

İLT 516 THE PROCESSABILITY OF THE METAL MATRIX COMPOSITE MATERIALS				ADVANCED TECHNOLOGIES DEPARTMENT					
SEMESTER	Teaching and Learning Methods (Hours Per Semester)							credits	
	lecture	Recite	Lab.	Homework	Project	Other	Total	Basic Credit	ECTS Credit
1-2	42	-	-	27	35	84	188	3	7.5
Language	Turkish								
Compulsory/ Elective	Optional								
Prerequisites	-								
Course Contents	The concept of workability. Experiments with chip lift and without chip lift. Metal cutting mechanics. Chip formation. Team Cracks and affects on the chips morphology. Team wear. Cutting fluids. Processing economy. The integrity of the processed surface. Parameters of the surface motif. Surface condition after machining. The methods for using in order to determine the processed surfaces. Metal matrix composites (MMC). Traditional production methods and processability. Non-traditional production methods and processability .								
Course Objectives	Influence of the concept of workability on the product design and production. Giving information about the processability methods.								
Learning Outcomes and Competences	<ul style="list-style-type: none"> • Learning the processed methods for the Traditional and non-traditional. • Learning the some experiments which are using the Machinability evaluation criteria. • The processability methods for the metal matrix compositesand learnings cutting tools for these materials. 								
Textbooks and /or References	<ul style="list-style-type: none"> • Şahin Y., “Kompozit malzemeler giriş”, Seçkin, Ankara, 2006 • William D., Callister Jr., “Materials Science and Engineering an İntroduction”, Seventh Edition, Wiley,2007 • Wessel, J. K. and Wessel, J. K., Handbook of Advanced Materials, Wiley, John&Sons, 2004. • Pilato, L. A. and Michno, M. J., Advanced Composite Materials, Cambridge University Press, 1994. 								
Assessment Criteria							<i>If and, mark (X)</i>	Percent %	
	Midterm Exams						X	40	
	Quizzes						-	-	
	Homeworks						-	-	
	Project						-	-	
	Term Paper						X	20	
	Laboratory Work						-	-	
	Other						-	-	
	Final exam						X	40	
Instructor	Assistant Prof. Dr. Filiz DEREKAYA								

Week	Subjects
1-3	The concept of workability. Experiments with chip lift and without chip lift.
4-7	Metal cutting mechanics. Chip formation. Team Cracks and affects on the chips morphology. Team wear. Cutting fluids. Processing economy. The integrity of the processed surface. Parameters of the surface motif.
8-10	Surface condition after machining. The methods for using in order to determine the processed surfaces.
10-14	Metal matrix composites (MMC). Traditional production methods and processability. Geleneksel olmayan üretim yöntemleri ve işlenebilirlik .