

	Course name: MCE 438 Computer Aided Manufacturing (CAM)		Department: Mechanical Engineering		Semester		
					8		
	Methods of Education					Credit (ECTS)	
	Lecture	Recitation/ (Etud)	Lab	Project/Field Study	Homework	Other	Total
42	32	-		46		120	
Language	English						
Compulsory/Elective	Elective						
Prerequisites	None						
Course Contents	<p>Definition of the geometries and designs in CAD/CAM environment, 2D and 3D design commands and dimension, 3D modelling and commands, making file, modifying and helping commands, tool selection and tool design, geometry and process definition, creation of the cutting tool position information, start point definition, tool start plane and cavity plane information, cutting parameters definition, the methods of the cutting tool approach to work piece, plunge and retract, profile machining for prismatic parts, slotting, pocketing, facing, drilling and machining methods, face turning, profile turning, grooving, drilling, internal and external threading process and parting off methods for cylindrical parts, using of the simulation modules in the CAD/CAM packages, post definition in the CAD/CAM packages, automatic CNC code generation, sending of the CNC part programmes to CNC machines with aid of DNC and RS-232, data transfer to CNC control panels and definition of the procedure, definition of the reference point of the work piece on CNC machine.</p>						
Course Objectives	Being able to perform all 2D and 3D designs and their machining operations using a CAD/CAM package.						
Learning Outcomes and Competences	Being able to generate tool paths doing 2D and 3D designs in a CAD/CAM package. To send part programmes to CNC machine and being able to machine parts.						
Textbook and /or References	<ul style="list-style-type: none"> • MASTERCAM ile Tasarım ve Üretim Modelleme, M., Gülesin, A., Güllü, Ö., Avcı, G., Akdoğan, Asil Yayın Daıtım, Ankara, 2005. • Mastercam ve CNC Programlama Cilt 1, M., NALBAN T, Beta Basım Yayım, Ankara, 2002 • Mastercam ve CNC Programlama Cilt 2, M., NALBAN T, Beta Basım Yayım, Ankara, 2003 • MASTERCAM Torna Modülü CNC Programlama 3, M., NALBAN T, Alfa Yayınları, Ankara, 2005 • MASTERCAM, K., Gök, A., Gök, Pusula Yayınları, İstanbul, 2004 						
Assessment Criteria			If any, mark as (X)		Percentage (%)		
	Midterm Exams		X		30		
	Quizzes						
	Homeworks		X		20		
	Projects						
	Term Paper						
	Laboratory work						
	Other						
Final Exam		X		50			
Instructors							