

CUTTING TOOLS TECNOLOGY

1	Course Title:	CUTTING TOOLS TECNOLOGY	
2	Course Code:	MKNS216	
3	Type of Course:	Optional	
4	Level of Course:	Short Cycle	
5	Year of Study:	2	
6	Semester:	4	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
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. Yahya Işık	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	Doç. Dr. yahya IŞIK yyisik@gmail.com	
17	Website:		
18	Objective of the Course:	Between machine tool, cutting tool and the workpiece material to understand the relationship in machining	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	In machining process to understand the role and effects of cutting parameters on cutting tool
		2	Make the selection of the cutting tool and to identify factors that influence the choice of cutting tool.
		3	Design knowledge to work to obtain the appropriate cutting tool, reduce the cost of cutting tools
		4	Learn about the norms of the cutting tool
		5	The ability to analyse between machine, cutting tool and workpiece material relationship in machining processing.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Mechanics of metal cutting and chip formation		
2	The concept of workability and machinability parameters		
3	Tool life and tool life models		
4	Cutting forces, the force measurement cutting power in machining processes		

5	The effects of machining parameters for cutting processes, types of chip	
6	Heat and temperature distribution, temperature effects on cutting tool.	
7	Measurement of surface roughness and surface quality of the calculation	
8	Materials of cutting tools.	
9	The ideal cutting tool characteristics, tool geometry, the effect of chip angle.	
10	According to the workpiece material norms of ISO	
11	Cutting tool selection and tool selection criteria	
12	the effects of coasting angle, positive and negative cutting tool. the effects of the edge radyüse to cutting processes.	
13	Effects of coating methods and coating of cutting tool	
14	Standards of the cutting insert and tool holder	
22	Textbooks, References and/or Other Materials:	<p>Modern Methods of Machining, Prof. Dr. M. Cemal ÇAKIR, 2000.</p> <p>Modern principles of metal cutting, Prof. Dr. M. Cemal ÇAKIR, 2000.</p> <p>Tool Design Lecture notes, Prof. Dr. Ulvi ŞEKER, Gazi University, 2006.</p> <p>Cutting Tool Technology, Doç. Dr. Yahya IŞIK, Uludag University publications, 2003.</p>
23	Assesment	
TERM LEARNING ACTIVITIES		NUMBE R
Midterm Exam		1
Quiz		0
Home work-project		0
Final Exam		1
Total		2
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	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	12	2.00	24.00
Homeworks	4	5.00	20.00
Projects	0	0.00	0.00
Field Studies	4	2.00	8.00
Midterm exams	1	2.00	2.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			84.00
Total work load/ 30 hr			2.80
ECTS Credit of the Course			3.00

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	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	4	0	0	0	0	0	0	0	0	0	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				