CNC MILLING MACHINE TECHNOLOGY

1	Course Title:	CNC MILLING MACHINE TECHNOLOGY
2	Course Code:	MKNZ208
3	Type of Course:	Compulsory
4	Level of Course:	Short Cycle
5	Year of Study:	2
6	Semester:	4
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	1
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Doç.Dr. ABDİL KUŞ
15	Course Lecturers:	DOÇ.DR. ABDİL KUŞ
16	Contact information of the Course Coordinator:	abdilkus@uludag.edu.tr, Uludağ Üniversitesi, Teknik Bilimler MYO, Görükle-BURSA Tel: 2942344
17	Website:	
18	Objective of the Course:	This course is preparation for work with the CNC milling machine, the program aimed to gain the competencies to make writing CNC programs and production.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	To prepare work for the CNC Milling machine
	2	Write programs for CNC Milling Machine
	3	Production in the CNC machines
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21	Course Content:

Course Content:

Week	Theoretical	Practice
1	CNC Milling machine features and parts.	Operation principles of the CNC Milling machine.
2	Types of control panels, buttons, and features.	Coordinate axes of the machine and reference points.
3	Cutter types, properties and possible uses.	Tool compensation settings, tool holders.
4	Resetting properties of the elements used.	Reset the track to be processed according tothe team.

5	Tool overall processing account.	Cutting depth, angle, and progress intreatment.
6	CNC Milling programming principles machines.	Processing and Preparation instructions.
7	Repeating courses and midterm exam	-
8	CNC Milling machines motion and coordinate system.	CNC milling machines application.
9	CNC programming using cycles.	CNC milling machines application.
10	Sub-programming technique and structure.	CNC milling machines application.
11	Sub-programming technique and structure.	CNC milling machines application.
12	CNC machines in the alarm and error codes.	CNC milling machines application.
13	Measuring and control	CNC milling machines application.
14	Measuring and control	CNC milling machines application.

22	Textbooks, References and/or Other Materials:	1-CNC milling operation manual book, 2-CNC milling usage manual book, 3-CNC Milling machine 4-Course notes 5-Gülesin, M., Güllü, A., Avcı, Ö., Akdoğan, G., “CNC Torna ve Freze Tezgahlarının Programlanması”, Asil Yayın Dağıtım, Ankara, 2008. COURSE EQUIPMENT: - CNC Milling machine, cutting

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	13	2.00	26.00
Practicals/Labs	13	2.00	26.00
Midterm Exam	1	20.00	
Self study and preperation	1	25.00	25.00
Quiz	0	0.00	
Homeworks	2	25.00	50.00
Home work project	1	20.00	
Projects	2	25.00	50.00
Final Exam	1	50.00	
Field Studies	0	0.00	0.00
Total	5	100.00	
Midterm exams	1	0.00	0.00
Contribution of Term (Year) Learning Activities to	50.00		
Others	0	0.00	0.00
Final Exams	1	0.00	0.00
Contribution of Final Exam to Success Grade	50.00		
Total Work Load			177.00
Total	100.00		
Total work load/ 30 hr			5.90
Measurement and Evaluation Techniques Used in the			
ECTS Credit of the Course			4.00

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	50.00
Quiz	0	0.00
Home work project	1	20.00
Final Exam	1	50.00
Total	5	100.00
Contribution of Term (Year) Learning Activities to	50.00	
Final Exams	1	0.00
Contribution of Final Exam to Success Grade	50.00	
Total	100.00	
Measurement and Evaluation Techniques Used in the		

24	**ECTS / WORK LOAD TABLE**

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

LO: Learning Objectives PQ: Program Qualifications

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