AGU Graduate School of Engineering & Science
Mechanical Engineering M.Sc. Program

Program Records

Ek-2

About the Program	The Mechanical Engineering Department's MSc program at Abdullah Gul University (AGU) places a strong emphasis on postgraduate study for innovative research. Current high-growth areas such as material science, manufacturing, energy, statics, dynamics, mechanics, thermodynamics, and heat transfer are the focus of our study. Participation in supported research initiatives is encouraged by all graduate students. Research projects are funded by TUBITAK, BAP, EU Framework Programs, and industry. All master's students are strongly encouraged to apply for TUBITAK 2210, 2215, and 2224 scholarships. The reputation of AGU's Mechanical Engineering (ME) MSc program will be shaped by the caliber of its graduate students and staff. One of the greatest ME programs will be developed with the assistance of talented, driven, and aspirational graduate students and distinguished professors in their field.
Program Objectives	- Keep up with the most recent advancements in their area of expertise in order to write for the literary world. - Carry out independent research and teaching in universities, R&D centers, and/or industrial firms both domestically and abroad. - Educate individuals to become creative, inquisitive, industrious in both national and international arenas, equipped with global knowledge and abilities, and able to be leaders and pioneers in their field.
Qualification Awarded	Graduate; Master of Science (M.Sc.) Degree / M.Sc. in Mechanical Engineering
Length of Program & Credits	2 years 120 ECTS
Level of Qualification	Second Cycle (Master) Degree; EQF-LLL: Level 7, QF-EHEA: Level 2
Mode of Study	Full Time
Field of Study	Engineering
Admission Requirements	An undergraduate diploma; a passing or acceptable score from the English Proficiency Exam of Abdullah Gül University, YDS (Foreign Language Exam), YÖKDİL (Foreign Language Exam for Higher Education Institutions), or TOEFL; an acceptable score from the Academic Personnel and Postgraduate Education Entrance Exam (ALES - Mathematical Score Type); a passing score at the oral interview for the concerned master's program. International students are admitted based on the criteria posted by the university.
Recognition of Credit Mobility	Course Substitution: For course substitutions, the medium of instruction of a previous course must be English, its final grade must be at least 3.00 out of 4.00, and approval of a relevant University Board is required. Lateral Transfer: Spending at least one semester at the master's program currently enrolled in, taking at least 2 credit courses, and passing them with at least 3.00 out of 4.00, and approval of a relevant University Board is required.
Graduation Requirements & Regulations	Successful completion of 2 compulsory courses, 5 elective courses (at least 3 of them must be taken from the ME department; referring to the Curriculum section below for research track specifications), Seminar course, and Ethics course; a minimum grade point average (GPA) of 3.00; earning 120 ECTS credits; successful submission of a thesis.
Occupational Profiles of Graduates	The program aims to inspire students to undertake pioneering research in Mechanical Engineering. The program, conducted in English, requires candidates to submit an original thesis based on research or application in related fields for the MSc degree. Graduates have the opportunity to pursue doctoral studies at AGU or top

	global universities. Furthermore, they are well-equipped to work in advanced technology companies working in the field Energy, Automotive, Manufacturing, Defense Industry etc. both in Türkiye and worldwide.
Access to Further Studies	Graduates may apply to third cycle (Level 8) degree programs.
Assessment & Grading Policy	Based on Abdullah Gul University Graduate Education and Examination Regulation rules.

Letter Grade	Coefficient	Score	Status
A	4,00	90-100	Pass
A-	3,67	87-89	Pass
B+	3,33	83-86	Pass
B	3,00	80-82	Pass
B-	2,67	77-79	Pass
C+	2,33	73-76	Pass
C	2,00	70-72	Failed
C-	1,67	64-69	Failed
D+	1,33	56-63	Failed
D	1,00	50-55	Failed
F	0,00	0-49	Failed

Information letters	Explanation
NA	Not Attended
W	Withdrawn
I	Incomplete
T	Transferred
S	Satisfactory
U	Unsatisfactory
P	In Progress
EX	Exempt

Program Outcomes

PO1. Conducts scientific research in the field of Mechanical Engineering, expands their knowledge, applies the information they have learned, interprets, and evaluates it.

PO2. Gains comprehensive knowledge about the limitations of both traditional and modern methods applied in mechanical engineering.

PO3. Complete and apply incomplete and limited data using scientific methods, integrating knowledge acquired from different disciplines.

PO4. Aware of new and developing applications in the field of mechanical engineering and can utilize them when necessary.

PO5. Designs, analyzes, defines, and formulates complex mechanical engineering problems and develops innovative, original, and up-to-date ideas and methods to solve these problems.

PO6. Designs and implements new projects based on theoretical, experimental, and modeling approaches related to current topics; gains the ability to solve problems encountered during these processes.

PO7. Can work effectively in disciplinary and interdisciplinary teams, perform individually, and take on leadership roles

PO8. Communicates effectively both orally and in writing; conveys the processes and results of their work in at least one foreign language through reports or articles, and presents them in national and international settings.

PO9. Recognizes the social, environmental, health, safety, legal, and sustainability dimensions of engineering applications, as well as project management and professional practices.

PO10. Prioritize ethical values in all stages of data collection, interpretation, disclosure, and in all professional activities.

TQF-HE & Program Outcomes Coverage		**Knowledge**	**Skills**	**Competences**			
		Theoretical Conceptual	Cognitive Practical	Work Independently and Take Responsibility		Communication and Social	Field Specific
					Learning		
	P01	X			X		
	PO2	X			X		
	PO3	X			X		
	PO4	X			X		
	PO5	X	X	X			X
	PO6	X	X		X		X
	PO7		X	X			X
	PO8				X	X	
	PO9		X			X	
	PO10		X	X		X	X

Institutional & Program Outcomes (IOs) * Coverage		IO1	IO2	IO3	IO4	IO5	IO6	IO7
	P01	X						
	PO2	X						
	PO3	X						
	PO4	X				X		
	PO5	X	X	X				
	PO6	X	X	X		X		
	PO7	X	X					
	PO8			X	X	X	X	
	PO9				X	X	X	
	PO10			X			X	X

* Link for the AGU Institutional Student Learning Outcomes (IOs)
https://cat.agu.edu.tr/Pages/KurumsalOgrencmeCiktilari.aspx?lang=en-US

Curriculum (Materials, Manufacturing, Solid Mechanics and Design Track / Dynamics, Control and Mechatronics Track / Heat Transfer, Fluid Mechanics, Energy Track)

Semester	Code	Course		T	P	C	ECTS
1st	GCC 1001	Introduction to Scientific Research Methods and Scientific Publication Ethics		3	0	3	7,5
	ME 501	Advanced engineering mathematics		3	0	3	7,5
	ME 502	Machine Learning Based Design and Optimization		3	0	3	7,5
	ME 5X1	Elective*		3	0	3	7,5
		Semester Credits	**12**	12	0	**12**	**30**
2nd	ME 5T1	Elective****		3	0	3	7,5
	ME 5T2	Elective****		3	0	3	7,5
	X-1	Elective**		3	0	3	7,5
	X-2	Elective***		3	0	3	7,5
		Semester Credits	**12**	12	0	**12**	**30**
3rd - 4th	ME 500	Seminar		0	2	0	5
	ME 597	Master's Degree Specialization		4	0	0	10
	ME 599	M.Sc. Thesis		0	1	0	45
		Semester Credits	**7**	4	3	**0**	**60**
		TOTAL	**24**	**28**	**3**	**24**	**120**

Curriculum Summary (Materials, Manufacturing, Solid Mechanics and Design Track / Dynamics, Control and Mechatronics Track / Heat Transfer, Fluid Mechanics, Energy Track)

%		Courses	Credit	ECTS
6.25	**YÖK/HEC Courses** GCC 1001 Introduction to Scientific Research Methods and Scientific Publication Ethics	1	3	7,5
6.25	**Compulsory** ME 501	1	3	7,5
6.25	**Compulsory** ME 502	1	3	7,5
31.25	**Electives** ME 5X1, ME 5T1, ME 5T2 X-1, X-2	5	15	37.5
4.17	**Seminar** ME 500	1	0	5
8.33	MSc Special Topics ME 597	1	0	10
37.5	**MSc Thesis**	1	0	45
100	**TOTAL**	**11**	**24**	**120**

* ME 5X1 is an elective course from the Mechanical Engineering Department.
** X-1 is a technical elective course from one of the departments within the Institute of Science.
*** X-2 is an independent elective course from any institute within AGU.
**** Students are required to take at least two elective courses related to their master's thesis topic under the supervision of their advisor. Therefore, electives ME 5T1 and ME 5T2 must be related to the student's master's thesis topic and shall be chosen from the relevant track. For example, ME 5T2 must be chosen from the same track pool as ME 5T1.

The semester in which the courses will be offered is under the authority of the Program Executive Board.

Track Name	Course Code
Materials, Manufacturing, Solid Mechanics, and Design Track	ME 510, ME 511, ME 512, ME 513, ME 514, ME 526, ME 527, ME 528, ME 529, ME 530, ME 531, ME 546, ME 547
Dynamics, Control, and Mechatronics Track	ME 556
Heat Transfer, Fluid Mechanics, Energy Track	ME 566, ME 567, ME 576, ME 577, ME 586, ME 587