INFORMATION ON THE MECHANICAL ENGINEERING MASTER DEGREE PROGRAM	
General Information	42 ECTS credit course work, a seminar speech and masters thesis research form the basis of the education
Program Purpose	We graduate mechanical engineers with mechanical and thermal design ability and experience of scientific/technical research
Degree Earned	Mechanical Engineer, MS
Level of Degree Earned	Master's Degree (NQF - HETR 7. Level)
Requirements and Rules of the Degree Earned	Based on the University regulations
Registration Admission Requirements	Based on the University regulations
Recognition of Prior Learning	Evaluated based on the course content
Examinations, Assessment and Grading	Based on the University regulations
Teaching Style	Full time education. Lectures, laboratory experiments and masters thesis research
Graduation Requirements	Based on the University regulations
Occupational Profiles of Graduated-Employment Opportunities	Graduates are employed by defence, automotive, machine production, energy and construction companies. They also pursue higher level of
Transition to a Upper Degree	Graduates can apply for Ph.D. education

Core Area	Category	Sub-category	Qualification	1	2	3	4	5	6	7	8	9	10
CORE AREA QUALIFICATIONS	INFORMATION	Theoretical - Factual	Achieves knowledge expansion and depth by doing scientific research in engineering field, assesses knowledge, interprets and applies.	X	X			X			X	X	X
			Has extensive knowledge about current techniques and methods applied in engineering and their limitations.		X						X		X
			Completes and applies the knowledge using scientific methods using limited or incomplete data; integrates knowledge of different disciplines.		X		X	X				X	
			Is aware of new and evolving practices of the profession and examines and learns them when necessary.				X	X		X		
	SKILLS	Cognitive - Applied	Completes and applies the knowledge using scientific methods using limited or incomplete data; integrates knowledge of different disciplines.		X		X	X				X	
			Builds engineering problems, develops methods to solve them, and applies innovative methods in solutions.	X	X			X			X	X	X
			Develops new and / or unique ideas and methods; develops innovative solutions in system, component or process design.		X	X					X		X
			Designs and implements analytical, modeling and experimental based research; analyzes and interprets complex situations encountered in this process.	X	X	X					X	X	X
	COMPETENCIES	Ability to work independently and to take responsibility	Leads in multidisciplinary teams, develops solution approaches in complex situations and take responsibility.				X						X
			Achieves knowledge expansion and depth by doing scientific research in engineering field, assesses knowledge, interprets and applies.	X	X						X	X	X
			Completes and applies the knowledge using scientific methods using limited or incomplete data; integrates knowledge of different disciplines.		X		X	X				X	
			Builds engineering problems, develops methods to solve them, and applies innovative methods in solutions.	X	X			X			X	X	X
			Develops new and / or unique ideas and methods; develops innovative solutions in system, component or process design.		X	X					X		X
			Designs and implements analytical, modeling and experimental based research; analyzes and interprets complex situations encountered in this process.	X	X	X					X	X	X
		Learning Competence	Is aware of the new and developing practices of the profession; it examines and learns them when necessary.		X						X		
			Completes and applies knowledge using scientific methods using limited or incomplete data; integrates knowledge of different disciplines.		X		X	X				X	
			Builds engineering problems, develops methods to solve them, and applies innovative methods in solutions.	X	X			X			X	X	X
			Develops new and / or unique ideas and methods; develops innovative solutions in system, component or process design.		X	X					X		X
		Communication and…	Communicates verbally and in writing using a foreign language at least at the European Language Portfolio B2 General Level.							X			
			Transcribes the processes and outcomes of his or her work in a systematic and explicit way, either in writing or verbally, in the national or international contexts in the area or outside the field.							X			
			Describes the social and environmental dimensions of engineering applications.						X				
			Achieves knowledge expansion and depth by doing scientific research in engineering field, assesses knowledge, interprets and applies.	X	X						X	X	X

		Category	Description										
		Communication and Social Competence	Completes and applies the knowledge using scientific methods using limited or incomplete data; integrates knowledge of different disciplines.		X		X	X				X	
			Builds engineering problems, develop methods to solve them, and applies innovative methods in solutions.	X	X			X			X	X	X
			Has extensive knowledge about current techniques and methods applied in engineering and their limitations.								X		X
			Designs and implements analytical, modeling and experimental based research; analyzes and interprets complex situations encountered in this process.	X	X	X					X	X	X
		Field Specific Competence	Cbserves social, scientific and ethical values in the process of collecting, interpreting and announcing data and in all professional activities.						X				
			Complete and applies the knowledge using scientific methods using limited or incomplete data; integrates knowledge of different disciplines.		X		X	X				X	
			Leads in multidisciplinary teams, develops solution approaches in complex situations and take responsibility.				X						X
			Transcribes the processes and outcomes of his or her work in a systematic and explicit way, either in writing or verbally, in the national or international contexts in the area or outside the field.							X			

Program Qualifications	
1	An ability to apply knowledge of mathematics, science, and engineering
2	An ability to perform theoretical or experimental research, as well as to interpret data
3	An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4	An ability to function on multidisciplinary teams
5	An ability to formulate, and solve engineering problems
6	An understanding of professional and ethical responsibility
7	An ability to communicate effectively in English and in Turkish
8	An ability to use the techniques, skills, and modern engineering tools necessary for engineering research
9	An ability to apply scientific research metodology
10	An ability to use the analytical, computational and experimental techniques and resolve issues in this process

All Courses in the Program		Program Qualifications									
Code	Course Name	1	2	3	4	5	6	7	8	9	10
MAK 501	Engineering Mathematics	4	3	1	2	3	1	1	2	3	2
MAK 502	Numerical Methods in Engineering	4	4	1	2	4	1	1	3	3	2
MAK 503	Theory of Elasticity	5	5	3	1	5	2	2	2	2	3
MAK 509	Continuum Mechanics	5	4	2	2	4	1	2	2	2	3
MAK 512	Finite Element Anaysis in Solid Mechanics	5	5	5	2	5	2	2	5	3	3
MAK 516	Heat Treatment	5	4	4	3	3	2	2	2	4	3
MAK 540	Advance Dynamics	5	4	4	1	4	1	2	2	2	3
MAK 546	Fluid Power Control	5	4	4	1	4	1	2	2	2	3
MAK 549	Advanced System Dynamics and Optimum Control	5	4	4	2	4	2	2	2	2	3
MAK 550	Measurement and Instrumentation	5	3	3	4	2	2	2	3	3	3
MAK 552	Introduction to Biomechanics	5	4	4	3	3	3	2	3	4	3
MAK 553	Advanced Biomechanics	5	4	4	3	4	3	2	3	4	3
MAK 554	Clinical Biomechanics of Spine	5	4	4	3	4	3	2	3	4	3
MAK 562	Advanced Fluid Mechanics	5	5	4	1	5	2	2	3	2	3
MAK 565	Convective Heat Transfer	5	5	4	1	5	2	2	3	2	3
MAK 572	Boundary Layer Theory	5	5	4	1	5	2	2	4	3	3
MAK 570	Combustion	5	5	4	2	5	3	2	4	3	3
MAK 597	Seminar							5			
MAK 599	Thesis	5	5	5	3	5	5	5	5	5	5