NATIONAL QUALIFICATIONS FRAMEWORK FOR HIGHER EDUCATION IN TURKEY (NQF-HETR) – MECHANICAL ENGINEERING UNDERGRADUATE PROGRAM OUTCOMES RELATIONSHIPS AT IŞIK UNIVERSITY

Mechanical	PROGRAM OUTCOMES																											
Engineering	РО	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO
NQF-HETR LEVEL:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Bachelor (6)	(1a)	(1b)	(2a)	(2b)	(3a)	(3b	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)	(6c)	(7a)	(7b)	(7c)	(7d)	(7e)	(7f)	(8a)	(8b)	(9a)	(9b)	(10a)	(10b)	(10c)	(11a)	(11b)
KNOWLEDGE																												
(Theory/Conceptual)																												
1-Possess advanced level																											I	
theoretical and practical																											i	
knowledge supported by																											i	
textbooks with updated																											i	
information, practice																											ı	
equipment and other																											ı	
resources. SKILLS													_															
(Cognitive / Practical)																												
1-Use of advanced																												
theoretical and practical																											ı	
knowledge within the																											ı	
field.																											ı	ī.
2-Interpret and evaluate																											i	
data, define and analyze																											ı	
problems, develop																											ı	
solutions based on																											ı	
research and proofs by																											ı	
using acquired advanced																											ı	
knowledge and skills																											i	
within the field. 3- Analyze a system,																												-
component or process																											i	
and design a system,																											ı	
component or a process																											ı	
under realistic constraints																											ı İ	
by applying modern																											l	
design methods.																											l	
4- Select and use modern																												
techniques and tools								•																			ı İ	
needed for engineering							W																				l	
applications																												
5- Design and conduct																											l	
experiments, gather data,																											l	
analyze and interpret									•	•																	ı İ	
results.																												
COMPETENCES																												
Work Independently																												
and Take Responsibility																												

1-Work efficiently																	
individually and in multi- disciplinary teams.							(3)	•								1	
2-Access information and																	
conduct literature survey																i	
for this purpose, use																ı	
databases and other																	
information sources.																	
Learning Competences 1-Access information and			ı	ı				ı							Π	$\overline{}$	
conduct literature survey																ı	
for this purpose, use																ı	
databases and other					W							W				i I	
information sources.																ı	
2-Aware of the need for																\rightarrow	$\overline{}$
lifelong learning; follow																	
the developments in																	
science and technology																i I	
and updated continuously																	
3-Use theoretical and																	
applied knowledge in																ı	
mathematics, science and																ı	
engineering subjects																ı	
pertaining to the relevant																ı	
discipline in the solutions																ı	
of engineering problems.																	
4- Identify, define,																ı	
formulate and solve																ı	
engineering problems,																ı	
select and apply appropriate analytical																ı	
methods and modeling																ı	
techniques for this																ı	
purpose.																ı	
5- Analyze a system,																	
component or process																	
and design a system,																	
component or a process																	
under realistic constraints																	
by applying modern																	
design methods.														 	<u> </u>	<u>. </u>	
6- Select and use modern														-		,	
techniques and tools																	
needed for engineering																	
applications																	
7- Work efficiently																	
individually and in multi-																	
disciplinary teams.																	

Communication and Social Relations																
1-Use information and			_			1										
communication																
technologies together																
with computer software required by the discipline																
					W											
at least at the advanced																
level of European																
Computer Driving																
License.		-														
2-Communicate																
effectively in oral and																
written forms; use a																
foreign language at least																
at the general level B1 of																
the European Language		1														
Portfolio.																
3-Communicate by using																
engineering drawings.																
4- Access information		1														
and conduct literature																
survey for this purpose,																
use databases and other																
information sources.																
5- Aware of the effects of																
engineering solutions and																
applications on universal																
and social dimensions;																
recognize the subjects of																
entrepreneurship and																
innovation and know																
about the problems of the																
era.																
Field Specific																
Competences																
1-Aware of professional																
and ethical responsibility					<u></u>	<u> </u>							W		<u> </u>	
2-Aware of project																
management, workplace		1														
practices, health of		1														
employees,		1														
environmental and		1														
occupational safety;																
recognize the legal																
consequences of																
engineering practices.																
3- Aware of the effects of																
3- Aware of the cricets of	l l															

applications on universal and social dimensions; recognize the subjects of entrepreneurship and innovation and know about the problems of the era.																												
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b	(4a)	(4b)	(5a)	(5b)	(6a)	(6b)	(6c)	(7a)	(7b)	(7c)	(7d)	(7e)	(7f)	(8a)	(8b)	(9a)	(9b)	(10a)	(10b)	(10c)	(11a)	(11b)
	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

(Note: The numbers of outcomes given in parenthesis address the program outcome numbers of MÜDEK, which is the authorized agency of Turkey for evaluation and accreditation of engineering undergraduate programs)