



T.C. ESKİŞEHİR OSMANGAZİ UNIVERSITY
ENGINEERING AND ARCHITECTURE FACULTY
MECHANICAL ENGINEERING DEPARTMENT

COURSE INFORMATION FORM

SEMESTER	Fall
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COURSE CODE	151815331	COURSE NAME	Manufacturing Engineering
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAG E
5	3			3	5	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY

Basic Science	Basic Engineering	Mechanical Engineering Subjects [if it contains considerable design, mark with (√)]	Social Science
		(X)	

ASSESSMENT CRITERIA

	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	50
	Quiz		
	Homework		
	Project		
	Report		
	Others (.....)		
FINAL EXAM		1	50

PREREQUIEITE(S)

COURSE DESCRIPTION

Manufacturing engineering course includes main subjects such as machining, cutting tools, manufacturing methods, machinability, machining economy.

COURSE OBJECTIVES

Students who successfully pass this course gain knowledge, skill and competency about machining and machine tools subjects.

**ADDITIVE OF COURSE TO APPLY
PROFESSIONAL EDUATION**

Students learn machining and applications. They can design and solve the new problems about machining and manufacturing.

COURSE OUTCOMES

Students can design, choose, and evaluate the machining processes.
Students can design the machining of a machine part with different specifications such as economy, time, labour etc.
Students learn the importance of following of professional subjects.
Students apply knowledge of mathematics, science, and engineering,
Students gain the ability of design and conduct problems as well as to analyze and interpret data, identify, formulate, and solve manufacturing problems.

TEXTBOOK

Modern imalatın prensipleri, M.P. Groover, 2015, Nobel Yayıncılık

OTHER REFERENCES

M.Cemal Çakır, Modern talaşlı imalatın yöntemleri, 2000. (Turkish)
M.Cemal Çakır, Modern talaşlı imalatın esasları, 2006. (Turkish)
T.Smith Graham, Cutting tool technology, 2009.

TOOLS AND EQUIPMENTS REQUIRED

Computer, Lecture Notes, Book, Projector

COURSE SYLLABUS	
WEEK	TOPICS
1	Introduction of machining
2	Fundamentals of machining –Cutting tool materials and wear
3	Fundamentals of machining –Cutting tool materials and wear
4	Selection of cutting tool
5	Machinability
6	Turning-mechanism and applications
7	Milling mechanism and applications
8	Mid-Term Examination
9	Mid-Term Examination
10	Advanced machining methods
11	Advanced machining methods
12	Advanced machining methods – High Speed machining
13	Cutting fluids and applications-Surface texture of machined parts
14	Machining and economy –Computer controlled machine tools
15,16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	Sufficient knowledge of engineering subjects related with mathematics, science and mechanical engineering; an ability to apply theoretical and practical knowledge on solving and modeling of mechanical engineering problems.	[]	[X]	[]
2	Ability to determine, define, formulate and solve complex mechanical engineering problems; for that purpose an ability to select and use convenient analytical and experimental methods.	[X]	[]	[]
3	Ability to design a complex system, a component and/or an engineering process under real life constraints or conditions, defined by environmental, economical and political problems; for that purpose an ability to apply modern design methods.	[]	[]	[X]
4	Ability to develop, select and use modern methods and tools required for mechanical engineering applications; ability to effective use of information technologies.	[X]	[]	[]
5	In order to investigate mechanical engineering problems; ability to set up and conduct experiments and ability to analyze and interpretation of experimental results.	[]	[X]	[]
6	Ability to work effectively in inner or multi-disciplinary teams; proficiency of interdependence.	[]	[X]	[]
7	Ability to communicate in written and oral forms in Turkish/English; proficiency at least one foreign language.	[]	[]	[X]
8	Awareness of life-long learning; ability to reach information; follow developments in science and technology and continuous self-improvement.	[]	[X]	[]
9	Understanding of professional and ethical issues and taking responsibility	[]	[X]	[]
10	Awareness of project, risk and change management; awareness of entrepreneurship, innovativeness and sustainable development.	[]	[]	[X]
11	Knowledge of actual problems and effects of engineering applications on health, environment and security in global and social scale; an awareness of juridical results of engineering solutions.	[]	[]	[X]
1:None. 2:Partially contribution. 3: Completely contribution.				

Prepared by: Assoc.Prof.Dr. Mustafa Ulutan

Date: 13/11/2017

Assist. Prof. Dr. Koray KILIÇAY

Signature(s):