inside screw threads
6	Theoretical	Fine mechanics (polishing, brushing, scarping, rectify, reaming, filing, to give a fine edge to a cutting instrument, fitting, Grinding,Broaching, Honing, Lapping,)
7	Theoretical	Fine mechanics (polishing, brushing, scarping, rectify, reaming, filing, to give a fine edge to a cutting instrument, fitting, Grinding,Broaching, Honing, Lapping,)
8	Theoretical	Planing and shaping machine
9	Theoretical	Lathe, milling machine
10	Theoretical	Classification of welding;, Arc welding (TIG-WIC) MIG, MAG Welding); Resistance Welding (Spot welding, seam welding, Flash butt welding)
11	Theoretical	Gas welding , Hard- and soft soldering
12	Theoretical	Forging, Hammer (dropforging), Forging machine, Forging presses)
13	Theoretical	Forging, Hammer (dropforging), Forging machine, Forging presses)
14	Theoretical	Valsing
15	Theoretical	Valsing
16	Final Exam	Final exam

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	4	4	112
Midterm Examination	1	0	7	7
Final Examination	1	0	6	6
			Total Workload (Hours)	125
			[Total Workload (Hours) / 25*] = **ECTS**	5
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Definition of Technology and its Components; Transfer of Technology; Definition of mechanics and importance on the machine construction, Planing of machine workhop.
2	To be able to use of Measure and Control apparatus in workshop, to Mark out.
3	Cutting; Cutting outside and inside screw threads , grasping the calculations and practices
4	Lathe, milling machine
5	Forging, Hammer (dropforging), Forging machine, Forging presses)