

FACULTY OF ENGINEERING AND NATURAL SCIENCES DEPARTMENT OF MECHATRONICS ENGINEERING MECHATRONICS ENGINEERING PROGRAMME (IN ENGLISH)

UNDERGRADUATE CURRICULUM

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Semester 1							
Code	Course Title	T	A	C	ECTS	Status	Prerequisite
MATH113	Mathematics I	3	2	4	6	Compulsory	
PHYS113	Physics-I	2	2	3	5	Compulsory	
MCHT103	Introduction to MCHT Engineering	2	0	2	7	Compulsory	
CHM103	Chemistry	2	2	3	5	Compulsory	
BBA222	Entrepreneurship Aplications	2	0	2	3	Compulsory	
	Foreign Language Elective	2	2	3	4	Elective	
		Total Cre	dit	17	30		

Semester 3							
Code	Course Title	T	A	C	ECTS	Status	Prerequisite
MATH215	Mathematics III	2	2	3	6	Compulsory	MATH113
EEE207	Circuit Analysis	3	0	3	5	Compulsory	
CMPE152	Computer Programming	2	2	3	5	Compulsory	
ME201	Computer Aided Technical Drawing	2	2	3	5	Compulsory	
MCHT231	Engineering Mechanics	3	0	3	5	Compulsory	
MATH220	Numerical Methods	2	2	3	4	Compulsory	MATH113
	Total 6	Cre	dit	18	30		

Semester 5	5						
Code	Course Title	T	A	C	ECTS	Status	Prerequisite
EEE301	Electromechanical Energy Conversion	3	2	4	7	Compulsory	
EEE303	Control Systems	3	0	3	7	Compulsory	
EEE305	Electronic Circuits II	3	2	4	6	Compulsory	
ME309	Dynamics	3	0	3	5	Compulsory	
EEE311	Digital Signal Processing	2	2	3	5	Compulsory	
		Total Cree	dit	17	30		

Course Title	T	A	C	ECTS	Status	Prerequisite
Mechatronics Engineering Design	0	2	1	4	Compulsory	
Departmental Elective / Faculty Elective	3	0	3	5	Elective	
Departmental Elective / Faculty Elective	3	0	3	5	Elective	
Science, Technology and Ethics	2	0	2	8	Compulsory	
Atatürk Principles and The History of Turkish Revolution I (*)	2	0	2	2	Compulsory	
Turkish-I (*)	2	0	2	2	Compulsory	
Internship 1	0	0	0	4	Compulsory	
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Total C	re	dit	13	30		
	Mechatronics Engineering Design Departmental Elective / Faculty Elective Departmental Elective / Faculty Elective Science, Technology and Ethics Attattrk Principles and The History of Turkish Revolution I (*) Turkish-I (*) Internship 1	Mechatronics Engineering Design 0 Departmental Elective / Faculty Elective 3 Departmental Elective / Faculty Elective 3 Science, Technology and Ethics 2 Attathr Principles and The History of Turkish Revolution I (*) 2 Turkish-I (*) 2 Internship I 0	Mechatronics Engineering Design 0 2 Departmental Electrive / Faculty Elective 3 0 Departmental Electrive / Faculty Elective 3 0 Science, Technology and Ethics 2 0 Attatrik Principles and The History of Turkish Revolution I (*) 2 0 Turkish-I (*) 2 0 0 Internship I 0 0	Mechatronics Engineering Design 0 2 1 Departmental Electrice / Faculty Electrice 3 0 3 Departmental Electrice / Faculty Electrice 3 0 3 Science, Technology and Ethics 2 0 2 0 2 Attattrk Principles and The History of Turkish Revolution 1(*) 2 0 2 0 2 0 2 Internship 1 0 0 0 0 0	Mechatronics Engineering Design 0 2 1 4 Departmental Elective Faculty Elective 3 0 3 3 5 Departmental Elective Faculty Elective 3 0 3 5 5 Science, Technology and Ethics 2 0 2 0 2 2 Auturk Principles and The History of Turkish Revolution I (*) 2 0 2 2 2 Turkish-I (*) 2 0 2 2 2 Internship I 0 0 0 4 4	Mechatronics Engineering Design 0 2 1 4 Compulsory Departmental Elective / Faculty Elective 3 3 5 Elective Departmental Elective / Faculty Elective 3 0 3 5 Elective Departmental Elective / Faculty Elective 3 0 3 5 Elective Science, Technology and Ethics 2 0 2 2 8 Compulsory Attathrk Principles and The History of Turkish Revolution I (*) 2 0 2 2 Compulsory Turkish-I (*) 0 0 0 4 Compulsory Internship 1 0 0 0 4 Compulsory

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
MATH114	Mathematics II	3	2	4	6	Compulsory	MATH113
PHYS114	Physics-II	2	2	3	5	Compulsory	PHYS113
EEE104	Logic Circuit Design	2	2	3	8	Compulsory	
CLP001	Career and Life Planning	0	2	1	3	Compulsory	
	University Elective	3	0	3	4	Elective	
	Foreign Language Elective	2	2	3	4	Elective	
		Total Cred	lit	17	30		

Semester 4							
Code	Course Title	T	A	C	ECTS	Status	Prerequisite
MATH216	Mathematics IV	2	2	3	6	Compulsory	MATH114
EEE212	Electronic Circuits I	3	2	4	5	Compulsory	
EEE214	Signals and Systems	3	0	3	7	Compulsory	MATH113
EEE220	Electromagnetic Theory	2	2	3	6	Compulsory	MATH113
MCHT236	Mechatronic Systems Design	2	2	3	7	Compulsory	
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		Total Cre	dit	16	31		

Semester 6								
Code	Course Title	1	Γ	١	C	ECTS	Status	Prerequisite
EEE314	Power Electronics & Motion Control Systems		3	2	4	8	Compulsory	
ME310	Theory of Machines		3	0	3	6	Compulsory	
MCHT332	Introduction to Thermal Systems Engineering		3	0	3	6	Compulsory	
MCHT302	Mechatronics Components & Instruments		2	2	3	5	Compulsory	
EEE310	Microcontrollers		2	2	3	5	Compulsory	
		Total Cr	ed	it	16	30		

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
MCHT498	Mechatronics Engineering Graduation Project	0	4	2	4	Compulsory	
	Departmental Elective / Faculty Elective	3	0	3	5	Elective	
	Departmental Elective / Faculty Elective	3	0	3	5	Elective	
IE367	Occupational Health and Safety	3	0	3	5	Compulsory	
ATA112	Atatürk Principles and The History of Turkish Revolution II (*)	2	0	2	2	Compulsory	
TRD112	Turkish-II (*)	2	0	2	2	Compulsory	
INT002	Internship 2	0	0	0	4	Compulsory	
MCHT494	Seminar	0	0	0	3	Compulsory	
	Total C	re	dit	15	30		

 $Abbreviations: T=Weekly \ hours: theoretical; A=Weekly \ hours: application; C=Credits \ in \ Turkish \ System; ECTS=European \ Credit \ Transfer \ System; C=Credit \ Turkish \ System; ECTS=European \ Credit \ Transfer \ System; ECTS=European \ Credit \ System; ECTS=European \ Credit \ Transfer \ System; ECTS=European \ Credit \ System; ECTS=European \ Credit$



ELECTIVE COURSES

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Code	Course Title				C	ECTS	Status	Prerequisite
		SECOND FOREIGN LANGUA	١GI	Ε				
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		DEPARTMENTAL ELECTI	VE					
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Semester	- 3							•
Code	Course Title		T	Α	C	ECTS	Status	Prerequisite
		SECOND FOREIGN LANGUA	AGI	Ē				
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	•	DEPARTMENTAL ELECTI	VE					
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	•	FACULTY ELECTIVE		_	_		•	•
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Code	Course Title		T	A C	ECTS	Status	Prerequisite				
	SECOND FOREIGN LANGUAGE										
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	DEPARTMENTAL ELE	CTIVE	E								
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	FACULTY ELECTI	VE									
	UNIVERSITY ELECT	TIVE									
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Code	Course Title SECOND FOREIGN LA			C	ECTS	Status	Prerequisite
	SECOND FOREIGN LA	NGUAGE	_	_			1
	DEPARTMENTAL ELI	ECTIVE					
MCHT480		3	0	3		Elective	1
MCHT482	Mechatronics Engineering O'COOP 1	3	0	3		Elective	
MCHT482 MCHT484	Mechatronics Engineering O'COOP 2 Mechatronics Engineering O'COOP 3	3	0	3		Elective	-
MCHT486		3	0	3		Elective	
	Mechatronics Engineering O'COOP 4			3			
CENG482	Embedded Systems	3	0			Elective	-
CENG218	Programming Languages and Applications	3	0	3		Elective	
MCHT460	Industrial Robotics and Automation	3	0	3		Elective	
CENG489	Pattern Recognition	3	0	3		Elective	
MCHT462	Autonomous Mobile Robots	3	0	3		Elective	
MCHT477	Introduction to Robotics	3	0	3		Elective	
MCHT464	Computer Vision	3	0	3		Elective	
MCHT465	Introduction to Deep Learning	3	0	3		Elective	
MCHT479	Introduction to AI Systems	3	0	3		Elective	
MCHT478	Phyton for Engineers	3	0	3		Elective	
EEE304	Digital Design	3	0	3	5	Elective	
	FACULTY ELECT	IVE					-
ENG368	Wireless Networks	3		3		Elective	
ENG302	Fuzzy Logic and Its Applications	3	0	3		Elective	
ENG304	Technology Management	3	0	3	5	Elective	
ENG308	Energy Policy	3	0	3	5	Elective	
ENG310	Sustainable Energy & Environment	3	0	3	5	Elective	
ENG370	Principles of Machine Learning	3	0	3	5	Elective	
ENG301	Management for Engineers	3	0	3	5	Elective	
ENG303	Project Management	3	0	3	5	Elective	
ENG353	Electric Drives	3	0	3		Elective	
ENG351	Digital Filters and Systems	3	0	3		Elective	
ENG355	Image Processing	3	0	3		Elective	
ENG367	Energy Laws and Regulations	3	0	3		Elective	
ENG476	Applied Mathematics	3	0	3		Elective	1
ENG477	Materials Science for Engineers	3	0	3		Elective	
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ENG380	Introduction to Sustainability		0	3	5	Elective	

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Semester	r 2							
Code	Course Title		1	$\Gamma \mid A$	\ C	ECTS	Status	Prerequisite
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		DEPARTMENTAL EL	ECTIVI	Ξ				
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		UNIVERSITY ELEC	TIVE					
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Semester	r 4							•
Code	Course Title		1	$\Gamma \mid A$	V C	ECTS	Status	Prerequisite
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	•	DEPARTMENTAL EL	ECTIVI	3				•
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	•	FACULTY ELECT	TIVE					
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		UNIVERSITY ELEC	TIVE					
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Semester	6							
Code	Course Title			T	A C	ECTS	Status	Prerequisite
		SECOND FORI	EIGN LANGUA	GI	3			
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Code	Course Title	T	A	C	ECTS	Status	Prerequisite
	SECOND FOREIGN	LANGUAG	E	_			
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	DEPARTMENTAL	ELECTIVE					
MCHT480	Mechatronics Engineering O'COOP 1	3	0	3		Elective	
MCHT482	Mechatronics Engineering O'COOP 2	3	0	3	5	Elective	
MCHT484	Mechatronics Engineering O'COOP 3	3	0	3	5	Elective	
MCHT486	Mechatronics Engineering O'COOP 4	3	0	3	5	Elective	
CENG482	Embedded Systems	3	0	3	- 5	Elective	
CENG218	Programming Languages and Applications	3	0	3	5	Elective	
MCHT460	Industrial Robotics and Automation	3	0	3	5	Elective	
CENG489	Pattern Recognition	3	0	3	- 5	Elective	
MCHT462	Autonomous Mobile Robots	3	0	3	5	Elective	
MCHT477	Introduction to Robotics	3	0	3	5	Elective	
MCHT464	Computer Vision	3	0	3	- 5	Elective	
MCHT465	Introduction to Deep Learning	3	0	3	- 5	Elective	
MCHT479	Introduction to AI Systems	3	0	3	5	Elective	
MCHT478	Phyton for Engineers	3	0	3	5	Elective	
EEE304	Digital Design	3	0	3	5	Elective	
	FACULTY EL	ECTIVE	•	_	•	•	
ENG368	Wireless Networks	3	0	3		Elective	
ENG302	Fuzzy Logic and Its Applications	3	0	3	5	Elective	
ENG304	Technology Management	3	0	3	5	Elective	
ENG308	Energy Policy	3	0	3	5	Elective	
ENG310	Sustainable Energy & Environment	3	0	3	5	Elective	
ENG370	Principles of Machine Learning	3	0	3	5	Elective	
ENG301	Management for Engineers	3	0	3	5	Elective	
ENG303	Project Management	3	0	3	5	Elective	
ENG353	Electric Drives	3	0	3	5	Elective	
ENG351	Digital Filters and Systems	3	0	3	5	Elective	
ENG355	Image Processing	3	0	3		Elective	
ENG367	Energy Laws and Regulations	3	0	3		Elective	
ENG476	Applied Mathematics	3		3	5	Elective	
ENG477	Materials Science for Engineers	3	0	3	5	Elective	
	UNIVERSITY E	LECTIVE	_				_