VOCATIONAL SCHOOL OF INFORMATION TECHNOLOGIES

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Deputy Director : Dr. Lecturer Elif KORUYUCU
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DEPARTMENT OF COMPUTER TECHNOLOGIES

COMPUTER PROGRAMMING PR.

PROGRAM

	I.Semester				**II.Semester**		
BTP101	Algorithms and Introduction to Programming	3+1	5.0	BİL181	Internet Programming I	3+1	4.0
BTP103	Integrated Office	3+1	4.0	BTP102	Database and Management Systems I	3+1	4.0
ELO103	Digital Electronics	3+1	4.0	BTP104	Data Structures and Programming	3+1	4.0
İNG187 (Eng)	English I	3+0	3.0	BTP146	Python Programming I	2+1	2.0
MAT1001	Mathematics I	3+0	4.0	İNG188 (Eng)	English II	3+0	3.0
TAR165	Atatürk's Principles and History of Turkish Revolution I	2+0	2.0	İSG401	Occupational Health and Safety I	2+0	2.0
TEK107	Scientific Principles of Technology	3+1	4.0	MAT1002	Mathematics II	3+0	4.0
TÜR125	Turkish Language I	2+0	2.0	TAR166	Atatürk's Principles and History of Turkish Revolution II	2+0	2.0
	Seçmeli Dersler	--	2.0	TÜR126	Turkish Language II	2+0	2.0
					Seçmeli Dersler	--	3.0
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			30.0				30.0

	III.Semester				**IV.Semester**		
BİL284	Object Oriented Programming	3+1	4.0	BİL812	Visual Programming	3+1	4.0

BTP203	Database and Operation Systems II	3+1	4.0	BTP201	Operating Systems	3+1	4.0
BTP239	Computer Hardware	2+1	4.0	BTP204	Microcomputer Systems and Assembler	3+1	4.0
BTP241	Computer Network Systems	2+1	3.0	BTP211	Technical English I	1+1	3.0
	Mesleki Seçmeli Dersler	--	15.0	BTP299	Internship	0+2	5.0
					Mesleki Seçmeli Dersler	--	10.0
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			30.0				30.0

Elective Courses

BEÖ155	Physical Education	2+0	2.0
ESTÜ1001	Story Analysis On World Literature	3+0	3.0
ESTÜ1003	Yoga and Meditation	1+1	2.0
ESTÜ101	Introduction to University Life	0+1	2.0
ESTÜ103	Ceramic Design Processes	2+1	3.0
ESTÜ104	Academic and Life Skills	2+1	3.0
ESTÜ106	Proje Yönetimi	2+1	3.0
ESTÜ111	Volunteering Works	1+2	4.0
ESTÜ112	Cyber Security for Everyone	2+0	2.0
ESTÜ113	Design Thinking	3+0	3.0
ESTÜ114	Visual Thinking	3+0	3.0
ESTÜ115	Photographic Viewpoint	2+1	3.0
ESTÜ116	Computer Aided Design I	3+0	3.0
ESTÜ117	Computer Aided Design II	3+0	3.0
ESTÜ118	Visual Thinking with Concepts	3+0	3.0
ESTÜ119	Flute	3+1	3.0
ESTÜ120	Solfege	3+1	3.0
ESTÜ121	Piano	3+1	3.0
ESTÜ122	Guitar	3+1	3.0
ESTÜ123	Gender Equality in Work Life	2+0	3.0
ESTÜ125	Philosophy of Science	3+0	3.0
ESTÜ127	Diction	1+2	3.0
ESTÜ129	Turkish as a Foreign Language I	2+0	2.0
ESTÜ130	Turkish as a Foreign Language II	2+0	2.0
ESTÜ131	Argentine Tango Dance	0+2	2.0
ESTÜ2001	AI Literacy	2+0	2.0
ESTÜ203	Introduction to Sociology	3+0	3.0
ESTÜ210	Culture of Museum	2+0	2.0
ESTÜ301	Science Communication	2+0	3.0
ESTÜ307	Children Rights and Family Education	2+0	2.0
ESTÜ402	Coaching and Leadership	3+0	3.0
ESTÜ403	Basic Computer Utilization	3+0	4.0
ESTÜ405	Computer Programming	3+0	5.0
MÜZ151	Short History of Music	2+0	3.0
PMYO198	Optional Internship	0+2	5.0
SAN155	Hall Dances	0+2	2.0
SNT155	History of Art	2+0	2.0
THU203	Community Services	0+2	3.0

Area Elective Courses

BİL182	Internet Programming II	3+1	4.0
BTP202	System Analysis and Design	2+2	4.0
BTP212	Technical English II	1+1	2.0
BTP215	C Programming I	3+1	4.0
BTP216	C Programming II	3+1	4.0
BTP246	Python Programming II	2+1	3.0
BTP2502	Mobile Programming	2+1	4.0
DJT203	Digital Electronic	3+1	4.0
ELO106	Digital Design	3+1	4.0
ELO211	Microprocessors / Microcontrollers	3+1	5.0

ESTÜ201	Turkish Sign Language	3+0	3.0
ESTÜ401	Introduction to Professional Life	1+1	2.0
ETK211	Professional Ethics	2+0	3.0
GRA110	Graphic and Animation	3+1	4.0
İLT105	General and Technical Communication	2+0	2.0
İME201	Vocational Training in Workplace I	5+10	15.0
İME202	Vocational Training in Workplace II	5+10	15.0
İŞL209	Business Management	2+0	2.0
İŞL421	Entrepreneurship	2+0	3.0
KGS104	Quality Assurance and Standards	2+0	2.0

CLOUD COMPUTING OPERATOR PR.

PROGRAM

I.Semester				II.Semester			
BBO1001	Computer Networks	3+1	5.0	BBO102	Virtualization and Cloud Technologies	3+2	5.0
BBO103	Operating Systems and Security	3+2	5.0	BBO106	Data Science	3+2	5.0
BBO105	Information Technologies	2+1	3.0	BTM102	Programming II	3+2	5.0
BTM101	Programming I	3+2	5.0	İNG188 (Eng)	English II	3+0	3.0
İNG187 (Eng)	English I	3+0	3.0	SGA2501	Linux Operating System Administration	2+2	5.0
MAT1005	Mathematics	3+0	5.0	TÜR126	Turkish Language II	2+0	2.0
TÜR125	Turkish Language I	2+0	2.0		*Seçmeli Dersler*	--	5.0
	Mesleki Seçmeli Dersler	--	2.0				
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			30.0				30.0

III.Semester				IV.Semester			
BBO2001	Database Management Systems	3+1	5.0	BBO2003	Cloud Computing Architectures	3+2	6.0
BBO2005	Data Security	2+1	3.0	BBO2299	Internship	0+2	5.0
BBO2007	Cloud Computing and Artificial Intelligence	3+2	6.0	TAR166	Atatürk's Principles and History of Turkish Revolution II	2+0	2.0
RYZ2003	Object Oriented Programming	3+2	5.0		*Mesleki Seçmeli Dersler*	--	12.0
TAR165	Atatürk's Principles and History of Turkish Revolution I	2+0	2.0		*Seçmeli Dersler*	--	5.0
	Mesleki Seçmeli Dersler	--	9.0				
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			30.0				30.0

Elective Courses

ALM255 (Ger)	German I	3+0	4.0
ALM256 (Ger)	German II	3+0	4.0
ANT452	First Aid	1+2	4.0
ARK108	Archaeology	2+0	2.0
BEÖ155	Physical Education	2+0	2.0
BEÖ176	Trekking	1+2	4.0
ESTÜ1001	Story Analysis On World Literature	3+0	3.0
ESTÜ1003	Yoga and Meditation	1+1	2.0
ESTÜ101	Introduction to University Life	0+1	2.0
ESTÜ103	Ceramic Design Processes	2+1	3.0

ESTÜ104	Academic and Life Skills	2+1	3.0
ESTÜ106	Proje Yönetimi	2+1	3.0
ESTÜ111	Volunteering Works	1+2	4.0
ESTÜ113	Design Thinking	3+0	3.0
ESTÜ114	Visual Thinking	3+0	3.0
ESTÜ115	Photographic Viewpoint	2+1	3.0
ESTÜ116	Computer Aided Design I	3+0	3.0
ESTÜ117	Computer Aided Design II	3+0	3.0
ESTÜ118	Visual Thinking with Concepts	3+0	3.0
ESTÜ119	Flute	3+1	3.0
ESTÜ120	Solfege	3+1	3.0
ESTÜ121	Piano	3+1	3.0
ESTÜ122	Guitar	3+1	3.0
ESTÜ123	Gender Equality in Work Life	2+0	3.0
ESTÜ125	Philosophy of Science	3+0	3.0
ESTÜ127	Diction	1+2	3.0
ESTÜ131	Argentine Tango Dance	0+2	2.0
ESTÜ132	History of Political Thought	3+0	3.0
ESTÜ133	Disability and Awareness	3+0	3.0
ESTÜ2001	AI Literacy	2+0	2.0
ESTÜ201	Turkish Sign Language	3+0	3.0
ESTÜ203	Introduction to Sociology	3+0	3.0
ESTÜ204	Effective Reading and Writing Skills	3+0	4.0
ESTÜ206	Financial Literacy	3+0	3.0
ESTÜ207	General Psychology	2+0	4.0
ESTÜ210	Culture of Museum	2+0	2.0
ESTÜ301	Science Communication	2+0	3.0
ESTÜ307	Children Rights and Family Education	2+0	2.0
ESTÜ402	Coaching and Leadership	3+0	3.0
FOT202	Photography	2+0	3.0
FRA255 (Fra)	French I	3+0	4.0
FRA256 (Fra)	French II	3+0	4.0
HUK458	Industrial Rights and Technological Development	3+0	3.0
İLT201	Interpersonal Communication	3+0	4.5
İLT419	Body Language and Diction	2+0	5.0
İSN309	Mass Media	3+0	3.0
İSP151 (Spa)	Spanish I	4+0	4.0
İSP152 (Spa)	Spanish II	4+0	4.0
İŞL101	Introduction to Business	3+0	4.5
İŞL102	Management and Organization	3+0	4.0
İŞL209	Business Management	2+0	2.0
İŞL301	Human Resources Management	3+0	4.0
İŞL421	Entrepreneurship	2+0	3.0
İTA255 (İta)	Italian I	3+0	4.0
İTA256 (İta)	Italian II	3+0	4.0
JAP301 (Jap)	Japanese I	4+0	4.0
JAP302 (Jap)	Japanese II	4+0	4.0
MÜZ101	Evolution of Music	2+0	3.0
MÜZ151	Short History of Music	2+0	3.0
MÜZ157	Traditional Turkish Art Music	2+0	2.0
ÖMB322	Ethics of Science and Research	2+0	3.0
REK2522	Sports Aviation	1+1	4.0
RTV281	Digital Literacy	2+2	4.0
RUS255 (Rus)	Russian I	3+0	4.0
RUS256 (Rus)	Russian II	3+0	4.0
SNT155	History of Art	2+0	2.0
SOS154	Man and Sociology	2+0	3.0
THU203	Community Services	0+2	3.0
TİY121	Introduction to Theatre	2+0	3.0
TİY308	Republic Era Turkish Theatre	2+0	3.0

Area Elective Courses

BBO101	Introduction to Cloud Computing Technologies	3+1	5.0
BBO104	High Performance Computing Hardwares	3+2	6.0

BBO2002	Industrial Cloud Technologies	3+1	6.0
BBO2501	Graduation Project	0+5	6.0
BBO2503	Internet of Things	2+1	4.0
BTP202	System Analysis and Design	2+2	4.0
BTP2502	Mobile Programming	2+1	4.0
ELO211	Microprocessors / Microcontrollers	3+1	5.0
ESTÜ112	Cyber Security for Everyone	2+0	2.0
İSG401	Occupational Health and Safety I	2+0	2.0
İSG402	Occupational Health and Safety II	2+0	2.0
İŞL475	Techno-Entrepreneurship	3+0	4.0
OGP2513	Software Development and Project Management	3+2	5.0
RYZ108	Machine Learning	2+2	5.0
RYZ2006	Project Management and Applications	2+1	3.0
RYZ2503	Image Processing Techniques	2+3	5.0
RYZ2504	Information Technology Law	2+1	3.0

CYBER ??SECURITY ANALYST AND OPERATOR PR.

PROGRAM

I.Semester				II.Semester			
BBO2001	Database Management Systems	3+1	5.0	BTM102	Programming II	3+2	5.0
BTM101	Programming I	3+2	5.0	BTP241	Computer Network Systems	2+1	3.0
BTP239	Computer Hardware	2+1	4.0	DJT203	Digital Electronic	3+1	4.0
ESTÜ112	Cyber Security for Everyone	2+0	2.0	İNG188 (Eng)	English II	3+0	3.0
İNG187 (Eng)	English I	3+0	3.0	SGA1002	Statistical Analysis in Informatics	1+3	4.0
MAT1005	Mathematics	3+0	5.0	TAR166	Atatürk's Principles and History of Turkish Revolution II	2+0	2.0
TAR165	Atatürk's Principles and History of Turkish Revolution I	2+0	2.0	TÜR126	Turkish Language II	2+0	2.0
TÜR125	Turkish Language I	2+0	2.0		*Mesleki Seçmeli Dersler*	--	7.0
	Seçmeli Dersler	--	2.0				
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			30.0				30.0

III.Semester				IV.Semester			
BBO103	Operating Systems and Security	3+2	5.0	SGA2002	Cyber Attack and Defense Methods II	2+4	6.0
BBO2005	Data Security	2+1	3.0	SGA2004	Audit and Management of Security Infrastructure	2+3	5.0
SGA2001	Cyber Attack and Defense Methods I	2+4	6.0	SGA2299	Internship	0+2	5.0
SGA2003	Software Security	2+2	5.0		*Mesleki Seçmeli Dersler*	--	7.0
	Mesleki Seçmeli Dersler	--	8.0		*Seçmeli Dersler*	--	7.0
	Seçmeli Dersler	--	3.0				
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			30.0				30.0

Elective Courses

ALM255 (Ger)	German I	3+0	4.0
ALM256 (Ger)	German II	3+0	4.0

ANT452	First Aid	1+2	4.0
ARK108	Archaeology	2+0	2.0
BEÖ155	Physical Education	2+0	2.0
BEÖ176	Trekking	1+2	4.0
ESTÜ1001	Story Analysis On World Literature	3+0	3.0
ESTÜ1003	Yoga and Meditation	1+1	2.0
ESTÜ101	Introduction to University Life	0+1	2.0
ESTÜ103	Ceramic Design Processes	2+1	3.0
ESTÜ104	Academic and Life Skills	2+1	3.0
ESTÜ106	Proje Yönetimi	2+1	3.0
ESTÜ111	Volunteering Works	1+2	4.0
ESTÜ113	Design Thinking	3+0	3.0
ESTÜ114	Visual Thinking	3+0	3.0
ESTÜ115	Photographic Viewpoint	2+1	3.0
ESTÜ116	Computer Aided Design I	3+0	3.0
ESTÜ117	Computer Aided Design II	3+0	3.0
ESTÜ118	Visual Thinking with Concepts	3+0	3.0
ESTÜ119	Flute	3+1	3.0
ESTÜ120	Solfege	3+1	3.0
ESTÜ121	Piano	3+1	3.0
ESTÜ122	Guitar	3+1	3.0
ESTÜ123	Gender Equality in Work Life	2+0	3.0
ESTÜ125	Philosophy of Science	3+0	3.0
ESTÜ127	Diction	1+2	3.0
ESTÜ131	Argentine Tango Dance	0+2	2.0
ESTÜ132	History of Political Thought	3+0	3.0
ESTÜ133	Disability and Awareness	3+0	3.0
ESTÜ2001	AI Literacy	2+0	2.0
ESTÜ201	Turkish Sign Language	3+0	3.0
ESTÜ203	Introduction to Sociology	3+0	3.0
ESTÜ204	Effective Reading and Writing Skills	3+0	4.0
ESTÜ206	Financial Literacy	3+0	3.0
ESTÜ207	General Psychology	2+0	4.0
ESTÜ210	Culture of Museum	2+0	2.0
ESTÜ301	Science Communication	2+0	3.0
ESTÜ307	Children Rights and Family Education	2+0	2.0
ESTÜ402	Coaching and Leadership	3+0	3.0
FOT202	Photography	2+0	3.0
FRA255 (Fra)	French I	3+0	4.0
FRA256 (Fra)	French II	3+0	4.0
HUK458	Industrial Rights and Technological Development	3+0	3.0
İLT201	Interpersonal Communication	3+0	4.5
İLT419	Body Language and Diction	2+0	5.0
İSN309	Mass Media	3+0	3.0
İSP151 (Spa)	Spanish I	4+0	4.0
İSP152 (Spa)	Spanish II	4+0	4.0
İŞL101	Introduction to Business	3+0	4.5
İŞL102	Management and Organization	3+0	4.0
İŞL209	Business Management	2+0	2.0
İŞL301	Human Resources Management	3+0	4.0
İŞL421	Entrepreneurship	2+0	3.0
İTA255 (İta)	Italian I	3+0	4.0
İTA256 (İta)	Italian II	3+0	4.0
JAP301	Japanese I	4+0	4.0
JAP302 (Jap)	Japanese II	4+0	4.0
MÜZ101	Evolution of Music	2+0	3.0
MÜZ151	Short History of Music	2+0	3.0
MÜZ157	Traditional Turkish Art Music	2+0	2.0
ÖMB322	Ethics of Science and Research	2+0	3.0
REK2522	Sports Aviation	1+1	4.0
RTV281	Digital Literacy	2+2	4.0
RUS255 (Rus)	Russian I	3+0	4.0
RUS256 (Rus)	Russian II	3+0	4.0
SNT155	History of Art	2+0	2.0

SOS154	Man and Sociology	2+0	3.0
THU203	Community Services	0+2	3.0
TİY121	Introduction to Theatre	2+0	3.0
TİY308	Republic Era Turkish Theatre	2+0	3.0

Area Elective Courses

BBO105	Information Technologies	2+1	3.0
BBO2503	Internet of Things	2+1	4.0
BTP202	System Analysis and Design	2+2	4.0
ELE215	Electromechanical Control Systems	3+1	4.0
ELO211	Microprocessors / Microcontrollers	3+1	5.0
İSG401	Occupational Health and Safety I	2+0	2.0
İSG402	Occupational Health and Safety II	2+0	2.0
İŞL475	Techno-Entrepreneurship	3+0	4.0
RYZ106	Artificial Intelligence	3+0	4.0
RYZ108	Machine Learning	2+2	5.0
RYZ2006	Project Management and Applications	2+1	3.0
SGA2501	Linux Operating System Administration	2+2	5.0
SGA2502	Graduation Project	0+5	6.0
SGA2503	Career Planning and Development	2+0	3.0

ELECTRICAL AND AUTOMATION DEPARTMENT

DRONE TECHNOLOGY AND OPERATIONS PR.

PROGRAM

I.Semester				II.Semester			
ELO103	Digital Electronics	3+1	4.0	BİL129	Information and Communication Technologies	2+1	3.0
İHA101	Introduction to Unmanned Aerial Vehicle Technology and Regulations	3+0	3.5	İHA102	Unmanned Aerial Vehicle Materials	3+1	3.0
İHA103	Aviation Terminology and Ethics	3+0	4.0	İHA104	Unmanned Aerial Vehicle Propulsion Systems	2+0	2.0
İNG115 (Eng)	English Speaking Skills I	1+1	2.5	İHA106	Theory of Flight	3+0	4.5
MAT1001	Mathematics I	3+0	4.0	İHA108 (Eng)	Technical English	2+0	2.0
MTR102	Measurement Techniques	1+1	2.0	İNG116 (Eng)	English Speaking Skills II	1+1	2.5
TAR165	Atatürk's Principles and History of Turkish Revolution I	2+0	2.0	İSG401	Occupational Health and Safety I	2+0	2.0
TEK107	Scientific Principles of Technology	3+1	4.0	MAT1002	Mathematics II	3+0	4.0
TÜR125	Turkish Language I	2+0	2.0	TAR166	Atatürk's Principles and History of Turkish Revolution II	2+0	2.0
	Seçmeli Dersler	--	2.0	TÜR126	Turkish Language II	2+0	2.0
					Seçmeli Dersler	--	3.0
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			30.0				30.0

III.Semester **IV.Semester**

İHA201	Unmanned Aerial Vehicle Control Methods and Simulations	3+1	4.0	İHA202	Flight Mission Planning and Programming	2+2	4.0
İHA203	Unmanned Aerial Vehicle Structures and Systems Design	3+0	3.0	İHA204	Unmanned Aerial Vehicle Manufacture and Assembly Workshop	2+2	3.0
İHA205	Aerodynamics	2+0	2.0	İHA206	Unmanned Aerial Vehicle Electrical Systems Maintenance and Repair	2+1	3.0
İHA207	Meteorology	3+0	2.0	İHA208	Unmanned Aerial Vehicle Operations, Ground Control and Communications	3+0	3.0
	Mesleki Seçmeli Dersler	--	19.0	İHA218	Flight Practices	1+3	4.0
				İHA299	Internship	0+2	5.0
					Mesleki Seçmeli Dersler	--	8.0
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			30.0				30.0

Elective Courses

BEÖ155	Physical Education	2+0	2.0
ESTÜ1001	Story Analysis On World Literature	3+0	3.0
ESTÜ1003	Yoga and Meditation	1+1	2.0
ESTÜ101	Introduction to University Life	0+1	2.0
ESTÜ103	Ceramic Design Processes	2+1	3.0
ESTÜ104	Academic and Life Skills	2+1	3.0
ESTÜ106	Proje Yönetimi	2+1	3.0
ESTÜ111	Volunteering Works	1+2	4.0
ESTÜ112	Cyber Security for Everyone	2+0	2.0
ESTÜ113	Design Thinking	3+0	3.0
ESTÜ114	Visual Thinking	3+0	3.0
ESTÜ115	Photographic Viewpoint	2+1	3.0
ESTÜ116	Computer Aided Design I	3+0	3.0
ESTÜ117	Computer Aided Design II	3+0	3.0
ESTÜ118	Visual Thinking with Concepts	3+0	3.0
ESTÜ119	Flute	3+1	3.0
ESTÜ120	Solfege	3+1	3.0
ESTÜ121	Piano	3+1	3.0
ESTÜ122	Guitar	3+1	3.0
ESTÜ123	Gender Equality in Work Life	2+0	3.0
ESTÜ125	Philosophy of Science	3+0	3.0
ESTÜ127	Diction	1+2	3.0
ESTÜ129	Turkish as a Foreign Language I	2+0	2.0
ESTÜ130	Turkish as a Foreign Language II	2+0	2.0
ESTÜ131	Argentine Tango Dance	0+2	2.0
ESTÜ2001	AI Literacy	2+0	2.0
ESTÜ203	Introduction to Sociology	3+0	3.0
ESTÜ210	Culture of Museum	2+0	2.0
ESTÜ301	Science Communication	2+0	3.0
ESTÜ307	Children Rights and Family Education	2+0	2.0
ESTÜ402	Coaching and Leadership	3+0	3.0
ESTÜ403	Basic Computer Utilization	3+0	4.0
ESTÜ405	Computer Programming	3+0	5.0
MÜZ151	Short History of Music	2+0	3.0
PMYO198	Optional Internship	0+2	5.0
SAN155	Hall Dances	0+2	2.0
SNT155	History of Art	2+0	2.0
THU203	Community Services	0+2	3.0

Area Elective Courses

ELE215	Electromechanical Control Systems	3+1	4.0
ELO211	Microprocessors / Microcontrollers	3+1	5.0
ESTÜ201	Turkish Sign Language	3+0	3.0

ESTÜ401	Introduction to Professional Life	1+1	2.0
FOT107	Photography	2+1	3.0
HYO308	Organizational Behavior	3+0	3.0
İHA209	Model Aircraft Manufacture	1+2	3.0
İHA210	Sustainable Aviation Technologies	2+0	3.0
İHA211	Unmanned Aerial Vehicle Maintenance and Reliability Management	3+0	4.0
İHA212	Computer Aided Design	2+1	4.0
İHA213	Unmanned Aerial Vehicle Communication Technologies and Cyber Security	2+2	4.0
İHA214	Composite Materials and Manufacture Methods	3+1	4.0
İHA216	Piston-prop Engines	3+0	4.0
İHA2501	Human Factors for Unmanned Aerial Vehicles and Systems	3+0	4.0
İHA2502	Unmanned Aircraft Systems Traffic Management	3+0	4.0
İHA2504	Hybrid Propulsion Systems and Use in Unmanned Aerial Vehicles	3+0	4.0
İŞL209	Business Management	2+0	2.0
İŞL421	Entrepreneurship	2+0	3.0
KGS104	Quality Assurance and Standards	2+0	2.0
MTR207	Sensors and Transducers	1+1	3.0

MECHATRONICS PR.

PROGRAM

I.Semester				II.Semester			
İNG187 (Eng)	English I	3+0	3.0	ELO104	Analog Electronics	3+1	4.0
MAT1001	Mathematics I	3+0	4.0	İNG188 (Eng)	English II	3+0	3.0
MTR101	Circuit Analysis	3+0	4.0	İSG401	Occupational Health and Safety I	2+0	2.0
MTR102	Measurement Techniques	1+1	2.0	MAK105	Production and Manufacturing Technology I	3+1	4.0
MTR105	Mechatronic System Fundamentals	3+0	3.0	MAT1002	Mathematics II	3+0	4.0
TAR165	Atatürk's Principles and History of Turkish Revolution I	2+0	2.0	MEK209	Mechanics of Materials (Dynamics)	3+0	3.0
TEK107	Scientific Principles of Technology	3+1	4.0	MLZ112	Materials Knowledge	3+0	3.0
TRS104	Technical Drawing	2+2	4.0	TAR166	Atatürk's Principles and History of Turkish Revolution II	2+0	2.0
TÜR125	Turkish Language I	2+0	2.0	TÜR126	Turkish Language II	2+0	2.0
	Seçmeli Dersler	--	2.0		*Seçmeli Dersler*	--	3.0
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			30.0				30.0

III.Semester				IV.Semester			
ELO103	Digital Electronics	3+1	4.0	ELE228	Electrical Machines and Drivers	3+1	4.0
MAK229	Mechanical Science and Elements	3+1	4.0	ENO204	Data Addition and Control with Computers	3+1	4.0
MAK263	Material and Mechanical Testing	3+1	4.0	MAK240	Hydraulic and Pneumatic Systems	3+1	4.0
MTR220	Process Control	3+0	3.0	MTR214	Applications of Mechatronic in Industry	1+1	3.0
	Mesleki Seçmeli Dersler	--	15.0	MTR299	Internship	0+2	5.0
					Mesleki Seçmeli Dersler	--	10.0
			-----				-----
			30.0				30.0

Elective Courses

BEÖ155	Physical Education	2+0	2.0
ESTÜ1001	Story Analysis On World Literature	3+0	3.0
ESTÜ1003	Yoga and Meditation	1+1	2.0
ESTÜ101	Introduction to University Life	0+1	2.0
ESTÜ103	Ceramic Design Processes	2+1	3.0
ESTÜ104	Academic and Life Skills	2+1	3.0
ESTÜ106	Proje Yönetimi	2+1	3.0
ESTÜ111	Volunteering Works	1+2	4.0
ESTÜ112	Cyber Security for Everyone	2+0	2.0
ESTÜ113	Design Thinking	3+0	3.0
ESTÜ114	Visual Thinking	3+0	3.0
ESTÜ115	Photographic Viewpoint	2+1	3.0
ESTÜ116	Computer Aided Design I	3+0	3.0
ESTÜ117	Computer Aided Design II	3+0	3.0
ESTÜ118	Visual Thinking with Concepts	3+0	3.0
ESTÜ119	Flute	3+1	3.0
ESTÜ120	Solfege	3+1	3.0
ESTÜ121	Piano	3+1	3.0
ESTÜ122	Guitar	3+1	3.0
ESTÜ123	Gender Equality in Work Life	2+0	3.0
ESTÜ125	Philosophy of Science	3+0	3.0
ESTÜ127	Diction	1+2	3.0
ESTÜ129	Turkish as a Foreign Language I	2+0	2.0
ESTÜ130	Turkish as a Foreign Language II	2+0	2.0
ESTÜ131	Argentine Tango Dance	0+2	2.0
ESTÜ2001	AI Literacy	2+0	2.0
ESTÜ203	Introduction to Sociology	3+0	3.0
ESTÜ210	Culture of Museum	2+0	2.0
ESTÜ301	Science Communication	2+0	3.0
ESTÜ307	Children Rights and Family Education	2+0	2.0
ESTÜ402	Coaching and Leadership	3+0	3.0
ESTÜ403	Basic Computer Utilization	3+0	4.0
ESTÜ405	Computer Programming	3+0	5.0
MÜZ151	Short History of Music	2+0	3.0
PMYO198	Optional Internship	0+2	5.0
SAN155	Hall Dances	0+2	2.0
SNT155	History of Art	2+0	2.0
THU203	Community Services	0+2	3.0

Area Elective Courses

ELE215	Electromechanical Control Systems	3+1	4.0
ELO211	Microprocessors / Microcontrollers	3+1	5.0
ENO208	Robot Technology	3+1	4.0
ENO210	Microcontroller Based Control	3+1	4.0
ESTÜ201	Turkish Sign Language	3+0	3.0
ESTÜ401	Introduction to Professional Life	1+1	2.0
ETK211	Professional Ethics	2+0	3.0
İME201	Vocational Training in Workplace I	5+10	15.0
İME202	Vocational Training in Workplace II	5+10	15.0
İŞL209	Business Management	2+0	2.0
İŞL421	Entrepreneurship	2+0	3.0
KGS104	Quality Assurance and Standards	2+0	2.0
MAK221	Computer Aided Design I	3+1	4.0
MAK242	Administrating Management and Manufacturing Control	1+1	3.0
MAK251	Energy Management	3+1	4.0
MAK272	Computer Aided Design II	2+1	3.0
MAK274	Computer Aided Machine Tools	2+1	4.0
MTR204	Electro hydraulics/Electro pneumatics	2+1	4.0
MTR207	Sensors and Transducers	1+1	3.0
MTR208	Mechatronic System Design	1+1	3.0
MTR210	Technical English	2+0	3.0
MTR212	Process Measurements	3+1	3.0

MTR218	Fuzzy Logic	3+1	4.0
MTR222	Semicoductor Device Technology	3+1	4.0
MTR2501	Circuit Applications	1+1	3.0
TER201	Thermodynamics	2+0	4.0

ROBOTICS AND ARTIFICIAL INTELLIGENCE PROGRAM

PROGRAM

I.Semester

BTM101	Programming I	3+2	5.0
DJT203	Digital Electronic	3+1	4.0
İNG187 (Eng)	English I	3+0	3.0
MAT1005	Mathematics	3+0	5.0
RAY126	Circuit Analysis	4+2	6.0
RYZ101	Computer Aided Technical Drawing	2+1	3.0
TAR165	Atatürk's Principles and History of Turkish Revolution I	2+0	2.0
TÜR125	Turkish Language I	2+0	2.0

			30.0

II.Semester

BTM102	Programming II	3+2	5.0
İNG188 (Eng)	English II	3+0	3.0
RYZ102	Introduction to Autonomous Systems	2+1	3.0
RYZ104	Robotics and Embedded Systems	2+3	6.0
RYZ106	Artificial Intelligence	3+0	4.0
RYZ108	Machine Learning	2+2	5.0
TAR166	Atatürk's Principles and History of Turkish Revolution II	2+0	2.0
TÜR126	Turkish Language II	2+0	2.0

			30.0

III.Semester

BBO2001	Database Management Systems	3+1	5.0
RYZ2001	Robotic Applications	1+3	4.0
RYZ2003	Object Oriented Programming	3+2	5.0
	Mesleki Seçmeli Dersler	--	12.0
	Seçmeli Dersler	--	4.0

			30.0

IV.Semester

RYZ2002	Artificial Intelligence Applications	1+3	4.0
RYZ2004	Deep Learning	2+1	3.0
RYZ2006	Project Management and Applications	2+1	3.0
RYZ2299	Internship	0+2	5.0
	Mesleki Seçmeli Dersler	--	11.0
	Seçmeli Dersler	--	4.0

			30.0

Elective Courses

ALM255 (Ger)	German I	3+0	4.0
ALM256 (Ger)	German II	3+0	4.0
ANT452	First Aid	1+2	4.0
ARK108	Archaeology	2+0	2.0
BEÖ155	Physical Education	2+0	2.0
BEÖ176	Trekking	1+2	4.0
ESTÜ1001	Story Analysis On World Literature	3+0	3.0
ESTÜ1003	Yoga and Meditation	1+1	2.0
ESTÜ101	Introduction to University Life	0+1	2.0
ESTÜ103	Ceramic Design Processes	2+1	3.0
ESTÜ104	Academic and Life Skills	2+1	3.0
ESTÜ106	Proje Yönetimi	2+1	3.0
ESTÜ111	Volunteering Works	1+2	4.0
ESTÜ113	Design Thinking	3+0	3.0
ESTÜ114	Visual Thinking	3+0	3.0
ESTÜ115	Photographic Viewpoint	2+1	3.0
ESTÜ116	Computer Aided Design I	3+0	3.0
ESTÜ117	Computer Aided Design II	3+0	3.0

ESTÜ118	Visual Thinking with Concepts	3+0	3.0
ESTÜ119	Flute	3+1	3.0
ESTÜ120	Solfege	3+1	3.0
ESTÜ121	Piano	3+1	3.0
ESTÜ122	Guitar	3+1	3.0
ESTÜ123	Gender Equality in Work Life	2+0	3.0
ESTÜ125	Philosophy of Science	3+0	3.0
ESTÜ127	Diction	1+2	3.0
ESTÜ131	Argentine Tango Dance	0+2	2.0
ESTÜ132	History of Political Thought	3+0	3.0
ESTÜ133	Disability and Awareness	3+0	3.0
ESTÜ2001	AI Literacy	2+0	2.0
ESTÜ201	Turkish Sign Language	3+0	3.0
ESTÜ203	Introduction to Sociology	3+0	3.0
ESTÜ204	Effective Reading and Writing Skills	3+0	4.0
ESTÜ206	Financial Literacy	3+0	3.0
ESTÜ207	General Psychology	2+0	4.0
ESTÜ210	Culture of Museum	2+0	2.0
ESTÜ301	Science Communication	2+0	3.0
ESTÜ307	Children Rights and Family Education	2+0	2.0
ESTÜ402	Coaching and Leadership	3+0	3.0
FOT202	Photography	2+0	3.0
FRA255 (Fra)	French I	3+0	4.0
FRA256 (Fra)	French II	3+0	4.0
HUK458	Industrial Rights and Technological Development	3+0	3.0
İLT201	Interpersonal Communication	3+0	4.5
İLT419	Body Language and Diction	2+0	5.0
İSN309	Mass Media	3+0	3.0
İSP151 (Spa)	Spanish I	4+0	4.0
İSP152 (Spa)	Spanish II	4+0	4.0
İŞL101	Introduction to Business	3+0	4.5
İŞL102	Management and Organization	3+0	4.0
İŞL209	Business Management	2+0	2.0
İŞL301	Human Resources Management	3+0	4.0
İŞL421	Entrepreneurship	2+0	3.0
İTA255 (İta)	Italian I	3+0	4.0
İTA256 (İta)	Italian II	3+0	4.0
JAP301 (Jap)	Japanese I	4+0	4.0
JAP302 (Jap)	Japanese II	4+0	4.0
MÜZ101	Evolution of Music	2+0	3.0
MÜZ151	Short History of Music	2+0	3.0
MÜZ157	Traditional Turkish Art Music	2+0	2.0
ÖMB322	Ethics of Science and Research	2+0	3.0
REK2522	Sports Aviation	1+1	4.0
RTV281	Digital Literacy	2+2	4.0
RUS255 (Rus)	Russian I	3+0	4.0
RUS256 (Rus)	Russian II	3+0	4.0
SNT155	History of Art	2+0	2.0
SOS154	Man and Sociology	2+0	3.0
THU203	Community Services	0+2	3.0
TİY121	Introduction to Theatre	2+0	3.0
TİY308	Republic Era Turkish Theatre	2+0	3.0

Area Elective Courses

BBO105	Information Technologies	2+1	3.0
BBO2503	Internet of Things	2+1	4.0
BTP202	System Analysis and Design	2+2	4.0
BTP2502	Mobile Programming	2+1	4.0
ELE227	Electrical Machines	3+1	4.0
ELO211	Microprocessors / Microcontrollers	3+1	5.0
ESTÜ112	Cyber Security for Everyone	2+0	2.0
İSG401	Occupational Health and Safety I	2+0	2.0
İSG402	Occupational Health and Safety II	2+0	2.0
İŞL475	Techno-Entrepreneurship	3+0	4.0

MAK240	Hydraulic and Pneumatic Systems	3+1	4.0
RYZ103	Data Structures and Algorithms	3+2	5.0
RYZ105	Operating Systems	2+3	5.0
RYZ2501	Linear Statistical Models	1+2	3.0
RYZ2502	Graduation Project	0+5	6.0
RYZ2503	Image Processing Techniques	2+3	5.0
RYZ2504	Information Technology Law	2+1	3.0
RYZ2506	Robotic Mechatronics	3+1	4.0

ROBOTICS AND ARTIFICIAL INTELLIGENCE PROGRAM

DEPARTMENT OF AUDIOVISUAL TECHNOLOGIES AND MEDIA PRODUCTION

GAME DEVELOPMENT AND PROGRAMMING PROGRAM

PROGRAM

I.Semester				II.Semester			
BTM101	Programming I	3+2	5.0	BTM102	Programming II	3+2	5.0
İNG187 (Eng)	English I	3+0	3.0	İNG188 (Eng)	English II	3+0	3.0
MAT1005	Mathematics	3+0	5.0	OGP102	Game Design Principles	2+2	5.0
OGP101	Game Physics	3+0	5.0	OGP104	Computer Graphics	2+2	4.0
OGP103	Game Development	2+4	6.0	OGP106	2D Game Development Studio	2+4	6.0
TAR165	Atatürk's Principles and History of Turkish Revolution I	2+0	2.0	TAR166	Atatürk's Principles and History of Turkish Revolution II	2+0	2.0
TÜR125	Turkish Language I	2+0	2.0	TÜR126	Turkish Language II	2+0	2.0
	Mesleki Seçmeli Dersler	--	2.0		*Seçmeli Dersler*	--	3.0
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			30.0				30.0

III.Semester				IV.Semester			
OGP2001	Interactive Storytelling	2+1	4.0	OGP2002	Mobile Game Development	2+4	6.0
OGP2003	Fundamentals of Digital Art and Design	3+0	4.0	OGP2299	Internship	0+2	5.0
OGP2005	3D Game Development Studio	2+4	6.0		*Mesleki Seçmeli Dersler*	--	14.0
OGP2007	Gamification	2+2	5.0		*Seçmeli Dersler*	--	5.0
	Mesleki Seçmeli Dersler	--	7.0				
	Seçmeli Dersler	--	4.0				
			-----				-----
			30.0				30.0

Elective Courses

ALM255 (Ger)	German I	3+0	4.0
ALM256 (Ger)	German II	3+0	4.0
ANT452	First Aid	1+2	4.0
ARK108	Archaeology	2+0	2.0

BEÖ155	Physical Education	2+0	2.0
BEÖ176	Trekking	1+2	4.0
ESTÜ1001	Story Analysis On World Literature	3+0	3.0
ESTÜ1003	Yoga and Meditation	1+1	2.0
ESTÜ101	Introduction to University Life	0+1	2.0
ESTÜ103	Ceramic Design Processes	2+1	3.0
ESTÜ104	Academic and Life Skills	2+1	3.0
ESTÜ106	Proje Yönetimi	2+1	3.0
ESTÜ111	Volunteering Works	1+2	4.0
ESTÜ113	Design Thinking	3+0	3.0
ESTÜ114	Visual Thinking	3+0	3.0
ESTÜ115	Photographic Viewpoint	2+1	3.0
ESTÜ116	Computer Aided Design I	3+0	3.0
ESTÜ117	Computer Aided Design II	3+0	3.0
ESTÜ118	Visual Thinking with Concepts	3+0	3.0
ESTÜ119	Flute	3+1	3.0
ESTÜ120	Solfege	3+1	3.0
ESTÜ121	Piano	3+1	3.0
ESTÜ122	Guitar	3+1	3.0
ESTÜ123	Gender Equality in Work Life	2+0	3.0
ESTÜ125	Philosophy of Science	3+0	3.0
ESTÜ127	Diction	1+2	3.0
ESTÜ131	Argentine Tango Dance	0+2	2.0
ESTÜ132	History of Political Thought	3+0	3.0
ESTÜ133	Disability and Awareness	3+0	3.0
ESTÜ2001	AI Literacy	2+0	2.0
ESTÜ201	Turkish Sign Language	3+0	3.0
ESTÜ203	Introduction to Sociology	3+0	3.0
ESTÜ204	Effective Reading and Writing Skills	3+0	4.0
ESTÜ206	Financial Literacy	3+0	3.0
ESTÜ207	General Psychology	2+0	4.0
ESTÜ210	Culture of Museum	2+0	2.0
ESTÜ301	Science Communication	2+0	3.0
ESTÜ402	Coaching and Leadership	3+0	3.0
FOT202	Photography	2+0	3.0
FRA255 (Fra)	French I	3+0	4.0
FRA256 (Fra)	French II	3+0	4.0
HUK458	Industrial Rights and Technological Development	3+0	3.0
İLT201	Interpersonal Communication	3+0	4.5
İLT419	Body Language and Diction	2+0	5.0
İSN309	Mass Media	3+0	3.0
İSP151 (Spa)	Spanish I	4+0	4.0
İSP152 (Spa)	Spanish II	4+0	4.0
İŞL101	Introduction to Business	3+0	4.5
İŞL102	Management and Organization	3+0	4.0
İŞL209	Business Management	2+0	2.0
İŞL301	Human Resources Management	3+0	4.0
İŞL421	Entrepreneurship	2+0	3.0
İTA255 (İta)	Italian I	3+0	4.0
İTA256 (İta)	Italian II	3+0	4.0
JAP301	Japanese I	4+0	4.0
JAP302	Japanese II	4+0	4.0
MÜZ101	Evolution of Music	2+0	3.0
MÜZ151	Short History of Music	2+0	3.0
MÜZ157	Traditional Turkish Art Music	2+0	2.0
ÖMB322	Ethics of Science and Research	2+0	3.0
REK2522	Sports Aviation	1+1	4.0
RTV281	Digital Literacy	2+2	4.0
RUS255 (Rus)	Russian I	3+0	4.0
RUS256 (Rus)	Russian II	3+0	4.0
SNT155	History of Art	2+0	2.0
SOS154	Man and Sociology	2+0	3.0
THU203	Community Services	0+2	3.0
TİY121	Introduction to Theatre	2+0	3.0

TİY308	Republic Era Turkish Theatre	2+0	3.0

Area Elective Courses

BBO105	Information Technologies	2+1	3.0
BBO2001	Database Management Systems	3+1	5.0
BTP202	System Analysis and Design	2+2	4.0
BTP2502	Mobile Programming	2+1	4.0
ESTÜ112	Cyber Security for Everyone	2+0	2.0
İSG401	Occupational Health and Safety I	2+0	2.0
İSG402	Occupational Health and Safety II	2+0	2.0
İŞL475	Techno-Entrepreneurship	3+0	4.0
OGP2501	Animation	2+1	3.0
OGP2502	Graduation Project	0+5	6.0
OGP2503	Sound Design	2+1	4.0
OGP2505	Game Marketing and Distribution	2+1	4.0
OGP2507	AR/VR Game Development	2+1	4.0
OGP2509	Text and Scenario Writing	2+2	4.0
OGP2511	Three Dimensional Design	2+2	4.0
OGP2513	Software Development and Project Management	3+2	5.0
OGP2515	UX/UI Design and Web Accessibility	2+2	5.0
RYZ106	Artificial Intelligence	3+0	4.0
RYZ108	Machine Learning	2+2	5.0
RYZ2003	Object Oriented Programming	3+2	5.0
RYZ2006	Project Management and Applications	2+1	3.0

DEPARTMENT OF ARCHITECTURE AND URBAN PLANNING

REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS PR.

PROGRAM

I.Semester				II.Semester			
BTM101	Programming I	3+2	5.0	BTM102	Programming II	3+2	5.0
İNG187 (Eng)	English I	3+0	3.0	İNG188 (Eng)	English II	3+0	3.0
MAT1005	Mathematics	3+0	5.0	TAR166	Atatürk's Principles and History of Turkish Revolution II	2+0	2.0
TAR165	Atatürk's Principles and History of Turkish Revolution I	2+0	2.0	TÜR126	Turkish Language II	2+0	2.0
TÜR125	Turkish Language I	2+0	2.0	UCS1002	Remote Sensing and GIS Studio II -Data Processing and Analysis	2+6	8.0
UCS1001	Remote Sensing and GIS Studio I -Basic Applications	2+6	8.0	UCS1004	Statistics and Data Analysis	2+1	3.0
	Seçmeli Dersler	--	5.0		*Seçmeli Dersler*	--	7.0
			-----				-----
			30.0				30.0

III.Semester				IV.Semester			
UCS2001	Remote Sensing	1+2	3.0	RYZ106	Artificial Intelligence	3+0	4.0
UCS2003	Remote Sensing and GIS Studio III- Service Management	2+6	8.0	RYZ108	Machine Learning	2+2	5.0

UCS2005	Basic Spatial Data Analytics	1+2	3.0	UCS2004	Remote Sensing and GIS Studio IV- Project Development	2+6	8.0
UCS2007	Applications of Web Mapping and Analysis	3+2	5.0	UCS2299	Internship	0+2	5.0
	Mesleki Seçmeli Dersler	--	11.0		*Mesleki Seçmeli Dersler*	--	6.0
					Seçmeli Dersler	--	2.0
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			30.0				30.0

Elective Courses

ALM255 (Ger)	German I	3+0	4.0
ALM256 (Ger)	German II	3+0	4.0
ANT452	First Aid	1+2	4.0
ARK108	Archaeology	2+0	2.0
BEÖ155	Physical Education	2+0	2.0
BEÖ176	Trekking	1+2	4.0
ESTÜ1001	Story Analysis On World Literature	3+0	3.0
ESTÜ1003	Yoga and Meditation	1+1	2.0
ESTÜ101	Introduction to University Life	0+1	2.0
ESTÜ103	Ceramic Design Processes	2+1	3.0
ESTÜ104	Academic and Life Skills	2+1	3.0
ESTÜ106	Proje Yönetimi	2+1	3.0
ESTÜ111	Volunteering Works	1+2	4.0
ESTÜ113	Design Thinking	3+0	3.0
ESTÜ114	Visual Thinking	3+0	3.0
ESTÜ115	Photographic Viewpoint	2+1	3.0
ESTÜ116	Computer Aided Design I	3+0	3.0
ESTÜ117	Computer Aided Design II	3+0	3.0
ESTÜ118	Visual Thinking with Concepts	3+0	3.0
ESTÜ119	Flute	3+1	3.0
ESTÜ120	Solfege	3+1	3.0
ESTÜ121	Piano	3+1	3.0
ESTÜ122	Guitar	3+1	3.0
ESTÜ123	Gender Equality in Work Life	2+0	3.0
ESTÜ125	Philosophy of Science	3+0	3.0
ESTÜ127	Diction	1+2	3.0
ESTÜ131	Argentine Tango Dance	0+2	2.0
ESTÜ132	History of Political Thought	3+0	3.0
ESTÜ133	Disability and Awareness	3+0	3.0
ESTÜ2001	AI Literacy	2+0	2.0
ESTÜ201	Turkish Sign Language	3+0	3.0
ESTÜ203	Introduction to Sociology	3+0	3.0
ESTÜ204	Effective Reading and Writing Skills	3+0	4.0
ESTÜ206	Financial Literacy	3+0	3.0
ESTÜ207	General Psychology	2+0	4.0
ESTÜ210	Culture of Museum	2+0	2.0
ESTÜ301	Science Communication	2+0	3.0
ESTÜ307	Children Rights and Family Education	2+0	2.0
ESTÜ402	Coaching and Leadership	3+0	3.0
FOT202	Photography	2+0	3.0
FRA255 (Fra)	French I	3+0	4.0
FRA256 (Fra)	French II	3+0	4.0
HUK458	Industrial Rights and Technological Development	3+0	3.0
İLT201	Interpersonal Communication	3+0	4.5
İLT419	Body Language and Diction	2+0	5.0
İSN309	Mass Media	3+0	3.0
İSP151 (Spa)	Spanish I	4+0	4.0
İSP152 (Spa)	Spanish II	4+0	4.0
İŞL101	Introduction to Business	3+0	4.5
İŞL102	Management and Organization	3+0	4.0
İŞL209	Business Management	2+0	2.0

İŞL301	Human Resources Management	3+0	4.0
İŞL421	Entrepreneurship	2+0	3.0
İTA255 (İta)	Italian I	3+0	4.0
İTA256 (İta)	Italian II	3+0	4.0
JAP301 (Jap)	Japanese I	4+0	4.0
JAP302 (Jap)	Japanese II	4+0	4.0
MÜZ101	Evolution of Music	2+0	3.0
MÜZ151	Short History of Music	2+0	3.0
MÜZ157	Traditional Turkish Art Music	2+0	2.0
ÖMB322	Ethics of Science and Research	2+0	3.0
REK2522	Sports Aviation	1+1	4.0
RTV281	Digital Literacy	2+2	4.0
RUS255 (Rus)	Russian I	3+0	4.0
RUS256 (Rus)	Russian II	3+0	4.0
SNT155	History of Art	2+0	2.0
SOS154	Man and Sociology	2+0	3.0
THU203	Community Services	0+2	3.0
TİY121	Introduction to Theatre	2+0	3.0
TİY308	Republic Era Turkish Theatre	2+0	3.0

Area Elective Courses

BBO105	Information Technologies	2+1	3.0
BBO2001	Database Management Systems	3+1	5.0
BBO2503	Internet of Things	2+1	4.0
ESTÜ112	Cyber Security for Everyone	2+0	2.0
İSG401	Occupational Health and Safety I	2+0	2.0
İSG402	Occupational Health and Safety II	2+0	2.0
RYZ103	Data Structures and Algorithms	3+2	5.0
RYZ2006	Project Management and Applications	2+1	3.0
UCS2502	Graduation Project	0+5	6.0

CLOUD COMPUTING OPERATOR PR.

CYBER ??SECURITY ANALYST AND OPERATOR PR.

SOFTWARE, APPLICATION DEVELOPMENT AND ANALYSIS DEPARTMENT

GAME DEVELOPMENT AND PROGRAMMING PROGRAM

COURSE CONTENTS

ALM255 (Ger) German I **3+0 4.0**

Greeting Friends; Asking for Someone's Health; Asking for Directions; Asking Where People are From; Making Requests; Asking for Prices; asking for Prices; Asking for Different Kinds of Food and Drink; Formal Sentences Used in Restaurants and Formal Places; Asking For and Telling People about Preferences; Likes and Dislikes; Asking for the Amount of

Something and Telling the Amount of Something: Structures Used in Telephone Conversations; Using Appropriate Grammar Forms for the Given Situations.

ALM256 (Ger) German II 3+0 4.0
Modal verbs: Können, Müssen, Wollen, Dürfen, Sollen, Mögen; Tenses: Simple Present Tense, Future Tense; Nouns and Types of Nouns; Articles; Singular and Plural Forms: Words that are used as Singular or Plural only, Plural Form of the Indefinite Article; Cases of a Noun: Uninflected Case, Accusative, Dative, Possessive Cases; Exercises about these Grammar Points.

ANT452 First Aid 1+2 4.0
Functioning Of The Human Metabolism And Systems: Disruptions occurring in the system, Things to do in the event of illness, Things to do in case of an accident or injury, First Aid Principles: The importance of first aid, Personal responsibilities related to first aid, Legal responsibilities related to first aid, Priorities in first aid, Awareness on first aid, Equipment used in first aid, First aid and time, Lifesaving, Human responsibilities in first aid, Proper first aid intervention, Preparation for expert team after first aid.

ARK108 Archaeology 2+0 2.0
Definition; Social, cultural and historical role of archaeology; Domain of Archaeology; Age of the World; Production of the Earliest Stone Tools; Scientific Disciplines Revenant to Archaeological Studies; Brief History of Archaeological Excavations; Historical Classification and History of Anatolia: Prehistoric Ages, Historical Ages, Archaeological sites of Anatolia, Archaeological excavations in Anatolia; Archaeological Activities of University.

BBO1001 Computer Networks 3+1 5.0
Introduction to Computer Network Systems and the Internet; Data and Signals, Analog and Digital Signals; Modulation, Signal Analysis and Encoding; Transmission Methods: Serial transmission, Parallel transmission, Handshaking, Simplex and Duplex communication; Computer Network Technologies, Network Types and Topologies; OSI Reference Model and Encapsulation; TCP/IP Model and Protocols; IP Addressing and Subnetting; Network Devices 1: Repeater, Hub, Access point, Switch; Network Devices 2: Router, Gateway, Firewall; IP Services; Basic Network Security; Cloud Networking; Industry Standards and Certifications.

BBO101 Introduction to Cloud Computing Technologies 3+1 5.0
Cloud computing fundamentals; Cloud service models; cloud infrastructures; Development of cloud-based applications.

BBO102 Virtualization and Cloud Technologies 3+2 5.0
Virtualization fundamentals; virtualization types; cloud computing models; cloud infrastructures; cloud-based application development and management; cloud-based security and privacy.

BBO103 Operating Systems and Security 3+2 5.0
Operating system concepts; Operating system structures; Security policies and mechanisms in operating systems; Security vulnerabilities; Protection methods from vulnerabilities.

BBO104 High Performance Computing Hardwares 3+2 6.0
High performance computing (HPC) hardware; Parallel processors; Architectures of GPUs, FPGAs, and other special purpose computing units; Performance analysis and optimization techniques.

BBO105 Information Technologies 2+1 3.0
Basic concepts of information technologies; Computer systems; Software applications; Internet and network fundamentals; Data management and security.

BBO106 Data Science 3+2 5.0
Data science fundamentals; Big data technologies; Scalable data analytics; scalable applications of machine learning algorithms; Data processing architectures; Performance and optimization techniques.

BBO2001 Database Management Systems 3+1 5.0
Fundamentals of database systems; Data Models and Relational Model; Relational database design; SQL; Database management systems; Distributed Databases and Data Integration; Data mining; Big data technologies; Current Trends in Database Technologies; Project development and presentation.

BBO2002 Industrial Cloud Technologies 3+1 6.0
Fundamentals of the industrial internet; Industrial cloud computing solutions; Cloud-based automation systems; Industrial IoT, Industrial cloud security, Data analytics and machine learning applications, Industry 4.0 and digital transformation;

Integration with Artificial Intelligence and Automation; Industrial Cloud Technologies of the Future; Project development and Presentation.

BBO2003 Cloud Computing Architectures 3+2 6.0
Cloud computing fundamentals; Cloud-based software architectures; Microservices; Container technologies; Cloud security; DevOps practices; Cloud service models; Application scenarios; Current trends in cloud architectures; Future vision; Project development and presentation.

BBO2005 Data Security 2+1 3.0
Fundamentals of data security; Data protection in cloud computing environments; Encryption techniques; Access control mechanisms; Firewalls; Intrusion detection and prevention systems; Security policies and standards in cloud computing; Legal regulations and compliance issues in cloud computing; Current security tools and technologies; Future trends.

BBO2007 Cloud Computing and Artificial Intelligence 3+2 6.0
Cloud computing infrastructures and services; Fundamentals of artificial intelligence and machine learning; Cloud-based artificial intelligence services; Data analysis and processing; Scalability and performance; Development of artificial intelligence applications and deployment in the cloud; Artificial Intelligence Ethics and Legal Obligations in Cloud Computing; Current Trends in Artificial Intelligence and Cloud Computing; Project development and presentation.

BBO2299 Internship 0+2 5.0
Internship concept; To support theoretical training with practical and current applications in the field, to gain knowledge and experience about the applications and/or production methods used in the sector.

BBO2501 Graduation Project 0+5 6.0
Defining a problem in the field of Cloud Computing; literature review for the solution of the problem; research; theoretical examination; modeling; simulation; project planning; project implementation; analysis; report preparation and presentation.

BBO2503 Internet of Things 2+1 4.0
Internet of Things (IoT) fundamentals; IoT devices and protocols; Integration with cloud computing; Data analysis and big data in IoT; IoT data analysis; IoT security; IoT application scenarios in different areas; Industrial IoT solutions; Project development and presentation.

BEÖ155 Physical Education 2+0 2.0
Definition of Physical Education and Sports; Aims, Disadvantages of Inactive Life; Various Activities for Physical Education; Recreation; Human Physiology; First Aid; Sports Branches: Definition, Rules and Application; Keep Fit Programs.Definition of Physical Education and Sports; Aims, Disadvantages of Inactive Life; Various Activities for Physical Education; Recreation; Human Physiology; First Aid; Sports Branches: Definition, Rules and Application; Keep Fit Programs.

BEÖ176 Trekking 1+2 4.0
The Definition of Trekking; The Essentials which Must Be Done Before Trekking, At The Time of Trekking, After Trekking; Trekking Equipments; Backpack and Essential Equipments in Backpack; The Characteristics of Clothes; The Characteristics of Shoes; Sleeping Bags: Their kinds and characteristics; The Characteristics of Mats; Tents: Their kinds and characteristics; The Methods of Direction Determination: Scrip, GPS, Pole star, Sun, Watch; The Problems According to Weather Conditions in Trekking.

BİL129 Information and Communication Technologies 2+1 3.0
Basic Concepts of Information Technologies: Hardware, Software, Storage, Computer network; Information Technologies and the Society; Word Processing Programs; Image Processing Programs; Presentation Software; Use of Information Networks (the Internet, e-mail); Internet and Communication.

BİL181 Internet Programming I 3+1 4.0
Fundemental Internet Concepts: Understanding the Client-server logic, TPC-IP protocol, HTTP, SMTP, DNS, FTP, TELNET; POP3, PROXY info; Introduction to Web Design: Creating Web files, Using FTP software; Introduction to HTML Language (HTML4); Concept of Cascading Style Templates (CSS3); Javascript-Introduction; Javascript-Contr ol Structures; Javascript-Functions; Javascript-Sequences; Javascript-Objects; Dynamic HTML (DHTML); DHTML Object Model and Collections; DHTML-Event Model.

BİL182 Internet Programming II 3+1 4.0
Introduction to Model-View-Controller (MVC) Architectural Design Pattern with an Appropriate Software Language; Properties and Uses of Model Objects, Image objects and Inspector objects; RESTful Web Service Concept and Usage;

Teaching a Software Language Compatible with Front-end Model-Image-Inspector Frameworks: Bidirectional data-binding, Dependency injection, Directives, Filters, Form controls, Expressions, Bootstrap mobile interface, JavaScript and CSS framework, SASS (syntactically awesome stylesheets), LESS.

BİL284 Object Oriented Programming 3+1 4.0

Identification of Variables and Functions as Objects; Properties of Objects and Changing them; Relations Between Mother / Child Objects; Programming Techniques; Use of Objects in Programming; Modification of Object Properties with Functions; Preparing More Useful Interfaces for Users; Faster and Easier Results Using Objects in Programming; Differences Between Classical Programming and Object-Oriented Programming.

BİL812 Visual Programming 3+1 4.0

Principles of Object Oriented Programming and Teaching a Suitable Language; The Building Blocks of the Language; Language Environment; Visual Programming; Program Structure; Elements of the Language; Simple Types; Floating Point Data Structures; Indicators; Log In / Out; Visual Database Tools; Tables; Data Clusters; SQL; Object Oriented Programming; Components; Objects; Advanced Programming Topics.

BTM101 Programming I 3+2 5.0

Variables and Data Types; Control Structures and Conditional Statements; Comparison Operators; Logical Operators; Loops and List Operations; Functions and Modular Programming; File Operations; Advanced Programming Topics and Library Usage; Error Trapping; Project Development.

BTM102 Programming II 3+2 5.0

Functional Programming; Data Structures and Algorithms; Sorting and Search Algorithms; Object Oriented Programming (OOP); GUI Programming; GUI Application Development; Database Operations; Project Development.

BTP101 Algorithms and Introduction to Programming 3+1 5.0

Principles of Problem Solving; Phases of Problem Solving; Algorithm and Flow Charts: Description of a problem, Recognizing critical points, Pieces into parts to problem, Converting algorithm into flow charts, Testing, Finding mistakes; Using Of Programming Media and Principles of Code Writing; Using Programming Language Media: Variables, Controlling terms and circles, Describing necessary variables, Writing program code, Running of program and testing, Producing alternative solving for program.

BTP102 Database and Management Systems I 3+1 4.0

Database, Data Base Management Systems; Basic Concepts and Definitions; Database Architecture: External, Conceptual and Internal levels; Schemas; Data Independence; Data Models: Entity-relationship model, Hierarchical model, Network model and relational model; Dependencies Between Attributes; Normal Forms.

BTP103 Integrated Office 3+1 4.0

Using for Various Aims in the Office Environment of Computer Technology; Using of Word Processing Programme; Presenting and Preparing Presentation by Computer Technology; Using of a Presentation Programme; To be able to Create of Working Sheet; Understanding Facilities Provided by Working Environment, Preparing Graphic in Working Sheet; Understanding Importance of Advantages of Using Database Programme.

BTP104 Data Structures and Programming 3+1 4.0

Definition of Data; Main Data Types and Data Structures; Connected Lists, Stocks; Conjunctions Nets; Algorithm Difficulty; Basic Algorithms; Memory Usage Registration Concept; Physical and Logical Organization of Registrations; File Usage and Management: Randomised and Directly connected files; Registering and Database; Programming; Controlling of Computer Ports by Programming.

BTP146 Python Programming I 2+1 2.0

To Construct an Algorithm; to Use Flow Diagram and Pseudo-code for Design of the Algorithm; to Learn Basic Concepts of Programming; to Support Basic Data İnput-output Processes by Programming; to Use Conditional Control Structures; to Use Operators; to Use Loop Structures; to Handle Exceptions for Designed Program; to Design a Function; to Call a Designed Function in a Program.

BTP201 Operating Systems 3+1 4.0

File and Directory Processes: File access, Definition of files and groups; Administration Systems: Administrator information, Comprehension of system principles, Creating user account, Inserting and terminating user group; Internet Tools: Mail, FTP, Telnet etc. software usage; Installation and Settings: System installation and application, Implemention of required system settings.

BTP202 System Analysis and Design 2+2 4.0

System Function and Components; Definition of the Problem and Solution Principles;System Creation Life Cycle; Analysis Tools and Techniques; Data Flow Charts or Modelling of New Information System; Data definition and Information Requirement at Data Dictionary; System Design and Application; Computer Inputs, Outputs, Controlls; Design of Files; Information System Development Steps and System Analysis; Administration Function; Data and Information Concepts; System Analysis Tools; Classification of Information Tools; Computer Aided Software Engineering Tools.

BTP203 Database and Operation Systems II 3+1 4.0

Design Criteria: Hierarchical, Network and Relational Database Systems; Data Definition, Data Manipulation and Query Languages; Relational Algebra Operators; Relational Calculus; Examples of Relational Query Languages: Sql, Quel, Qbe; Operational Requirements: Security, Integrity, Accuracy, Concurrency and Performance.

BTP204 Microcomputer Systems and Assembler 3+1 4.0

Understanding Basic Hardware Units and Structures of a Microcomputer; Processing of Microcomputer Hardware Units; Programming by Low Level Programming Languages of Microcomputer Systems; Assembler Programming Languages and Applications: Structure of assembler programming, Languages and basic concepts of assembler programming language, Statements of assembler programming language, Advantages of assembler programming language.

BTP211 Technical English I 1+1 3.0

Speaking: Using To Be and Simple Present Tense (Main verb) and Adjectives and Post Modifiers; Using Have Got and Has Got and There Is and There Are; Using Would You Mind...? /Would You Mind If I...? /Would You Like Me To...? / Shall I...?; Using Sorry/ I Am Afraid.../ It's All right; Using Must/ Have To/ Have Got To /Need /Necessary; Using A Little/ Only A Little/ A Few/ Only A Few/ Much/ Many/ Two-Third/ Ten Percent; Using Imperatives/ Ordinal Numbers; Using Possible/ Impossible/ Probable/ Improbable/ Can /Can't/ Might/ Must, Listening and Understanding; Writing, Regarding and Understanding.

BTP212 Technical English II 1+1 2.0

Speaking: Using Simple Present (Main verb)/Have Got/Has Got/Passive; Using Passive/There Is/There Are/Like/Alike/ Unlike/Differ From/While/As Compared With; Using Simple Present/Present Progressive; Using Simple Future/Be Going To/Future Time Expressions/Passive; Using Adverbial Clauses of Reason and Result; Using Was/Were/Simple Past/Passive/ Past Time Expressions, Listening and Understanding, Writing, Reading and Understanding.

BTP215 C Programming I 3+1 4.0

Analysis of C Program: Keywords; Variables, Constants and Declaring a Function or an Array; Data Types Used in C; Operators and Precedence; Declaration of Data; Basic I/O Statements: Getchar(), Getch(), Getche(), Putchar(), Gets(), Puts(), Printf(), Scanf(); Loop Statements: For, While, Do-While; Decision Statements: If-Else-Switch-Case; Strings and Arrays: One dimensional arrays, Multidimensional arrays, Pointers, Character strings; Functions.

BTP216 C Programming II 3+1 4.0

The Importance of Using Indicator Type Variable; Definition and Usage of Indicator Type Variable; Indicator Arithmetic; the Usage of Indicators Type Functions; To be able to go into the Unmistaken Graphic Environment; Adding Necessary Library Functions to the Software; Understanding and Using the Graphic Statements File Types; Common Statements and Terms About Files; Common Statements and Terms About Files; Common Statements and Terms About Text and Binary Files; File Saving Operations on Text Files; The Control of Computer Ports by Using Programming Language.

BTP239 Computer Hardware 2+1 4.0

Physical Structure of a Computer: Hard disc, Processor, Memory, Disc driver, Floppy disc drive;Removable Memory Units; Backup Units, CDs, Input and Output Units, Connection Points,Keyboard, Mouse, Joystick, Scanner, Digitizer, Sound Card, Graphic card, Expanding cards,Monitor, Printer, Plotter; Modem; Network cards; Categorization and Comparison of BigMedium-Small Computer Equipment

BTP241 Computer Network Systems 2+1 3.0

Introduction to Computer Networks; Circuit and Packet Switching Technologies; LAN, WAN, MAN and CAN; Network Hardware; Repeater, Bridge, Hub, Switch, Managed Switch; Ethernet, Wireless Network Hardware, Access Points, Router, Hardware Set Up and Configuration; Network Standards, Network Protocols; OSI Model;TCP, IPv4, IPv6, DNS; Computer Network Planning and Design; Trouble Shooting in Computer Networks

BTP246 Python Programming II 2+1 3.0

Review of the Basic Programming Concepts; Lists: Specific methods of lists; Tuples; Dictionaries: Specific methods of dictionaries; Multidimensional Lists; Modules: Math module, Sys module, Datetime module, Time module, Random module; File Input/Output methods; Classes and Data Abstractions; Python Iterators; Python Generators; Inheritance; Polymorphism; Sort Algorithms; Search Algorithms.

BTP2502 Mobile Programming 2+1 4.0

Mobile Computing: Mobile computing platforms, Smart devices, Mobile development environments, Native and Cross-platform Development; The Flutter Architecture; Fonts, images and puspec file; Introduction to the Dart Language; Immutable Variables: Using Final & Const; Using Typedefs; OOP in Dart; Mixins; Mastering Layouts & Taming Widget Tree; Adding Interactivity; Stateless & Statefull Concepts; State Management; Navigation & Routes; Step by Step Creating Big Project.

BTP299 Internship 0+2 5.0

DJT203 Digital Electronic 3+1 4.0

Basic concepts; Number Systems: Decimal, Binary, Octal, Hexadecimal number systems, Conversion of number systems; Logic Gates: And, or, nand, nor etc., gates, Truth tables; Boolean Algebra: Rules, De- Morgan theorems, Simplification of logic circuits; Karnaugh Maps, Simplification of Logic Circuits; Adders and Subtractors: Half-Full adders, Half-Full subtractors; Combinational Circuits: Decoder, Encoder, 7 segment display; Flip-Flops: S-R, D, T, J-K flip flops and truth tables; Counters; Registers.

ELE215 Electromechanical Control Systems 3+1 4.0

Control Input Components: Switches, Buttons, Paco switches, Mechanic limiting switches, Micro switches, Sensors, Thermostats; Control Output Components: Solenoids valves, Contactors, Coils; Protection Coil of Electric Machines; Control of Electric Machines: Speed control and breaking in three phases asynchronous machines; Control of Lift; PLC in Control Systems.

ELE227 Electrical Machines 3+1 4.0

Magnetic Materials and Magnetic Circuits; Electromechanical Energy Conversion Principles; Transformers; Asynchronous Machines Synchronous Machines; Direct Current Machines; Introduction to Power Electronics and Motor Drives.

ELE228 Electrical Machines and Drivers 3+1 4.0

Structures of Electrical Machines and Operational Principles; Fundamental Equalities and Characteristic Curves: DC motor operation techniques, Types of DC motors, Asynchronous motors; Mono Phase AC Motor; Control Principles of Electrical Machines: Basic control principles used in electrical motors; DC Motor Driving: The structures and operational principles of various DC motors; AC Motor Driving Techniques and Circuits: The structures and operational principles of various AC motors; Step Motors and Driving Circuits: Types of step motors and driving methods.

ELO103 Digital Electronics 3+1 4.0

Digital Concept; Number System; Logic Circuit: Definition of And-Or-Nand etc. logic gates; Simplification of the Logical Expressions; Integrated Circuits : Encoder, Decoder, Seven segment decoder; Flip-Flops: Truth tables of R-S,D, T and J-K type flip flops; Counters: Synchronous, Asynchronous, Up-down counter; Registers and Handlers; Memory Units: Definition of RAM, ROM, PROM, EPROM; Algorithmic State Machines; Invertors.

ELO104 Analog Electronics 3+1 4.0

Semi-conductors and Basic Structures of PN Junction Circuit Equipments; Characteristics of Diodes, Filters, Cutters, Rectifiers, Inverter Circuits; Zener Diodes and Types of Other Diodes; BJT Transistors: Pre-voltage, Operation point, Figures of common connection and Darlington arrangement; JFET-MOSFET Transistors: Their features, Operations, Pre-voltages, Current controlling and types; Operational Amplifiers: Their characteristics, Basic circuits: Addition, Subtraction, Integration and Derivation receiving circuits; Multivibrators and Wave Formers: Their features, Operations and types.

ELO106 Digital Design 3+1 4.0

Circuit Design Using Logic Gates: 3 bit input-8 bit output decoder circuit designs, Multiplexer and demultiplexer related to circuit designs; Circuit Design Using Flip-Flop: Asynchronous and synchronous counter designs, Shift register designs, Parallel input and parallel output shift register, Parallel input and series output shift register ;Circuit Design Using Integrated Circuits: Programming EPROM, Frequency meter design, Programmable logic array design, Multiplexer design using EPROM.

ELO211 Microprocessors / Microcontrollers 3+1 5.0

General Structure of Micro Computer System: Central process unit, RAM and ROM memory characteristic, Input/Output interfaces and peripheral, Micro computer system tools; Comparison of Microprocessors and Microcontroller; Installation of Microprocessors and Microcontroller System; Introduction to Programming: Assembly language structure , Instructions, Flow diagrams; Programming: Data transfer, Loop consumption, Sub programme concepts.

ENO204 Data Addition and Control with Computers 3+1 4.0

Basic Terms: Programmable logic control, Data summing with computer and basic concept related with control; "Data Summing With Computer and Control" SCADA Programmes Definitions; Similarities and Differences Among SCADA Software; Actual SCADA Programming: Stopping and operating motors with instructions; Programmable Logic Control and SCADA Communication.

ENO208 Robot Technology 3+1 4.0

Structure and Operation of Robot: Purpose of robot usage, Block diagrams, Utilization areas of arm-type designed robots; Robot Sensor Units: Operation system of sensors, Robotic syncro-angular sensors, Robotic syncro-resolver sensors; Principles of Robot-Mechanic Systems; Robot Control System: Decision mechanisms, Position servo system, Concept of optimal control; Robot Applicators; Robot Programming: Flow diagram, Coordinate values.

ENO210 Microcontroller Based Control 3+1 4.0

Basic Terms related to Input-Output Processes: "Sink current", "Source current" concept, Parallel data transfer process; Programming to Input-Output Device; Interrupt: Definition of interrupt vector, Interrupt sub-programs; Counters-Timers: Counter-Timer units and principles of working, Step motor control with microcontroller, DC motor control with microcontroller; ADC-DAC Applications.

ESTÜ1001 Story Analysis On World Literature 3+0 3.0

Introduction and Description of the Story: General features; Historical Development of the Story Genre: Classical story understanding and Maupassant style, Chekhov style; Basic Elements of Story Analysis: Person, Time, Place, Theme, Language and Style, Structural Analysis of the Story; Maupassant Style Story Analysis: Plot and classical narrative understanding; Chekhov Style Story Analysis: Mood, character-oriented narration and modern story understanding; Existential Story Studies: Existentialism and the individual's search for meaning; Story in Turkish Literature: Depiction of people, nature and daily life, Postmodern understanding of story, irony and narrator characteristics, Minimalist narration and distribution; General Discussion and Comparison of Stories.

ESTÜ1003 Yoga and Meditation 1+1 2.0

Definition Yoga and Meditation; Yoga and Meditation Benefits; Basic Purposes of Yoga: Breath, Body awareness, Balance; Basic Principles of Meditation; Basic Yoga and Meditation Exercises, Yoga Poses.

ESTÜ101 Introduction to University Life 0+1 2.0

Orientation: Concept of university and understanding of university, General information about Eskisehir, Education and student discipline regulations, Ethics at the university, National and international exchange programs, General services of university, Faculty/department orientations; Self-improvement seminars: Research projects, Entrepreneurship, Respect to diversity, Social gender, Leisure philosophy, Zero waste and sustainability, Career planning and mind mapping, Scientific thinking and observation, Barrier - free living, Carbon footprint, Start-up practices, Project based internship.

ESTÜ103 Ceramic Design Processes 2+1 3.0

Ceramic Design: Definition, Uses, Functions; Principles of Ceramic Design: Line, Color, Texture, Form, Scale, Direction; Analyzing of Design Methods Related to Ceramic; Prepare a Draft Study on the Subject; Prepare a Project With Designs; Determination and Preparation of Ceramic Sludge Types Used in Forming; Defined Production Methods and Knowledge Series Production Methods; Drying; Bisque Firing; Glazing and Glazed Firing.

ESTÜ104 Academic and Life Skills 2+1 3.0

Self-Awareness: Development of self, Early adulthood and self-concept; Values and Goals: Goal setting, Concreate goals and priorities. Considering resources; Effective time Management: Management and planning Definition of Stress; Psychological and Physiological Aspects of Stress; Emotions, Cognitive processes; Coping with Stress. Definition of Stress; Psychological and Physiological Aspects of Stress; Emotions, Cognitive processes; Coping with Stress.

ESTÜ106 Proje Yönetimi 2+1 3.0

Project Management Fundamentals: Definition of project; Human Resources and Communication Management; Quality Management in Projects; Procurement Planning in Projects; Stakeholders Management; Gantt Chart; Causality Relationship Between Activities; SWOT Analysis; Planning of Risk Management in Projects; Project Compression Analysis and Cost Management; Project Resources and Resource Scheduling; Project Monitoring with Earned Value Management; Control and Progress in Line with the Objective of the Projects; R&D Sample Projects; Project Practices.

ESTÜ111 Volunteering Works 1+2 4.0

Management and Organization Concepts; The Concept of Volunteering and Volunteer Management; Fundamental Volunteering Areas (Disaster and Emergency, Environment, Education and Culture, Sports, Health and Social Services etc.); Project Development Related to Volunteer Work and Participation in Volunteer Work in the Field; Ethics, Moral, Religious, Traditional Values and Principles in Volunteer Work; Participation in Voluntary Work in Public Institutions,

Local Governments and Non Government Organizations (NGOs); Risk Groups in Society and Volunteering; Immigrants and Volunteering.

ESTÜ112 Cyber Security for Everyone 2+0 2.0

Basic Concepts: Computer components and definitions; Software: System software, Application software; Computer Networks: Concept of Network and Internet; Malware and Network Attacks: Viruses, Attacks; Computer and Access Security: Password selection, File sharing, Backup; Internet security: SSL, Fake websites; Security on Social Platforms: Fake news and people; Security Analysis: System analysis, Network traffic analysis; System and Network Security: Network security, System security, Mobile device security; Information Security Management System: ISO 27001; Personal Data Protection Law: PDLP procedures; Information Technology Law: Information crimes and punishments.

ESTÜ113 Design Thinking 3+0 3.0

Design Thinking Concepts: Design thinking, Human-centered design, User research, Problem identification, Problem definition, Empathy, Idea development, Creativity, Idea elimination and selection, Low-precision prototyping, High-precision prototyping, User tests, Usage tests, Usability, Revision and iteration, Visual thinking, User-centered design, Design processes and innovation, applications, Presentation techniques.

ESTÜ114 Visual Thinking 3+0 3.0

Visual Thinking Concepts: Concepts of abstract and concrete, Point, Line, Surface, Volume, Composition, Repetition, Rhythm, Hierarchy, Harmony, Contrast, Measuring and scale; Presentation Techniques: Sketch, Color, Tone, Order; Visual Perception and Gestalt Theory: Figure-ground relationship, Proximity principle, Similarity principle, Completion principle, Continuity principle, Simplicity principle, Depth perception, Psychological effect; Visual Communication: Image reading, Image interpretation, Pictogram, Ideogram, Logotype.

ESTÜ115 Photographic Viewpoint 2+1 3.0

Course Introduction: Project work; Research and Discussion of the Project Subject: Evaluation of research results, Successful examples from photography and graphic art, Examination of examples of selected works, Determination of application subjects, Discussion of application possibilities, Basic design elements and principles in photography and graphic design process, Trial shooting and evaluation; Light and Lighting: Color and functions of color; Photography Techniques: Visual editing, Reading photographs; Methods and Techniques in Applied Photography: Technical evaluation of photographs and development stages of the photographs; Basic Rules of Composition in Photography: Perspective, Balance, Proportion, Texture, Shape, Perspective, Lens selection and application; Shooting Process and Graphic Interventions on Photographs; Photographic View Methods: Evaluation of shooting results; Preparation of Portfolio: Portfolio evaluation, Presentation methods and techniques, Exhibition preparation methods.

ESTÜ116 Computer Aided Design I 3+0 3.0

Concepts of Computer Aided Design: Introducing to fusion360, Introducing interface, Surface modeling, Solid modeling; Basic Commands: Sketching, Editing, Constraints, Timeline, Parameter modification, Technical drawing; Construction Commands: Create, Inspect, Insert; Surface Modeling Tools: Creating and editing surfaces; Assembly: Adjusting, Arranging, Joint, Additional options; Freeform Modeling: T-Splines, Surface creation, Surface editing, Symmetry and tools; Visualization: Assigning material, Scene settings, Rendering methods; Various Applications.

ESTÜ117 Computer Aided Design II 3+0 3.0

Concepts of Computer Aided Design: Surface and solid modeling, Differences between surface and solid modeling, Surface creation, Arrangement; Sheet Metal Processing: Sheet metal processing creation and editing; Advanced Modeling Tools: Product part modeling; Introduction to Simulation: FEA simulation, Analyzing and interpreting simulation results; Generative Design: Generative design concept, Generative design tools, Simulating and evaluating generative design results; Manufacturing Tools: 3D printing, Introduction to CAM, Introduction to electronics.

ESTÜ118 Visual Thinking with Concepts 3+0 3.0

Visual Thinking with Concepts: Perception as ability to know, Change of senses; Seeing and time, Seeing depth, Understanding shapes; Visual Perception: Abstraction; Static and dynamic concepts of abstraction, Context, Comparison of perception, Similarities; Image and thought: Mental images; Particular and spiritual images, Abstraction of the image, Perceived quantities, Geometry and meaning; Writing and speech: Words as images, Intuition and cognition, Perception of words, Verbal concepts and pictorial concepts; Vision in Education: Images and art, Looking and understanding, Visual education tools.

ESTÜ119 Flute 3+1 3.0

Breath Work: Breathing exercises the diaphragm and correctly use various activation studies; Technical Studies: Stance, Grip, Position, Fingering and embouchure work; Learning the Notes on the Flute: Learning the notes on the flute with octaves, The octave positions of the lip according to the study, A long blowing sound with learned notes; Technical Development; Proper Studies to be Determined by İnstructor According to Student's Performance on the Scales: With

learned notes, Sharp, Flat, Major and Minor, According to the ranking exercises scales; Flute Repertoire in the Context of Period, Style and İnterpretation: Selected works according to student performance from periods in music history.

ESTÜ120 Solfege 3+1 3.0

Octave of the Tone to be Specified According to The Groups; The Signs Used in Writing Music; Signs Spelling Rules; Staff and Additional Lines; Arrays and Intervals; Major and Minor Scales, İnterests, and Varieties: Natural, Harmonic, Melodic; Measure and Time; The Terms of the Transaction; Marks of Dynamics; The Expression of Terms; According to Student Level and Profile to be Created Reading Pieces by the Teacher; Reading with Piano Accompaniment; Rhythmic Perception and Rhythmic Reading, and Only Two Voice Dictation Skills; to be Able to Read on Different Keys, to be Able to Read Complex Rhythmic Pieces with Piano Accompaniment Two, Three, Four-Voices Dictation Skills; Ability to Read Ceremonial Solfege, Atonal Solfege.

ESTÜ121 Piano 3+1 3.0

Starting Position on the Piano: By taking into consideration to correct position of hands, Arms, Fingers, And feet; Technical Development Exercises: Etudes, Scales, Chords and arpeggios studies; Techniques of Touching Piano Keyboard, Staccato, Legato, Non Legato; Information About Dynamics; Working with Learning Notes and Octaves: One hand and double hand into small pieces-small parts; Style and in the Context of Your Comment Piano Repertoire: Baroque, Classical, Romantic, And modern Turkish composers will be given according to the performance of student works.

ESTÜ122 Guitar 3+1 3.0

Theoretical studies: Writings symbols used in music; Basic information About Solfege; The Structural Characteristics of the Guitar; Guitar History; İntroduction to Guitar: Learning the notes on guitar; Learning the Names of the Right Hand and The Left Hand; Technical Exercises on the Guitar; Scales; Arpeggios; Slurs; Barres; Repertoire: Proper studies to be determined by instructor according to student's performance on the scales; To Recognition of the Different Disciplines During The Phase of Prima Vista; To Make Conscious About Playing Together; Improving to Stage Performance.

ESTÜ123 Gender Equality in Work Life 2+0 3.0

Understanding Gender; Historical and Social Foundations of Gender Equality; Gender and Education; Gender and STEM; Status of Women's Employment in Turkey: Decent work conditions and gender equality, Status of women's employment in the world; Production and Reproduction of Feminine and Masculine Identities in Work Life; Importance of Gender Equality in Work Life; International Norms and Standards on Gender Equality in Work Life; Legal Framework and National Policies on Women's Employment in Turkey; Gender and Leadership; Project Presentations.

ESTÜ125 Philosophy of Science 3+0 3.0

The Emergence of Philosophy; Socrates and Post-Socratic Greek World; Epistemology: Types of knowledge, Knowledge criteria, The relationship between truth and reality; What is science?; Scientific method and process (1): Description, Explanation; Scientific method and process (2): Scientific law and theory; Scientific Objectivity and Historicity; Science and Logic: Deduction, Induction and Analogy; Validity Problems of Scientific Statements: Verifiability, Falsifiability, Possibility, Necessity; Science, Nature and Society: Faith, Ideology, Scientific attitude, Paradigm, Distinction of the scientific from the unscientific.

ESTÜ127 Diction 1+2 3.0

Basic Elements of Diction; Pronunciation defects; Breathing Development and Diaphragm Exercises; Pronunciation Disorders: Rules about vowels; Correct Pronunciation of Words; Spelling and Pronunciation of Confused Words; Stress Exercises; Intonation Exercises; Pronunciation Exercises; Things to Do for Effective Speaking; Prepared Speech; Unprepared Speech; Vocalization Applications.

ESTÜ129 Turkish as a Foreign Language I 2+0 2.0

ESTÜ130 Turkish as a Foreign Language II 2+0 2.0

ESTÜ131 Argentine Tango Dance 0+2 2.0

Introduction to the Course; General Information About Argentine Tango: History of Argentine Tango, Argentine Tango styles, Argentine Tango music; Fundamentals of Tango Salone Dance; Walking Exercises: Training-Dance grip, Individual-couple walking, Steady-paced straight walking with music, Stopping, Changing steps; Walking Exercises: Forward, Backward, Right, Left, Face to face-cross, Straight-circular, Rock steps; Walking Exercises: Improvised walking with music in various rhythms and tempos; Basic Combinations; Forward Ocho; Back Ocho; Parada; Sandwich; Ocho Cortado; Media Luna; Tango Events: Milonga culture; Improvisational application of all learned figures.

ESTÜ132 History of Political Thought 3+0 3.0

Society, Thought and Fiction: Primitive societies and the beginning of thought, The emergence of political fiction; From Organic Evolution to Social-Cultural Evolution: Man's life in the stone ages, Primitive society's way of thinking; Transition from Primitive Community to Civilized Society and Spread of Civilization: Birth of the first civilized society and social division of labor, Spread of civilizations; Political Thinking in Pre-Greek Civilizations: Political Thought in Mesopotamia, Egypt and Anatolia; Political Thinking in Contemporary Greek Civilizations: Political Thinking in Persia, India, China, and the Hebrews; Society and political thought in ancient Greece; Society and Political Thinking in Rome: Economic and socio-political developments in Rome, political thinking in Rome; Society and Political Thinking in the Medieval Latin World: Economic, social and political developments in the Latin world; political thought in the Latin world; Society and Political Thinking in the Modern Age: Economic, social and political developments in Western societies, transition from feudal order to capitalist system; Political Thinking in Modern Western Societies: Religious Reform, Absolute Monarchy and Enlightenment.

ESTÜ133 Disability and Awareness 3+0 3.0

Basic Concepts and Definitions in Special Education, History of Special Education Legal Basis of Special Education, Disabled Individuals and Their Characteristics, Disability and Discrimination, Accessibility is a Human Right! Universal Design, Disability Friendly Approach, Social and Adaptation Skills of Individuals with Disabilities, Business and Vocational Skills and Employment in Individuals with Disabilities, Social Contact in Individuals with Disabilities.

ESTÜ2001 AI Literacy 2+0 2.0

The general aim of this course is to provide undergraduate students from various disciplines with AI literacy. It enables students to understand the fundamental concepts of AI, recognize its applications in daily life and various sectors, use common AI tools effectively and responsibly, and critically evaluate the ethical and societal implications of AI technologies. The course aims to empower students to become informed citizens and adaptable professionals in an increasingly AI-driven world.

ESTÜ201 Turkish Sign Language 3+0 3.0

Deaf Society and Culture: Concept of Hearing Impaired and Deaf. Discrimination against deaf society (Audism). What is sign language? The place of it in deaf culture and social life. Sign language interpretation.1st Grade Turkish Sign Language Education: Foundational concepts and terms. Sign language basic sentence structures and patterns, dialogue, sign language usage space and fluency, fingerspelling, use of non-monual expressions (gestures, mimicking, facial expressions, head and body positions), hand shapes and use, colours, numbers, syntax, directional verbs, self-introduction, comprehension.

ESTÜ203 Introduction to Sociology 3+0 3.0

Science, Society, Sociology: The comparison of physical science and social science, The Birth of Sociology, Theoretical Perspectives in Sociology: Development of sociology, classical and modern sociology; Social Change and Globalization: Theories of social change, Modernism and post-modernism, Culture and Society: Culture of sociology, Gender Equality, The socialization of gender; Work and Economy; Fordism, post-fordism, work and occupations, Political Sociology: İdeology; Sociology of Family: Family from sociological perspectives; Religion and Society; Law, Crime and Society: social deviance, Urbanization and Environment: Risk society.

ESTÜ204 Effective Reading and Writing Skills 3+0 4.0

The Activities Which Contribute The Reading And Writing Skills: Literary texts, Cultural and art activities; Reading Skill; Skill of Writing Efficiently: Widen one's viewpoint; Improvement of Creating Writing: To write originally impression of literary texts or activities; The Texts with Correct Expression: Spelling rules, Punctuation marks, Creating passage, Creating text, Vocabulary, The usage of dictionary; Expression Styles: Narrative expression, Descriptive expression, Explanatory expression, Definitive expression, Sampled expression, Substantive expression, Comparative expression; Types of Writing: Official writing, Fictional writing, Essays.

ESTÜ206 Financial Literacy 3+0 3.0

Key Issues in Financial Literacy: Money, Credit, Deposit, Interest; Conscious Use of Cards: Debit card, Credit card; Inflation and Its Effects on Our Lives; Personal Financial Planning: Spending, Saving, Investment, Budget; Investment Decisions and Investment Plans; Foreign Currencies and Foreign Currency Markets: Dollar, Euro, Pound Sterling; Precious Metals: Gold, Silver; Bonds, Bills and mutual funds; Stocks and Exchange Terminology; Private Pension System: Asset distribution, Participants' rights; Cryptocurrencies: Blockchain, Decentralized finance, NFT, Metaverse.

ESTÜ207 General Psychology 2+0 4.0

History of Psychology; Research Methods in Psychology: Descriptive methods, Correlation, Experiment; Learning Theories: Classical conditioning, Operant conditioning; Motives and Emotions; Perception and Sensation; Memory: Sensory memory, Short-term memory, Long-term memory; Social Psychology: Social influence, Conformity, Acceptance, Obedience, Attitude, Cognitive dissonance, Social categorization; Environmental Psychology; Developmental Psychology:

Lifelong development, Developmental processes; Personality: Psychodynamic, Behavioral and social cognitive; Personality tests; Psychological Disorders: Anxiety and mood disorders, Eating disorders, Personality disorders.

ESTÜ210 Culture of Museum 2+0 2.0

Definition of Museum, its origin and Types of Museums, the story of Archaeological Excavations in Turkey, Ottoman Museology and Antiquities Laws; The Establishment of Museology in Turkey and the works of Osman Hamdi Bey; The importance of Archeology and Archaeological Museums in Turkey; Ruins (Open-Air Museums) in Turkey; Turkish and Islamic Arts Museums in Turkey, Methods of preserving and exhibiting works in museums; Ethnography Museums, methods of preservation of artifacts; Painting and Sculpture Museums, methods of preserving and exhibiting works; Museums of Urban History; Modern Museums; General evaluation of the course

ESTÜ301 Science Communication 2+0 3.0

Science Culture And Science Communication; Actors in Science Communication Process; Open Access: Open access initiatives, Open access platforms; Role of Information Centers in Science Communication Process; Science and Technology Policies: Science-technology-invention-innovation, Science Policies and Science Communication; Academic Texts; Science Journalism: The development of science journalism, The effects of science journalism on the development of science, Writer-reader-scientist interaction ; Ethics In Science Communication; Project Presentations.

ESTÜ307 Children Rights and Family Education 2+0 2.0

Children, Rights and Legal Arrangements Related to Children, Children's Rights and Laws for the Protection of Rights, Children's Rights Convention, Children in Need of Protection, Child Family Relationship I, Child Family Relationship II, Child Neglect and Abuse, Child and Crime Relationship, Family Education and Principles, Family Education and Family Communication, Family Problems and Services for Children, Turkish Family Structure and Family Services.

ESTÜ401 Introduction to Professional Life 1+1 2.0

Information about PL, What is needed for PL?, Sector Meetings, 21. Century Competencies: Improving self-awareness, Basic communication skills, Problem solving, Decision making and leadership, Teamwork; Effective Interview Techniques and Interview Simulation; Career Planning; Resume Preparation Techniques, Networking: Social networks for professional life; Project Management; Job Search Strategies.

ESTÜ402 Coaching and Leadership 3+0 3.0

Definition of Coaching; The Difference of The Coaching Profession from Other Specializations Is the Basic Coaching Session; Characteristics Of Coach; Harmony In Coaching Relationship; Different Learning And Experience Styles, Coaching And Leadership-Based Communication; Listening Deeply, Asking Strong Questions, Giving Feedback. Coaching Levels; Goal, Motivation and Action Steps, Goal Setting Coaching Tool; Circle of Life, Values Assessment Coaching Tool; Determination of Core Values, Leadership; Vision and Mission Work, Holistic Leadership; Life Purpose Study, Leadership Styles; Teacher, Visionary, Warrior, Wise, Nourishing.

ESTÜ403 Basic Computer Utilization 3+0 4.0

Computers: Binary number system, Computer architecture, Input-output units, System units; Computer Software: Operating systems, Utilities; Peripheral Equipment: Printers, Scanners; Computer Security: Viruses, Worms, Trojans, Antivirus software; Basic Internet Concepts: Computer networks, Working principle; Word Processor: Editing documents, Text formatting, Working with Tables; Spreadsheet: Page structure, Cell logic, Filtering in tables, Graphics, VBA introduction; Presentation: Slide layout, Transitions, Animations; E-mail: POP3, IMAP, Exchange, Account setup; Application software: Software that comes with the operating system, PDF Reading, Compression.

ESTÜ405 Computer Programming 3+0 5.0

Modern Computers: Data storage, Binary system, Computer architecture, Arithmetic and logical unit; Algorithm Concept:, Algorithm design, Flow charts; Python Basics: Python versions, Integrated development environments, First program; Basic Data Types: Numerical and logical data types, Dictionaries, Sets, Lists; Variables and Operators: Variables, Operators; Control Statements: Sequential Statements, Decision Control Statements, Repetitive Statements; Functions: Creating and calling functions, Arguments, Recursive functions; Object-Oriented Approach: Classes, Objects, Methods; File Operations: Opening file, Reading file, File methods; Graphical User Interfaces.

ETK211 Professional Ethics 2+0 3.0

Concepts of Ethics and Morality: Definition, Characteristics, Distinction; Types of Ethics; Principles, Rules and Codes; Concept of Professional Values; Relationship Between Ethics and Professional Value; Need for Ethics; Principles and Rules of Professional Ethics; National and International Regulations of Ethics.

FOT107 Photography 2+1 3.0

Components of Cameras; Techniques of Photography: Exposure, Equivalence laws, Exposure adjustments; Adjustments of Technical Equipment: White balance, Virtual adjustments; Compositions: Subject, Movement, Rhythm, Texture,

Perspective, Light; Assistant Equipment; Tripod, Filters, Light; Ranges of Photography; Portrait, Nature, Architectural; Technological Developments: Digital photography.

FOT202 Photography 2+0 3.0
Introduction to Photography: Relations between architects and photography, Description of visual aspect of architecture, Use of photography in the presentation of architectural products; The camera; Process of photographing; Film Development Procedure for Black and White Films, Film Development Procedure for Colored Films and Slides; Printing Processes.

FRA255 (Fra) French I 3+0 4.0
Language Functions: Greetings, Invitations, accepting or refusing invitations; Vocabulary Knowledge: Nourishment, Accommodation, Clothing and colors, Bairams and activities; Grammar: Expressions showing quantity, Demonstrative and possessive adjectives, Prepositions and time indicators, Stressed personal pronouns, Imperatives, Verbs with double pronouns; Learning About French Culture: An area in France: La Baurgogne; Pronunciation, Semi-vowels, Gliding.

FRA256 (Fra) French II 3+0 4.0
Language functions: Imperatives and wishes; Evaluation, Proving and Thanking; Vocabulary: Nourishment, Accommodation, Clothing and colors, Bairams and activities; Ordinal Numbers; Grammar: Expressions showing quantity, Demonstrative and Possessive Adjectives, Prepositions and Time indicators, Stressed personal pronouns: Imperative moods, Verbs with double pronouns; Learning about Target Culture: An Area in France: La Bourgogne; Pronunciation: Intonation, Semi-Vowels, Gliding.

GRA110 Graphic and Animation 3+1 4.0
Pictures Files; Comprehension of various kinds of picture files forms and properties, Commonly used picture files picture saving files, Properties of picture files; Selecting The Most Useful Picture Forms to Be Used in Web; Opening the Existing Picture and Making Necessary Arrangements on the Picture Files to be able to Make Picture Files; Animations for Web Pages; General Properties of the Animation Creating Programmes; Necessary Drawing Object for Animation; Animation Logic; Creating Animations Using Various Methods.

HUK458 Industrial Rights and Technological Development 3+0 3.0
Overall look at the intellectual systems; General principles of industrial rights; The categories of industrial rights; Patent, trademark; industrial design; Topographies of integrated circuits; Protection of microorganisms; Discussion on the "invention" concept; Background motivation of inventions; Use of inventions in daily life; The rights of the inventors; Special work on the patent system; The use of patent system in production by the engineers; Use of patent archives; Search for invention whether it is patentable or not; Preparing a patent file.

HYO308 Organizational Behavior 3+0 3.0
Introduction to Organizational Behavior and Scientific Foundations of Organizational Behavior; Historical Development of Organizational Behavior; An Individual and Personality in Organization; Attitudes and Job Satisfaction; Foundations of Personal Differences, Biographical Characteristics; Abilities and Learning; Organizational Culture; Groups and Group Dynamics in Organizations; Working with Group Techniques and Participant Management; Motivation Process and Theories of Motivation; Leadership and Theories of Leadership; Conflict; Stress and Stress Management; Organizational Environment and Technology; Organizational Change; Organizational Improvement.

İHA101 Introduction to Unmanned Aerial Vehicle Technology and Regulations 3+0 3.5
First Aviation Trials; Historical Development of UAVs; UAV Configurations; Rotary Wing UAVs; Fixed Wing UAVs; Flapping Winged UAVs; Airborne Light UAVs; Weight Classifications; Range and Altitude Classifications; Task Classifications; H Study in Turkey; Military UAV Studies; Civil UAV Studies; Trends in UAV Research; SHT UAV Instruction; SHT UAV Classification; SHT UAV Registration System; SHT UAV Pilot Licensing, Registration and Registration; Airspace and No-Fly Zones; Commercial and Individual License Differences in UAVs; Insurance Obligations of UAV Users.

İHA102 Unmanned Aerial Vehicle Materials 3+1 3.0
Bonds Between Atoms, Stress, Yield Strength, Tensile Strength, Hardness and Ductility; Metal Based Materials; Aluminum Alloys and Their Properties Used in UAVs, Tensile, Hardness, Fatigue and Impact Strength Tests of Aluminum Alloys; Corrosion Types; Composite materials; Fiber Materials; Matrix Materials; Wood Types Used in UAVs; Mechanical Properties of Wooden Materials; 3D Printing Thermoplastics Used in UAVs; Principle of 3D Printing Method; Thermoplastic Types; Mechanical Behavior of Thermoplastics; Corrosion Behaviors of UAV Materials; Production Methods of UAV Components; Maintenance and Repair of UAV Components.

İHA103 Aviation Terminology and Ethics 3+0 4.0
UAV and General Aviation Terminology; Aviation Alphabet; Standard Terms; International Civil Aviation Organization; Civil Aviation General Directorate; Human Factor: Fatigue and lack of attention, Team management, Social pressure, Stress

and trust; Things to Do Before, During and after flight; Availability for Continuous Flight; Concept of Ethics; Ethics and Its Importance in Aviation Companies; Historical Development of Ethics; Factors Forming Ethics: Culture, Social Responsibility; Causes of Unethical Behaviors: Individual and organizational reasons; Ethical Dimension of Decision Making Process; The Effect of Unethical Behavior on Aviation Activities.

İHA104 Unmanned Aerial Vehicle Propulsion Systems 2+0 2.0

Unmanned Aircraft Propulsion Configurations; Electric and Gasoline Engines; Types of Electric Motors: Brushless electric motors, Brushed electric motors; Piston Engine Types; Mini Turbojet Engines; Electronic Speed Control Circuits; Fuel Types Used in Internal Combustion UAV Engines; Fuel Emissions; Energy Storage Systems: Batteries, Supercapacitors; Alternative Energy Sources: Fuel cells, Solar panels, Biofuels; Propeller Theory; Propeller and Wings; Gear Systems.

İHA106 Theory of Flight 3+0 4.5

Atmospheric Physics: Physical properties of air; International Standard Atmosphere; Flight Theory: Aerostatic and Aerodynamic Lift; Aircraft Aerodynamics: Airflow, Boundary layer; Aerodynamic Force and Components, Aerodynamic Moment, L/D Ratio; Wing Profile; Stall, High Lift Devices; Subsonic, Transonic and Supersonic Flight; Aerodynamics of Rotary Wing Aircraft; Wings; Flight Controls, Empennage; Airframe, Landing Gear; Powerplants.

İHA108 (Eng) Technical English 2+0 2.0

Introduction to the Course; Word Syntax; Words Showing Place; Professional Verbs and Their Conjugations; Guidelines and Procedures; Basic Sentence Structure; Physical Characteristics and Dimensions; Structures Defining Purpose; Unmanned Aerial Vehicle Structural Terms; Aerodynamics and Aviation Terms; Flight Mechanics Terms; Control and Electronics Terms; Terms Related to Operations.

İHA201 Unmanned Aerial Vehicle Control Methods and Simulations 3+1 4.0

Introduction to Automatic Control in Unmanned Aerial Vehicles: Control, Automatic control, Entry, Exit, Control and disturbance variables, Open loop control, Closed loop control; Laplace Transform; System Dynamics: Electrical and mechanical system elements; Speed Control in Electric Motors; Transfer Function and Block Diagrams; Stability of Control Systems; Controllers and Controller Design.

İHA202 Flight Mission Planning and Programming 2+2 4.0

UAV Mission Planning; Military and Civilian Applications and Examples; Autonomous UAV Programming; Flight Controllers; Open Source Software Architecture; ArduPilot Project, ArduPilot Firmware, MAVLink, MAVProxy; SITL Architecture; SITL Simulator; Ready Libraries; DroneKit, Gazebo, Robot Operating System (ROS); Task Planning Software, Mission Planner, QGround Control, Script Insertion; Practice, Matlab, Python Examples and Applied Laboratory Studies.

İHA203 Unmanned Aerial Vehicle Structures and Systems Design 3+0 3.0

System Engineering Approach; Defining the System, System, Subsystem, Component and Part Levels in Systems Engineering Approach; UAV Subsystems; Propulsion Subsystem; Carrier Surfaces Subsystem; Control System; Communication Subsystem; Power Subsystem; Mission Subsystem; Introducing UAV Structures and Examining Their Types; Wing Component and Parts; Tail Component and Parts; Body Component and Parts; Landing Gear Component and Parts; Components and Parts of Control and Communication Subsystems; Realization of System; Subsystem; Configuration Choices and Methodology

İHA204 Unmanned Aerial Vehicle Manufacture and Assembly Workshop 2+2 3.0

Introduction of Unmanned Aircraft Basic and Sub-Components, Introduction of Basic Processes on Assembly Line, Techniques Used in Component Joining Processes, Adhesives, Binders, Anti-Vibration Tools, Introduction of Hand Tools, Introduction of Pneumatic and Electric Devices, Laser Cutting, Milling, Hot Wire Cutting Techniques , UAV Beneficial Load Assembly, Propeller Balance and Importance of Propeller Assembly, Transferring Matters to be Considered in the Installation of Autopilot Card and Flight Sensors, Assembly Applications; Preflight Maintenance; After Flight Maintenance; After Incident Maintenance; Case Study.

İHA205 Aerodynamics 2+0 2.0

Atmospheric Physics: International standard atmosphere (ISA) model, Application to aerodynamics; Airflow Around a Body: Boundary layer, Laminar and turbulent flow, Free flow, Relative air flow, Up and down flow, Vortices, Stagnation Point; Wing Profile and Wing Terminology: Camber, Chord, Average aerodynamic chord, Profile (parasite) drag, Induced drag, Pressure center, Angle of attack, Wing geometry and span ratio; Thrust; Weight; Aerodynamic Force; Lift and Drag Production: Angle of attack, Lift coefficient, Drag coefficient, Polar curve, Stall; Airfoil Distortion Caused by Ice, Snow and Icing.

İHA206 Unmanned Aerial Vehicle Electrical Systems Maintenance and Repair 2+1 3.0

UAV Electric Power System Problem Areas; Problems in UAV Electric Motors, Problems in UAV Batteries, UAV Battery Charging Protocols; Problems in UAV Electronic Speed Control Circuit, Problems Related to Feeding Autopilot and Flight Cards, UAV Power Distribution Circuits and Connecting to UAV Platform, Electric Power System Problems and Solutions; General UAV Cable Hardware: Cable Types and Classification, Cable Hardware Failure Methods, Electromagnetic Interference in UAV Electrical System, Solutions of Problems Caused by Electromagnetic Interaction in Aircraft; Example UAV Electric Faults and Solutions.

İHA207 Meteorology 3+0 2.0

Definition and History of Meteorology, Sources of Weather Report; Atmosphere; Pressure, Pressure Systems, Temperature, Inversion; Humidity, Density, Altimeter; Wind, Local Winds, General Circulation; Stability, Meteorological Factors restricting Opinion; Synoptic Cards, Clouds and Precipitation; Thunderstorm, Tropopause, Turbulence; Jet Streams, Icing; Air Masses, Fronts; Meteorological Documents for Flight; CAVOK, SKC and NSC; Meteorological Cards.

İHA208 Unmanned Aerial Vehicle Operations, Ground Control and Communications 3+0 3.0

UAV Operations: Civil operations, Military operations; UAV Bases in Turkey and the World; 3D Positioning; Reference Systems; UAV Control Systems: Flight sensors, Position sensors; GPS, GNSS; Errors Due to Position Sensors; UAV Ground Stations; Subsystems of Ground Stations; UAV Communication Methods; Telemetry Connections; Telemetry Ranges; Satellite Connections; Basic Map Readings; Special Maps; Airspace and No-Fly Zones; Communication with ATC; Standard Speech Procedures; Information Sharing with Other Stakeholders; Flight Plan; Operation Rules; Operation Envelope; Safe and Secure Flight; Emergency Situations; Risk Assessment.

İHA209 Model Aircraft Manufacture 1+2 3.0

Introduction to Modeling: Flight theory: Forces acting on the plane, Lifting force, Weight, Pull (propulsion), Drag; Flight Principles of Model Aircraft; Basic Elements of Model Aircraft: Wing, Body, Landing gear, Tail gear, Flight controls, Power group; Model Airplane Types: Free flight models, Radio controlled models; Factors Affecting Model Aircraft Selection; Factors Affecting the Performance of Model Aircraft; Plan Reading and Model Aircraft Manufacturing Materials; Manufacturing Techniques; Flight Techniques.

İHA210 Sustainable Aviation Technologies 2+0 3.0

Green Airport; Studies on Design and Construction; Indoor Air Quality; Energy and Materials; Green Engine; Combustion Chamber Design; Renewable Energy Sources in Aviation; Alternative / Green Aviation Fuels; More Electric Aircraft; All Electric Aircraft; Thermal Management in Batteries; Life Cycle Design and Life Cycle Evaluation; Life Calculation of Aviation Materials; Life Cycle Calculation in Aircraft.

İHA211 Unmanned Aerial Vehicle Maintenance and Reliability Management 3+0 4.0

General Concepts Related to Aircraft Maintenance; System Approach and Maintenance Activities; Concept of Reliability and Aircraft Maintenance; Classification of Aircraft Maintenance Activities; Activities Forming Aircraft Maintenance; Care Regulations and Basic Care Methods; Reliability Centered Maintenance; Maintenance Routing Guides; Development of Basic Maintenance Program; Preparation of Maintenance Programs; Planning of Aircraft Maintenance Activities; Aircraft Reliability Program; Aircraft Maintenance Costs; Human Factors in Aircraft Maintenance.

İHA212 Computer Aided Design 2+1 4.0

Description of the Program Package: Features, Menus, Sub-menus, Design environment and menus; Correction and Query Operations: Functions of the correction and query commands, Corrections and arrangements on the created object; Image Control Operations: Function of basic image commands; Blocking Processes and Layers; Dimensioning and Scanning Operations; Printing Processes from the Printer and Plotter.

İHA213 Unmanned Aerial Vehicle Communication Technologies and Cyber Security 2+2 4.0

Wireless Communication Technologies: Bluetooth, Zigbee, Wi-Fi, WAVE, WiMAX and LTE; UAV-UAV and UAV-ground station data connection structures: Bandwidth, Range, Delay, Antenna structures and selection; Unmanned Aerial Vehicle Communication Security and Threats: Signal mixing, Intervention, Deception; Basic Communication Theory: Modulation, Demodulation, Analog and digital communication techniques.

İHA214 Composite Materials and Manufacture Methods 3+1 4.0

Composite Matrix and Fiber Structures; Fiber Fabric Types; Fiber Supplements; Carbon-Graphite and Boron Fibers; Glass and Aramid-Kevlar Fibers; Ceramic Fibers; Metal Fibers; Properties of Fabric Types; Fiber Weaving Types and Effects of Their Angles; Resin Types; Mechanical Behavior of Composites: Orthotropic and anisotropic behaviors; Composite Production Methods, Hand Lay-up, Vacuum Infusion; Production with Prepregs; Flemish Wrapping Technique; Composite Furnaces; Composite Curing Process; Surface Treatment After Curing; Paint Processes on Composite UAV Components; Corrosion of Composite Structures in Service Life: Moisture absorption, Temperature effect.

İHA216 Piston-prop Engines 3+0 4.0

History of Reciprocating Engines; Working Principles of Reciprocating Engines: Four-stroke engines, Reciprocating engines used in aircraft; Reciprocating engine cycles: General information, Ideal cycles for Reciprocating Engines, Otto cycles, Diesel cycles; Energy and Environmental Analysis; Engine characteristics; Reciprocating engine systems: Lubrication system, Fuel system, Ignition system, Cooling system; Propeller System.

İHA218 Flight Practices 1+3 4.0

Overview of UAV Operations; Flight Preparation with Fixed Wing UAVs and Rotary Wing UAVs; Pre-Flight Checklist Preparation; Introduction of UAV Auxiliary Equipment and Safety Precautions; Rotary Wing UAV Pre-Flight Operations and Assembly; Pre-Flight Operations and Assembly of Fixed Wing UAVs; Pre-Flight Applications with Rotary Wing UAV; Flight Training with Rotary Wing UAV.

İHA2501 Human Factors for Unmanned Aerial Vehicles and Systems 3+0 4.0

Unsafe actions by pilots and operators: Errors, Violations; Preconditions for unsafe actions: Environmental factors, Individual conditions; Personnel factors: Unsafe controls; Inadequate supervision, Improper planned operations, Failure to correct a known problem, Control violations, Organizational influences; External influences, Decision making and automation; Situational awareness; Substance use by UAV operators; Fatigue; Workload, Cooperation, Team cohesion and coordination.

İHA2502 Unmanned Aircraft Systems Traffic Management 3+0 4.0

The need and evolution of unmanned aircraft systems traffic management; Operational concept of UTM: Benefits, Conceptual structure, Stakeholders, Services and supporting infrastructure, Operations, Airspace management: Safety, Security, Operational Scenarios, Application of UTM.

İHA2504 Hybrid Propulsion Systems and Use in Unmanned Aerial Vehicles 3+0 4.0

Propulsion Systems and Types in Air Vehicles; Electric Propulsion Systems; Types of Electric Propulsion Systems; Future Forecasts of Electric Vehicles; Hybrid Propulsion Systems; Types of Hybrid Propulsion Systems; Hybrid Electric Propulsion Systems and Types; Hybridization Degree and Classification; Applications of Electric Propulsion Systems in Unmanned Aerial Vehicles; Applications of Hybrid Propulsion Systems in Unmanned Aerial Vehicles.

İHA299 Internship 0+2 5.0

Information about Internship: Purpose, Method, Process, Professional Awareness: Scope of the Profession, ResearchOriented Areas, Practical-Oriented Areas, Occupation and Employability; Occupation and Career Planning; Vocational Training and Specialization: Documentation of Expertise; On-site Practice: Field Trip Technical Trips and Application Studies; Project Design: Determination, Planning, Analysis, Method and Equipment Selection, Application and Conclusion, Reporting and Presentation.

İLT105 General and Technical Communication 2+0 2.0

Definition and Type of Communication: Communication and it's basic concepts, Types of communication; Oral Communication: Techniques, Principles and necessity of oral communication, It's effects on daily life; Written Communication; examples of written language, The kinds of written text used for institutional communication at business Life; Applying Communication Techniques at Business Life; Graphics Communication; Purpose of using Graphic and Schemes Communication; Communication via Technological Devices; Convenience provided by Technologic Equipments.

İLT201 Interpersonal Communication 3+0 4.5

Verbal Communication; Speaking Skills As Dimension of Interpersonal Communication; Listening Capabilities As Dimension of Interpersonal Communication; Non-Verbal Communication; Signs And Meanings; Stress And Stress Management; Group; Group Dynamics; Small Group Characteristics; Persuasion; Speaking And Listening; Time And Time Management; Interpersonal Communication; History of Communication Research.Verbal Communication; Speaking Skills As Dimension of Interpersonal Communication; Listening Capabilities As Dimension of Interpersonal Communication; Non-Verbal Communication; Signs And Meanings; Stress And Stress Management; Group; Group Dynamics; Small Group Characteristics; Persuasion; Speaking And Listening; Time And Time Management; Interpersonal Communication; History of Communication Research.

İLT419 Body Language and Diction 2+0 5.0

Research on Body Language and Concepts of Body Language; Face-to-Face Relations; Relation between Human and Society; Relation between Body and Objects; Relation between Body and Space; Orientation Exercises; Diction Exercises: Intonation, Stress, Articulation; Use of Voice: Control of sound volume, tone color and breath; Speech Control; Movements of Head and Eyes; Facial Expressions; Use of Hands and Arms; Use of Feet and Legs; Harmany in Body Use; Relation between Speech and Body Use; Harmonious Use of Body, Space and Objects.

İME201 Vocational Training in Workplace I 5+10 15.0
Knowing the Workplaces: Organizational structure, Hierarchical position of the student, Work discipline and rules; Safety: Occupational health and safety, Working rules, Protective equipment; Production process: Observation and simple application of the production process, use of theoretical knowledge; Professional communication: The ability to communicate with personnel in horizontal and vertical positions in the workplace.

İME202 Vocational Training in Workplace II 5+10 15.0
Workplaces Working Rules and Conditions: Occupational health and safety, Knowledge and use of protective equipment; Production System and Method: Monitoring the production process and being involved in the production process under the supervision of the management training officer; Use of Appropriate Equipment and Materials; Problem Solving; Professional communication: Written and verbal professional communication skills; Profession and Technology: Following, analyzing and evaluating technological developments in the field.

İNG115 (Eng) English Speaking Skills I 1+1 2.5
Required phrases for everyday English; Greeetings, Introducing, Asking for and giving directions. Social Life: giving an order and paying the bill at restaurants, pubs and bars, Making reservations, shopping. Improvement of listening skills, Pronunciation: improvement of pronunciation and understanding.

İNG116 (Eng) English Speaking Skills II 1+1 2.5
Daily life and social expressions at advanced level. Asking for information about transportation. Various expressions for various situations. Expressions for formal/official situations. Asking for an appointment, job applications/interview, form filling. Formal and informal telephone conversations. Dealing with various accents and register, exercises to improve speaking skills, exercises on problematic sounds and words.

İNG187 (Eng) English I 3+0 3.0
Using Personal Pronouns and Possessive Adjectives; Using to be in Present Tense; Using Singular and Plural Nouns; Using Basic Language Related to Food and Drink; Using "There is-there are" in sentences; Using "have got"; Asking "yes-no" Questions and Giving Short Answers to Them; Talking about Daily and Weekly Routines; Talking about Likes and Dislikes; Talking about Sports and Hobbies; Talking about Abilities by Using "can", "can't"; Using Adjectives that Describe People; Talking about Appearance, Personality and Feelings of People; Talking about Clothes and Colours; Talking about Shopping and Prices; Using Present Continuous Tense.

İNG188 (Eng) English II 3+0 3.0
Using Simple Present Tense; Comparing Simple Present and Present Continuous Tenses; Using Prepositions of Time and Place; Giving Directions, Making Reservations; Using "to be" in Past Tense; Using Regular and Irregular Verbs in Simple Past Tense; Using Comparative and Superlative Form of Adjectives; Using Modals to Give Advice; Suggestions and Obligations; Using Future Tense: Making Sentences Using "going to" and "will"; Using If Clauses Type 0 and 1.

İSG401 Occupational Health and Safety I 2+0 2.0
Overview of Occupational Health and Safety: Scope, Importance, Related concepts; Workplace Accidents and Occupational Diseases: Reasons, Precautions, Costs; Occupational Health and Safety: Responsible institutions, Problems in applications, Legal basis for occupational safety, Legislation, Regulations for employers; Legal Responsibility of Employers for Workplace Accidents and Occupational Diseases: Liability concept, Regulations for employer responsibility.

İSG402 Occupational Health and Safety II 2+0 2.0
Compensation Claims for Occupational Health and Safety: Compensation types; Legislation for Employers not Abide by Occupational Health and Safety Instructions: Administrative sanctions, Criminal sanctions, Investigations for workplace accidents; Organization in Workplace for Occupational Health and Safety: Employee representative, Obligation for constituting board for occupational health and safety, Workplace health and safety board; International Legislation for Occupational Health and Safety: International legislation, European legislation, Comparison of national and international legislation.

İSN309 Mass Media 3+0 3.0
Concept of the Mass Media; Emergence of Mass Media; Historical Development of Mass Media Research; Liberal and Critical Approaches to Mass Media; Optimistic Approach to Mass Media: Marshall McLuhan; Pessimistic Approach to Mass Media: Herbert Marcuse; Quasi Optimistic Approach to Mass Media: Alvin Toffler; Ideological Function of Mass Media; Globalization and Consumer Society; Advertising and Consumer Society; News and Reality; Myth Production in Mass Media: Advertising, TV, News; Discussions on Information Society: Internet and the Problem of Participation; Media and Women; Media and Democracy.Concept of the Mass Media; Emergence of Mass Media; Historical Development of Mass Media Research; Liberal and Critical Approaches to Mass Media; Optimistic Approach to Mass Media: Marshall McLuhan; Pessimistic Approach to Mass Media: Herbert Marcuse; Quasi Optimistic Approach to Mass Media: Alvin

Toffler; Ideological Function of Mass Media; Globalization and Consumer Society; Advertising and Consumer Society; News and Reality; Myth Production in Mass Media: Advertising, TV, News; Discussions on Information Society: Internet and the Problem of Participation; Media and Women; Media and Democracy.

İSP151 (Spa) Spanish I 4+0 4.0

Introduction: Greeting, Giving information; Gender in Nouns and Adjectives; Verbs in the Present Tense; Demonstrative Adjectives and Pronouns; Plural Forms of Nouns and Adjectives; Description: House, Objects, Numbers; Asking Questions; Asking for Directions and the Time; Verbs in the Present Progressive Tense; At a Restaurant: Ordering, Asking for the Bill, Talking about Preferences; Describing People; Reflexive Verbs; Shopping: Cost, Likes and Dislikes, Quantity; Invitation: Accepting, Refusing; Gerunds; Seasons.

İSP152 (Spa) Spanish II 4+0 4.0

The Past: Near and remote past, Prepositions, Indefinite pronouns; The Future: Future plans, Making a phone call, Comparison; The Future Perfect Tense; Habits in the Past; Regular and Irregular Verbs; Senses; Some Grammar Rules: Obligation, Personal pronouns, Passive construction, conjunctions; Reading Texts: Biography, Narration, Picture stories.

İŞL101 Introduction to Business 3+0 4.5

Concept of business: Economic systems, Production factors, Needs and wants, Demand, Goods and services, Consumption and consumer; Success criterion: Efficiency and related concepts; Characteristics of Businesses: Goals and functions of businesses, Relationships with the environment and responsibilities of businesses, Grouping of businesses; Foundation of businesses: Foundation decision, Determining plant location; Extending Businesses; Business ethics and social responsibility (Ethical and moral rules); Concept of management; Functions of management; Human resources management; Functions of human resources management; Principles of marketing.Concept of business: Economic systems, Production factors, Needs and wants, Demand, Goods and services, Consumption and consumer; Success criterion: Efficiency and related concepts; Characteristics of Businesses: Goals and functions of businesses, Relationships with the environment and responsibilities of businesses, Grouping of businesses; Foundation of businesses: Foundation decision, Determining plant location; Extending Businesses; Business ethics and social responsibility (Ethical and moral rules); Concept of management; Functions of management; Human resources management; Functions of human resources management; Principles of marketing.

İŞL102 Management and Organization 3+0 4.0

Management: Definition, Significance of Management for Business Enterprises; Development of Management Science: Classical, Behavioral and Modern Theories; Management Systems; Decision Making and Planning; Concepts of Authority and Power: Characteristics of Authority and Power, Delegation of Authority; Organization: Characteristics and Principles; Comparison of Organization and Planning Processes; Departmentalization; Staffing: Fundamentals, Staffing Process; Leading: Fundamentals, Leading Process; Organizational Structures: Development and Varieties of Organizational Structures; Controlling: Fundamentals and Controlling Process.

İŞL209 Business Management 2+0 2.0

Business and Basic Concepts, Aims and Relationship with Environment of Management: Basic concepts, Business' aims, Importance in economical structure, Difference between manager and entrepreneur; Classification of Businesses: Dimension, Property, Legal structure etc.; Establishment Studies, Dimension and Capacity: Foundation stages, Location, Dimension definion, Capacity; Functions of Business: Management, Organization, Control, Planning; Organization Operation Process: Leathership and management, Strategical management, Change, Groups, Motivation.

İŞL301 Human Resources Management 3+0 4.0

Human Resources Management: Development, Goals and Principles; Functions of Human Resources Management: Human resources planning; Recruitment, Performance Appraisal, Training, Orientation and Development; Wage and Salary Administration; Career Management; International Human Resources Management; Technology in Human Resources Management.Human Resources Management: Development, Goals and Principles; Functions of Human Resources Management: Human resources planning; Recruitment, Performance Appraisal, Training, Orientation and Development; Wage and Salary Administration; Career Management; International Human Resources Management; Technology in Human Resources Management.

İŞL421 Entrepreneurship 2+0 3.0

Importance and Evolution of Entrepreneurship: Entrepreneurship within the framework of Manager, Concepts of Entrepreneur, Employer, Boss and Investor; Leadership in Entrepreneurship and Importance of Management Characteristics; Characteristics of Entrepreneurship; Changing Views of Entrepreneurship; General Evaluation of Entrepreneurship in Turkey: Change and Entrepreneurship; Entrepreneurship before and after the Republic; Female Entrepreneurs.

İŞL475 Techno-Entrepreneurship 3+0 4.0

Techno-Entrepreneurship: Definitions, Concepts, History; Creativity and Innovation: Concepts, Innovation types, Situation in Turkey and world; Idea to Market: Emergence and commercialization process of business idea, road maps; Entrepreneurial Marketing: Concepts, strategy and implementation; Managerial Issues: Performance, Team work, Strategic orientations; Legal Issues: Patents, Copyrights, Law and regulations; Financial Issues: Sources of funding, Sponsorships; Characteristics of Techno-Entrepreneur: Background, Education, Personality; Sustainability and Innovator's Dilemma: Concepts, Reasons of failure; Future of Techno-Entrepreneurship: Trends.

İTA255 (İta) Italian I 3+0 4.0

Sounds in Italian; Masculine and Feminine Definite Articles; Personal and Demonstrative Pronouns; Use and Conjugation of Verbs 'Essere? and 'Avere?; Introducing Oneself; Improving Reading Comprehension by means of Dialogs ; Describing People ; Days ; Months ; Years ; Asking the Time ; Ordinal and Cardinal Numbers.

İTA256 (İta) Italian II 3+0 4.0

Simple and Compound Prepositions; Past Tense and Conjugation of Verbs in this Tense; Transitive and Intransitive Verbs in Past Tense; Improving Reading Skills; Analyzing Paragraphs and Texts; Interrogatives: Asking Questions; Introduction to Italian Culture and Daily Language.

JAP301 Japanese I 4+0 4.0

Basic Verbs; Words and Sentence Structures Used In Daily Speech; Greetings; Meeting Someone new; Introducing Oneself; Asking For Price; Time Concept; Numbers; Verbs And Words About Traveling By Train And By Bus; Likes And Dislikes; Apologizing.

JAP301 (Jap) Japanese I 4+0 4.0

Basic Verbs; Words and Sentence Structures Used In Daily Speech; Greetings; Meeting Someone new; Introducing Oneself; Asking For Price; Time Concept; Numbers; Verbs And Words About Traveling By Train And By Bus; Likes And Dislikes; Apologizing.

JAP302 Japanese II 4+0 4.0

Introducing Oneself And One's Family; Ordering Food And Beverages In A Restaurant Or Cafe; Asking for the Bill; Meals And Expressions Used for Ordering Meals; Making A Reservation; Talking On The Phone; Asking For Information; Quantifiers; Demonstrative Adjectives; Talking About Past And Future.

JAP302 (Jap) Japanese II 4+0 4.0

Introducing Oneself And One's Family; Ordering Food And Beverages In A Restaurant Or Cafe; Asking for the Bill; Meals And Expressions Used for Ordering Meals; Making A Reservation; Talking On The Phone; Asking For Information; Quantifiers; Demonstrative Adjectives; Talking About Past And Future.

KGS104 Quality Assurance and Standards 2+0 2.0

Standardization: Definition, Aims and principles, TSE (Turkish Standards Institute) and its mission, Regional and internal standardization associations; Quality and Quality Concept: Quality definition and concept, Quality approach, Quality costs and risks, Concept of quality control; Quality Assurance: Quality management principles, TS-EN-ISO 9000, TS-EN- ISO 9001; TS-EN, ISO 9004, ISO 9004, ISO 19011 standards and explanations; Vocational Standards: Understanding vocational standards.

MAK105 Production and Manufacturing Technology I 3+1 4.0

Principles, Scope and Importance of Production and Manufacturing Technologies; Measurement and Control Knowledge; Traditional Manufacturing Methods: Definition, Scope, Areas of Use, Comparison with computer aided production and manufacturing methods; Analysing the Manufacturing System; Manufacturing Methods: Definiton, Scope, Areas of Use, Comparison Other Manufacturing Methods.

MAK221 Computer Aided Design I 3+1 4.0

Basic CAD Applications: Commands of limits, Units, Grid, Snap, Ortho, Menu, Save, End, Quit, Screen; CAD Station Drawing Spring: Drawing sector, Drawing straight line; Coordinate Systems: Commands of zoom, Pan, Redraw, Regen Fillet, Chamfer, Break, Trim, Move, Copy, Array, Offset Mırrormirrtext, Rotate, Ellipse, Polygon, Rectangle, Trace, Fill, Solid, Donut, Polyline, Divide, Measure, Change Color, Linetype, Ltscale, Scale, Explode Extend, Stretch, Block, Wblock, Insert, Minsert, Layer, Hatch, Help, List, Area, Dblist, Dist, Id, Status.

MAK229 Mechanical Science and Elements 3+1 4.0

Basic Terms: Diagram of force extension, Stress, Modulus of rigidity, Safety coefficients, Poisson's ratio; Stress: Gliding stress, Shear stress, Hardness, Bending stress, Flow tension, Extension, Elasticity, Beam, Grade, Moment of inertia, Torsional stress, Machine Components: Rivet, Welding, Solder, Bolt, Archer, Shafts, Bearing, Journal bearing, Roller bearing, Lubrication.

MAK240 Hydraulic and Pneumatic Systems 3+1 4.0

Basic Terms of Hydraulic: Bernoulli's equation, Continuation, Flow variety, Reynold's number; Elements in Hydraulic Pneumatic: Gear pumps, Sliding pumps, Piston pumps, Screw pumps, Directional control valves, Flow control valves, Pressure control valves, Cylinders; Basic Terms in Pneumatic: Absolute temperature, Absolute pressure, Isothermal, Adiabatic, Compression; Elements in Pneumatic: Air lubrication, Compressor, Directional control valves, Flow control valves.

MAK242 Administrating Management and Manufacturing Control 1+1 3.0

Management and Manufacturing: Preplanning, Forecasting, Planning, Organisation, Job, Batch, Flow and automatic types of production, Industrial wage, Waste of energy, Material consumption, Statistical of quality control, Production, Planning; Control Rules of Management: Quality control, Stock control, Buck keeping; Marketing; Planning, Orient and Check; Education; Turkish Work Laws; Auditing: Strike, Lockout, Syndicate.

MAK251 Energy Management 3+1 4.0

Common Energy Situation of Turkey; Structure of Turkish Industry; Energy Direction: Importance of energy consumption; Energy Committee; Energy Manager and His Duties; Measurement Devices and Measurement Techniques; To increase Energy Efficiency in Accidents; Electrical Systems: Energy Saving in Electrical Motors, Energy saving in lightning; Economical Analysis Methods; Alternative Energy Sources; Compound Heat-Power Production Systems.

MAK263 Material and Mechanical Testing 3+1 4.0

Material Testing: Introduction, Importance, Material testing methods; Destructive Examinations: Definition and Scope, Importance, Usage objectives, Properties of materials that can be detected with destructive examinations, Classification of destructive examinations and places of use; Experiments and Analysis Techniques: Tensile, compression, torsion, hardening, impact, wear, fatigue, creep, corrosion experiments, Techniques of metallographic analysis; Destructive Examinations of Industrial Pieces and Examination Standards.

MAK272 Computer Aided Design II 2+1 3.0

Dimensioning: Dimension line, Extension lines, Dimension arrows, Layout of writing, Text format, Perspective drawing, Printer and printing; 3D Drawing: Features, Colors; Linear Dimensioning: Horizontal dimensioning, Vertical dimensioning, Inbuilt dimensioning, Rotated dimensioning, Basic line, Continuous dimensioning, Angular dimensioning, Radial dimensioning, Diameter dimensioning, Radius dimensioning, Ordinate dimensioning; 3 Dimensional Drawing.

MAK274 Computer Aided Machine Tools 2+1 4.0

Production Technologies: Traditional production methods, Numerically controlled production technologies, Comparison of production methods; Computer Aided Production and Manufacturing Methods: NC and CNC control systems; CNC Lathe: Production process in CNC lathe, CNC lathe cutters and control panels, CNC lathe maintenance; CNC Milling Machine: Production process in CNC milling machine, cutting and control panels used in CNC milling machine and maintenance of CNC milling machine.

MAT1001 Mathematics I 3+0 4.0

Sets, Real Number Sets, Intervals, Exponentials and Radicals; Identities and Factorization, First and Second Degree Equations and Inequalities; Functions: Concept of a function, Operations with functions, Graph of a function; Linear Functions: Equation of a line, Analytical investigation of lines; 2nd Degree Polynomial Functions: Parabola; Rational, Algebraic and Trigonometric Functions; Inverse Function, Exponential and Logarithmic Functions.

MAT1002 Mathematics II 3+0 4.0

Limit and Continuity; Derivative: Definition of derivative, Tangent line, Properties of the derivative, Chain rule; Derivatives of Polynomial, Rational, Exponential and Logarithmic Functions; Applications of Derivative: Increasing and decreasing functions, Local extremum points, Concavity, Plotting Graphs; Integral: Definite integral, Areas of plane regions; Indefinite Integral; Properties of Integral, Integrals of Polynomial, Rational, Algebraic, Exponential and Logarithmic Functions: Change of variables, Integration by parts, Partial fractions; Surface Area and Volume; Matrices and Determinants; Solutions of Linear Systems of Equations.

MAT1005 Mathematics 3+0 5.0

Sets and Number Sets; Exponents and Radical Numbers; Equations and Inequalities; Functions and Graphs; Limit and Continuity; Detailed Examination of Lines in Plane and Space; Trigonometric Functions and Graphs; Vectors and Vector Operations; Inner Product; Linear Equation Systems and Matrices; Probability and Statistics.

MEK209 Mechanics of Materials (Dynamics) 3+0 3.0

Inner and Outer Force: Static loads, Dynamic loads, Tension and stress, Strength, Factor of safety; Pulling and Pressing Strength: Hooke's law, Trimming strength, Pins and Designing; Moment of Inertia; Torsion Strength Composite Stress Strength; Tender Columns; Wearing: Repeating loads, Examining broken weary cross sections.

MLZ112 Materials Knowledge 3+0 3.0

Importance of Materials Science and Engineering; Atomic Structure and Bond Forces: Formation of atomic structures, Crystal structures and their types, Crystal structure errors; Solidification and Melting Behavior: Equilibrium, Phase, Liquefaction curve, Evaluation of equilibrium diagrams by examining solidification curve; Industrial Materials; Examination of Ferrous and Non-ferrous Metals: Introductions and standards; Material Selection Criteria; Application Examples.

MTR101 Circuit Analysis 3+0 4.0

Concepts of Circuit Analysis; Electric Current; DC Circuit Elements; Voltage; Energy, Power; Resistance; Capacitance; Inductance; DC Circuit Analysis; Alternating Current; Frequency; Phase; Impedance; AC Circuits Analysis; Relay Systems; Transformers; Principles of Electric Engines; Generators; Engines.

MTR102 Measurement Techniques 1+1 2.0

Measurement Techniques; Importance of Measurement; The International System of Units (SI); Base units and derived units; Importance of Calibration; Accuracy, Sensitivity Concepts; Error and tolerances; Analog and Digital Measurement Devices; Measuring Current, Voltage, Power, Frequency, Phase and Electrical energy; Using Oscilloscope; Measuring Mechanical, Hydraulic and Thermodynamic Quantities: Velocity, Pressure, Temperature and Heat Measurements; Job Safety Rules for Electrical Measurements.

MTR105 Mechatronic System Fundamentals 3+0 3.0

Mechatronics: Definition, Mechatronic structure components, Mechanical systems and their design, Electronic systems, Automation systems, Information systems, Process systems; Sensors and Transducers; Mechanical and Electrical Actuators; Systems Modelling: Dynamic responses of systems, Transfer functions, Frequency response, Closed loop controllers; Microprocessors: Assembly language, Input-output systems, PLC; Electricity: Reliability, Basic electrical measurements, Operation of oscillators and signal generators, Electrostatically sensitive parts.

MTR204 Electro hydraulics/Electro pneumatics 2+1 4.0

Introduction to Fluid Power; Energy and Power in Hydraulic and Pneumatic Systems; Pumping Theory; Classification of Pumps; Hydraulic Cylinders and Engines; Valves and Other Control Components in Hydraulic and Pneumatic Systems; Hydraulic and Pneumatic Circuit Design and Analysis; Logical Flow Control Systems; Moving-part Logic circuits; Fluid-control of Fluid Power Systems; Electrical-control of Fluid Power Circuits; Electro Hydraulic Servo Systems; Programmable Control Systems (PLC); Applications of Electro Hydraulic, Electro Pneumatic and PLC Systems.

MTR207 Sensors and Transducers 1+1 3.0

Definitions of Sensors and Transducers; Differences of Sensors and Transducers; Selection of Sensors; Self Generating Sensors and Modulating Sensors; Static and Dynamic Characteristics of Sensors; Classification of Transducers: Position transducers, Force transducers, Movement transducers, Fluid transducers, Temperature transducers, Variable resistance transducers, Variable inductance transducers, Variable capacitance transducers, Light and Radiation transducers; Medical Sensors; Sensor Applications in Electronic Device Circuits.

MTR208 Mechatronic System Design 1+1 3.0

What is mechatronics?; Sensors and Transducers; Signal Conditioning; OPAMP; Filtering; Wheatstone Bridge; Data Acquisition and Representation Systems; Mechanical and Electrical Actuators, Drivers; Modeling Systems; Dynamic Responses of the Systems; Transfer Functions; Frequency Response; Closed-loop Controllers; Digital Logic; Microprocessors; Assembly Language; Input-output (I/O) Systems. Programmable Logic controllers (PLC); Realization of a Mechatronic System as a Project.

MTR210 Technical English 2+0 3.0

Speaking: Introduction of himself and others, Subjects interested with working place, Demands in formal place, Offering help, Excuse, Apology, Necessity, Obligation, Quantity, Ratio Percentages, Estimating, Instruction; Listening-Understanding: Understanding in professional subject; Writing: Taking note, Cirriculum vitae, Business letters, Passive structure usage; Reading-Understanding: Conjunctions indicate time, purpose, condition, Expressions in passive structure, Expressions indicate contrariness, Dictionary usage.

MTR212 Process Measurements 3+1 3.0

Instrumentation Terms: Definition of sensor, Fluency, Transmitter; Measurement Errors; Position Instruments: The kind of limit switches and it?s way of using; Pressure and Vacuum Measurements: Pressure measurement methods, Vacuum system,

Manometer and its studying and using; Weight and Strength Measurements: Weight measurement at fluids; Velocity and Acceleration Measurements: Definition of velocity and acceleration.

MTR214 Applications of Mechatronic in Industry 1+1 3.0
Applications of Mechatronic; Mechanical Systems; Processing of Mechanical Components; Design of Mechanic Components; Design of Mechatronic Components; Realization of Mechatronic Components; Project Process: Project file, Functional efficiency, Organization of project, Cost analysis of project, Control of project, Presentation.

MTR218 Fuzzy Logic 3+1 4.0
Introduction to Fuzzy Logic; Fuzzy Logic Set Theory: Classical and fuzzy sets, Set operations on fuzzy logic; Fuzzy Arithmetics: Addition and subtraction of fuzzy numbers, Multiplication and division of fuzzy numbers; Fuzzy Logic Membership Functions; Fuzzy Relations; Fuzzy Logic Inference System: Mamdani fuzzy model, Sugeno and Tsukamoto models; Applications of Fuzzy Logic: Matlab fuzzy logic toolbox.

MTR220 Process Control 3+0 3.0
Automatic Control Concepts: Reference (Set Point), Error, Process (Controlled) variable, Measurement (Controlling) definitions, Maximum overshoot, Rise time, Settling time definitions; Automatic Control Symbols; Automatic Control Methods; Definitions of Open Loop and Closed Loop Control Systems; Various Control Structures; Stability in Control Systems; End Driver Components.

MTR222 Semicoductor Device Technology 3+1 4.0
Semiconductor Materials, Crystal Structure, Carrier Concentration, Acceptors and Emitters, Mobility, Resistivity, Hall Effect, Carrier Diffusion, Generation and Recombination Processes, P-N Junction, Operation principles of diodes, Basic diodes circuits, voltage- current curve, Operation principles of BJT, BJT circuits, current-voltage curve, Operation principles of MOSFET, Basic MOSFET circuits, current-voltage curve, Circuit design using BJT and MOSFET, and design as digital logic gates.

MTR2501 Circuit Applications 1+1 3.0
Basic Electrical Laws; Circuit Connections; Measuring İnstruments; Determination of Resistance Value; Setting Up A Circuit With Breadboard; Measurement of Equivalent Resistance; Kirchhoff Laws Applications: voltage and current measurement; Oscilloscope Usage: DC/AC voltage, period, frequency and phase difference measurement with oscilloscope.

MTR299 Internship 0+2 5.0
Information about Internship: Purpose, Method, Process, Professional Awareness: Scope of the Profession, Research-Oriented Areas, Practical-Oriented Areas, Occupation and Employability; Occupation and Career Planning; Vocational Training and Specialization: Documentation of Expertise; On-site Practice: Field Trip Technical Trips and Application Studies; Project Design: Determination, Planning, Analysis, Method and Equipment Selection, Application and Conclusion, Reporting and Presentation.

MÜZ101 Evolution of Music 2+0 3.0
History of Music: Antique period, Middle Ages, Renaissance, Baroque, Music in the 17th and 19th centuries; Music in the 20th Century: Regionalism, Nationalism, Universality; Cultural Mosaic of Anatolian Music; Place of Turkish Music in the International Arena; Developing Appreciation of Music from Different Periods.History of Music: Antique period, Middle Ages, Renaissance, Baroque, Music in the 17th and 19th centuries; Music in the 20th Century: Regionalism, Nationalism, Universality; Cultural Mosaic of Anatolian Music; Place of Turkish Music in the International Arena; Developing Appreciation of Music from Different Periods.

MÜZ151 Short History of Music 2+0 3.0
Mile Stones in the History of Music; Music of the Antique Period; Music of Far East; Music of Anatolia; Music of the Middle Ages: Gregorian Chants; Music of Renaissance: Bach and Handel; Music of the Classical Age; Pianoforte in the Classical Age; Romantic Age; Nationalist Movement; Contemporary Music; Nationalism and Universality.

MÜZ157 Traditional Turkish Art Music 2+0 2.0
Description of Traditional Art Music: Basic concepts, Characteristics, Types, Notes, Instruments; The Mode System of Traditional Turkish Art Music; The Rhythmic Pattern of Traditional Turkish Art Music; Samples from Different Modes; Samples from Different Rhythmic Patterns.

OGP101 Game Physics 3+0 5.0
Game Engines; Game Engine Usage and Software Development; Game Engine Components; Game Mechanics and Game Physics; Interactive Game Features; Physical Simulations and Real-Time Rendering; Multiplayer Game Physics; In-Game Physics Interactions; Motion Capture and Application; Vehicle and Machinery Physics; Game Testing and Debugging; Virtual Reality and Augmented Reality.

OGP102 Game Design Principles 2+2 5.0
Fundamentals and History of Game Design; Game Physics and Player Interaction; Game Balancing and Progression System; Game Story and Character Design; Creating Game World and Atmosphere; Game Prototyping and Testing; Game Design Project Development.

OGP103 Game Development 2+4 6.0
Game Development Process and Basic Concepts; Game Development Tools and Platforms; Game Physics and Balancing; Game Prototyping and Design; Game Graphics and Sound Design; Team Collaboration and Project Management; Game Testing and Publishing Process.

OGP104 Computer Graphics 2+2 4.0
Storytelling Fundamentals and Structure; Game Characters and Dialogues; Ripple Points and Story Paths; Creating Game World and Atmosphere; Effect of Player Decisions on Story Flow; Dynamic Story Creation and Balancing; Interactive Story Design Applications.

OGP106 2D Game Development Studio 2+4 6.0
2D Game Engines and Tools; 2D Graphic Design and Animation; Game Physics and Level Design; Character Design and Sprite Animations; Game Prototyping and Testing; 2D Game Design Project Development; 2D Game Development Practices.

OGP2001 Interactive Storytelling 2+1 4.0
Storytelling Fundamentals and Structure; Game Characters and Dialogues; Ripple Points and Story Paths; Creating Game World and Atmosphere; Effect of Player Decisions on Story Flow; Dynamic Story Creation and Balancing; Interactive Story Design Applications.

OGP2002 Mobile Game Development 2+4 6.0
Mobile Game Development Tools and Platforms; Mobile Game Physics and User Interface Design, Different Mobile Game Types and Market Dynamics, Performance and Optimization Techniques, Social Features and Network Integration, Mobile Game Marketing and Distribution Strategies, Mobile Game Prototypes and Testing Techniques, 3D Game Design Project Development, 3D Game Development Practices.

OGP2003 Fundamentals of Digital Art and Design 3+0 4.0
Art and Design Fundamentals; Digital Drawing and Illustration Techniques; Color Theory and Composition; Typography and Graphic Design; Digital Photography and Manipulation; Visual Storytelling and Aesthetics; Digital Art Applications and Projects.

OGP2005 3D Game Development Studio 2+4 6.0
3D Modeling and Animation; Game World and Environment Design; Character Design and Rigging; 3D Graphic Design and Lighting; Game Physics and Balancing; 3D Game Design Project Development; 3D Game Development Practices.

OGP2007 Gamification 2+2 5.0
Basic Principles of Gamification; Strategic Approaches; User Motivation; Game Design Principles; Project Development Process; Management Strategies; Event Evaluation; Ethics and Sustainability; Feedback Techniques; Industry Trends; Application Examples; Tools and Platforms; Project Presentation; Advanced Techniques.

OGP2299 Internship 0+2 5.0
Internship concept; To support theoretical training with practical and current applications in the field, to gain knowledge and experience about the applications and/or production methods used in the sector.

OGP2501 Animation 2+1 3.0
Fundamentals of Animation; Concept of Frames Per Second; Theories for Perceiving Movement; Animation History, Techniques, Types and Principles; Three Dimensional Modeling; Material and Texture; Light and Camera; Concept of Keyframe; Animation of Objects; Skeletonization; Animation with Skeletonization; Rendering and Video making.

OGP2502 Graduation Project 0+5 6.0
Defining a problem in the field of game development and programming; literature review for the solution of the problem; research; theoretical examination; modeling; simulation; project planning; project implementation; analysis; report preparation and presentation.

OGP2503 Sound Design 2+1 4.0
Sound Recording Techniques; Audio Editing and Editing; Creating Sound Effects; Dialogue Recording and Management; Music Composition and Applications; Integration with Game Engines; Software and Tools for Sound Design.

OGP2505 Game Marketing and Distribution 2+1 4.0
Game Marketing Strategies; Target Audience Determination; Brand Management; Digital Marketing Tools; Social Media Marketing; Marketing Campaigns and Interactive Content Creation; Game Distribution Channels; Platforms and Stores.

OGP2507 AR/VR Game Development 2+1 4.0
Augmented Reality (AR) and Virtual Reality (VR) Technologies; Basic Principles of AR/VR/MR/XR Technologies; AR/VR Game Design; AR/VR Game Engines and Software; AR/VR Graphics and Sound Design; AR/VR Interaction Design; AR/VR Application Development Processes; AR/VR Game Testing and Publishing Methods.

OGP2509 Text and Scenario Writing 2+2 4.0
Concept of Scenario: Theme, Plot, Character Creation, Plot, Conflict, Climax, Storytelling; Scenario Parts; Scenario Draft; Development Scenario; Differentiation Scenario; Storyboard Preparation; Information on Editing and Transition Methods to be Used; Concept of Narrative and Narrator; Forms of Narrative Construction; Basic Components of Narrative; Sound Design and Components of Sound; Elements Affecting Rhythm; Use of Time and Space in Narrative, Use of Dialogue in Scenario; Scenario Analysis.

OGP2511 Three Dimensional Design 2+2 4.0
The Concept of Three-Dimensional Design; The Concept of Formation in the Context of Form, Function and Aesthetics; Modeling Work with Dimensional Round, Square and Triangular Shapes; Introduction of the Concepts of Plan, Section and View and Their Application to Geometric Forms; Formation of Cube, Cone, Cylinder and Prism Forms and Search for Order in Space; Preparation of Sketches, Transfer of Sketches to Model Size.

OGP2513 Software Development and Project Management 3+2 5.0
Software Development Models; Requirements Analysis and Design; Programming and Code Development; Testing and Quality Assurance; Agile Software Development; Scrum Project Management; Project Management Tools; Resource Planning; Risk and Crisis Management.

OGP2515 UX/UI Design and Web Accessibility 2+2 5.0
UX/UI Design Fundamentals; User Research Methods; Determining User Needs; User Interface Design; User Experience Design; User Testing and Feedback Analysis; Web Accessibility Standards; Design Practices for Disabled Users.

ÖMB322 Ethics of Science and Research 2+0 3.0
Science, the nature of science, its development and scientific research; the concept of ethics and ethical theories; research and publication ethics; unethical behavior and ethical violations in the research process; ethical issues related to writing and copyright; biased publication, editor, refereeing and ethics; unethical behavior in broadcast ethics and broadcasting; legal regulations and boards on research and publication ethics; Ways to be followed in detecting ethical violations; common research, publication ethics violations and methods to prevent them.

PMYO198 Optional Internship 0+2 5.0
Meeting with the Business World; Obtaining Experiences that Support Theoretical, Practical and Personal Development: Practice by working in public or private institutions, Developing field-oriented skills with applications, Teamwork experience, Time and stress management skills; Verbal and Written Communication: Horizontal and vertical communication within the organization, Communication with the customer, Reporting and presentation of experiences; Occupation and employability, Creating a Vocational Career Plan.

RAY126 Circuit Analysis 4+2 6.0
Circuit Theory; Ohm's Law; Electric Current; Resistivity; Voltage; Electrical Power and Energy; Equivalent Resistance; Current and Voltage Division; Dependent and Independent Voltage and Current Sources; DC Circuit Analysis Methods; Kirchhoff's Laws; Mesh Current Method; Node Voltage Method ; Source Transformation; Superposition Method; Thevenin and Norton Equivalent Circuits; Capacitors; Electric Field; Capacitance; DC RC Circuits; Inductors; Magnetic Flux and Faraday's Law; Inductance; DC RL Circuits; Alternating Current; Amplitude; Frequency; Phase; Power in AC circuits; RL; RC and RLC circuits in AC; Phase Diagrams; Reactance and Impedance; Transformers.

REK2522 Sports Aviation 1+1 4.0
Introduction to Air Sports: History of aviation; Air Sports Institutions and Organizations; Air Sports Branches: General aviation, Acrobatics, Ultralight aircraft, Microlight aircraft, Gyrocopters, Gliders, Parachutes, Drones, Hang gliders, Balloons, Paragliding, Air modeling; Paragliding Sport: Paragliding sport in the world and in Türkiye, Introduction of paragliding flight equipment, Paragliding aerodynamics, Paragliding control, Dispatch and management, Meteorology,

Paragliding flight safety, Paragliding air traffic rules, Paragliding emergencies and procedures, First aid, Paragliding folding, Maintenance and storage, Paragliding ground work; Recent Developments in Aviation.

RTV281 Digital Literacy 2+2 4.0
Internet Technology and Uses; Abbreviations on Internet Addresses; Accessing Information over the Internet; Effective Participation on the Web; Web Literacy Reading Skills and Competencies; Terms and Concepts in New Media; Social media: Social Media Literacy Components; Social Media Security Threats and Precautions: Malware on the Web, Access to Reliable, Accurate and Updated Information in the Web Environment; Misinformation and Disinfection Concepts; Information Usage and Sharing in the Web Environment; Web Ethics: Privacy and Privacy in Social Media Use.

RUS255 (Rus) Russian I 3+0 4.0
Russian Alphabet; Transcriptions of Sounds in Russian; Russian Ortography; Phonetic Perception of Sounds; Consonants and Vowels; Intonation and Stress; Nouns: Proper and Common Nouns; Masculine, Feminine and Neutral Nouns; Russian Names for Men and Women; The Use of Number with Nouns; Greeting Structures; Asking for Directions; Introducing Oneself; Asking and Telling the Time; Patterns Used in Shopping; Patterns Used in Telephone Conversations.

RUS256 (Rus) Russian II 3+0 4.0
Plural Nouns; Construction of Plural Nouns: Plural-only and Singular-only Nouns; Adjectives: Types of adjectives, Forms of Adjectives; Numbers: Different Types of Numbers; Verbs: Types of verbs; Infinitives; Tenses: Present Continuous Tense, Past Tense, Future Tenses; Action Verbs.

RYZ101 Computer Aided Technical Drawing 2+1 3.0
Introduction to Technical Drawing and general information about CAD; Three-view extraction and three-view drawing with CAD; Scales and dimensioning principles; CAD dimensioning commands and applications; Creation of solid models, construction drawings, assembly models of parts that constitute autonomous systems in the software environment; Application of mechanism simulation creation techniques.

RYZ102 Introduction to Autonomous Systems 2+1 3.0
Basic components of autonomous systems; Modeling; Driving techniques; Sensor technologies; Path planning; Localization; Mapping; Autonomous navigation; Autonomous system modeling; Autonomous simulation applications.

RYZ103 Data Structures and Algorithms 3+2 5.0
Introduction to data structures; Basic concepts; Arrays; Lists; Queues; Stacks; Tree structures; Graphs; Navigation algorithms; Functioning of data structures and operations; Use of data structures with various algorithms; Project development.

RYZ104 Robotics and Embedded Systems 2+3 6.0
Robotics and Embedded Systems; Basic electronics; Microcontrollers; Sensors; Actuators; programming; design, development and implementation of robotics and embedded systems.

RYZ105 Operating Systems 2+3 5.0
Operating Systems; Management of computer systems; Efficient use of resources; Process management; Memory management; File systems; Security and performance analysis; Network management and communications; Artificial Intelligence and Operating systems.

RYZ106 Artificial Intelligence 3+0 4.0
Definition of artificial intelligence; History; Basic concepts; Techniques; Applications; Machine learning; Algorithms, Deep learning, Image processing, Security threats and vulnerabilities.

RYZ108 Machine Learning 2+2 5.0
Machine learning; Data preprocessing; supervised learning (including regression and classification); unsupervised learning (clustering and dimensionality reduction); Model evaluation metrics; Algorithms and model selection; Investigating Machine Learning in Industry and Research; Challenges and Ethics; Project Development.

RYZ2001 Robotic Applications 1+3 4.0
Robotic System Components; Robotic Programming; Robot Types; Agricultural and Industrial Automation; Healthcare Applications; Drones and Autonomous Vehicles; Project Development and Presentation.

RYZ2002 Artificial Intelligence Applications 1+3 4.0

Artificial Intelligence from Past to Present; Use of Artificial Intelligence in Different Fields; Competition in the Age of Artificial Intelligence; The Role of Artificial Intelligence in Consumer Behavior; Marketing Communication with Artificial Intelligence; Evaluation of the Effects of Artificial Intelligence Applications.

RYZ2003 Object Oriented Programming 3+2 5.0
Basic Concepts; Classes and Objects; Inheritance; Polymorphism; Abstract classes; Arrays and Collections; Database Operations; GUI Programming; Advanced Object Oriented Programming Topics; Project development and presentation.

RYZ2004 Deep Learning 2+1 3.0
Basic concepts; Artificial Neural Networks and Backpropagation Algorithm; Deep Natural Language Processing; Recurrent Neural Networks; Training and Evaluation of Deep Learning Models; Activation Functions and Loss Functions; Deep learning applications in different fields; Deep Learning and Ethical Issues; Project development and presentation.

RYZ2006 Project Management and Applications 2+1 3.0
Project Management Terminology; Project Management Methodology, Project Management Principles; Project Management Performance Areas; Project Life Cycles; Organizational Structures in Projects; Project Stakeholders; Project managers; Project Initiation Processes; Project Planning Processes; Project execution processes; Project Monitoring and Control Processes; Project or Phase closing processes.

RYZ2299 Internship 0+2 5.0
Internship concept; To support theoretical training with practical and current applications in the field, to gain knowledge and experience about the applications and/or production methods used in the sector.

RYZ2501 Linear Statistical Models 1+2 3.0
Basic statistical concepts; measures of central tendency and measures of dispersion; simple linear regression; multiple linear regression; regression coefficients and their interpretations; model selection and evaluation.

RYZ2502 Graduation Project 0+5 6.0
Defining a problem in the field of Robotic and Artificial Intelligence; literature review for the solution of the problem; research; theoretical examination; modeling; simulation; project planning; project implementation; analysis; report preparation and presentation.

RYZ2503 Image Processing Techniques 2+3 5.0
Image fundamentals; Natural and artificial vision; image acquisition devices and their working methods; Formation and digitization of the image; Programming fundamentals in image processing; Image preprocessing and filtering techniques; Feature extraction and object recognition; Object tracking and background subtraction method; Detection of colored objects, RGB and HSV color modes and transformations.

RYZ2504 Information Technology Law 2+1 3.0
Basic legal regulations; Electronic commerce and commercial transactions; Intellectual property law and digital content; Data privacy and personal data protection; Electronic signature and certificate service providers; Cloud computing and legal issues; Data storage and archiving; IT law and ethical issues.

RYZ2506 Robotic Mechatronics 3+1 4.0
Introduction to Robotic Mechatronics; Mechanical Fundamentals and Robot Components; Actuator Technologies; Sensor Technologies; Introduction to Robot Kinematics; Advanced Kinematic Analysis; Inverse Kinematic Analysis; Introduction to Robot Dynamics; Robot Dynamics Equations; Fundamentals of Control in Robots.

SAN155 Hall Dances 0+2 2.0
Basic concepts. The ethics of dance, Dance Nights, Dance Costumes, National International Competitions and rules/grading, Basic Definitions, Classifications of Dances: Social Dances; Salsa, Cha Cha, Samba, Mambo, Jive, Rock'n Roll, Jazz, Merenge; Flamenko, Rumba, Passa -Doble, Argentina tango, Vals, Disco, Quickstep, Foxtrot, Bolero, European Tango: Ballroom Dances; Sportive Dances; Latin American Dances; Samba, Rumba, Jive, Passa-Doble, Cha Cha, Standart Dances; European Tango, Slow vals (English), Viyana vals, Slow foxtrot, Quickstep.

SGA1002 Statistical Analysis in Informatics 1+3 4.0
Descriptive and Analytical Statistics in Informatics, Correlation, Regression tests selection and interpretation.

SGA2001 Cyber Attack and Defense Methods I 2+4 6.0

Information security; Information security laws and standards; Basics of ethical hacking; Information security threats and vulnerabilities; Types of malware; Virtualization; Password cracking techniques and countermeasures; Social engineering techniques, insider threats, identity theft, countermeasures.

SGA2002 Cyber Attack and Defense Methods II 2+4 6.0
Network level attacks and countermeasures; Application level attacks (web server attacks, web application attacks and SQL injection) and countermeasures; Wireless encryption, wireless threats and countermeasures; Security guidelines and tools for Mobile Platforms; IoT and OT concepts, attacks and countermeasures; Cloud computing technologies, cloud computing threats, attacks and security techniques; Basics of pen testing.

SGA2003 Software Security 2+2 5.0
Computer networks; Protocols; Layer Concept; Data Connections; Network Layers; Transport Layers; Security Concepts: Threats, penetration, defense; Software Security, Operating System Security.

SGA2004 Audit and Management of Security Infrastructure 2+3 5.0
Planning, configuration, monitoring and auditing processes of security infrastructures in corporate information systems. Implementation of network security, access control mechanisms, log management and security policies. Analyzing security threats, determining appropriate measures and gaining the ability to effectively manage the security infrastructure.

SGA2299 Internship 0+2 5.0
Internship concept; To support theoretical training with practical and current applications in the field, to gain knowledge and experience about the applications and/or production methods used in the sector.

SGA2501 Linux Operating System Administration 2+2 5.0
Open Source Software; Linux Distributions and Installations; Linux Architecture and File System; Linux Installation; Kernel Programming; Configuration of Services; Linux System Administration; User and Group Management; Security; Network Management; Introduction to Linux Servers.

SGA2502 Graduation Project 0+5 6.0
Under the supervision of the instructor: Literature review, research, theoretical investigation, modeling, simulation, project planning, project implementation, analysis, report preparation and presentation.

SGA2503 Career Planning and Development 2+0 3.0
Career Concept: Career planning stages, career strategies, career planning models; CV Preparation: CV format and issues to be considered while preparing CV, cover letters and introduction letters; Job interview.

SNT155 History of Art 2+0 2.0
History of Civilization and Evolution of Art: Prehistory to Present; Concepts and Terminology in Art with Samples; Interrelation among Art-Religion and Society; Effects of Religion on Artistic Development; Reflections and Interpretations of Judaism, Christianity and Islam on Art; Renaissance: Emergence, Effects, Artists, Works of Art; Architecture and Plastic Arts; Art in the 19th and 20th Centuries: Relevanceof the main historical events of the period.

SOS154 Man and Sociology 2+0 3.0
Sociology; Definition; Development of Sociology; Methods and Methodology in Social Sciences: Research procedure, Scientific method and sociology, Validity and reliability, Ethics of Social Research; Culture and Society; Family and Gender Issues; Environmental Issues and Society; Media and Communications; Stages of Industrialization; Industrial Revolution and its Consequences; Urban Life and Urbanization: Urban problems in Turkey; Social Inequalities; Social Stratification.

TAR165 Atatürk's Principles and History of Turkish Revolution I 2+0 2.0
Reform efforts of Ottoman State, General glance to the stagnation period, Reform searching in Turkey, Tanzimat Ferman and its bringing, The Era of Constitutional Monarchy in Turkey, Policy making during the era of first Constitutional Monarchy, Europe and Turkey, 1838-1914, Europe from imperialism to World War I, Turkey from Mudros to Lausanne, Carrying out of Eastern Question, Turkish Grand National Assembly and Political construction 1920-1923, Economic developments from Ottomans to Republic, The Proclamation of New Turkish State, from Lausanne to Republic.

TAR166 Atatürk's Principles and History of Turkish Revolution II 2+0 2.0
The Restructuring Period; The Emergence of the fundamental policies in the Republic of Turkey (1923-1938 Period); Atatürk's Principles, and Studies on Language, History and Culture in the period of Atatürk; Turkish Foreign Policy and Application Principles in the period of Atatürk; Economic Developments from 1938 to 2002; 1938-2002 Period in Turkish Foreign Policy; Turkey after Atatürk's period; Social, Cultural and Artistic Changes and Developments from 1938 to Present.

TEK107 Scientific Principles of Technology 3+1 4.0
Material Properties: Chemical operations in burning and oxidation, Prevention from oxidation, Elasticity of material and Hook's Law; Static: Static balance state, Vctorial and scalar quantities, Moment, Center of gravity; Dynamics: Path, time, velocity and acceleration; Mechanic and Electromagnetic Wave Movement: Wave length, Frequency; Fluid Pressure: Pressure and its units, Absolute presuure, Relative Pressure; Electric and Magnetism: Simple circuits with serial and parallel connected resistants, Current, voltage difference and resistant problems.

TER201 Thermodynamics 2+0 4.0
Definitions and Fundamental Principles; First Law of Thermodynamics; Thermodynamic Systems; Heat and Work; Second Law of Thermodynamics; Entropy; Heat Energy; Carnot Principle and Carnot Cycle; Change of State of Gases; Heat Engine Cycles: Constant volume (Otto), Constant pressure (Diesel) and mixed cycles, Power cycles.

THU203 Community Services 0+2 3.0
Various Community Projects: Helping young students during their study periods or after school study sessions, Aiding the elderly in nursing homes, helping disabled individuals with various tasks, helping social services and aiding children with their education etc., take part in the projects which raise environmental awareness, Integrating with the community and enabling use of knowledge accumulated in the courses.

TİY121 Introduction to Theatre 2+0 3.0
Fundamentals of Theatre; Historical Developments of Theatre; Important Periods in World Theatre; Study of Contemporary Interpretations: Plays and Actors; Application of Basic Acting Techniques; Critiquing; Evaluation; Improvisation.

TİY308 Republic Era Turkish Theatre 2+0 3.0
Republic Era Turkish Theatre: Political, Social, Cultural Art Life; Theatre Concepts; Western Theatre; Theatre Perception; Effects of Western Theatre on Turkish Theatre; Dramatic Types; Acting Methods, Directing, Playwriting, Dramatic Styles; Theatre Buildings; Directing Techniques; Analyzing Developments of Theatre; Theatre Education; State Theatres; Private Theatre Companies.

TRS104 Technical Drawing 2+2 4.0
Technical Drawing and Tools: Drawing tools, introduction, usage and care; Technical Drawing Papers: Papers used at drawing, Measurements of paper standarts; Scales: Applications; Standart Line: Usage areas, Line studies; Standart Writing: Inclined and Perpendicular writing, Writing studies; Geometrical Drawings: Angles, Setsquare, Ruler, Drawing angles by using compasses, Dividing to equal parts, combinations, Drawing regular polygons into a circle; Geometric Projection and Drawing Views; Scaling and Measuring; Cross Section Views; Perspective; Roughness of Surfaces and Surface Processing Signs; Tolerance and Exercises.

TÜR125 Turkish Language I 2+0 2.0
Language: Characteristics of language, Relationship between language and thought and language and emotion, Theories about the origin of languages, Language types, The position of Turkish Language among world languages; Relationship Between Language and Culture; Historical Progress of the Turkish Language; Alphabets Used for Writing in Turkish; Turkish Language Studies; Turkish Language Reform; Phonetics; Morphology and Syntax; The Interaction of Turkish Language with Other Languages; Wealth of Turkish Language; Problems Facing Turkish Language; Derivation of Terms and Words; Disorders of Oral and Written Expression.

TÜR126 Turkish Language II 2+0 2.0
Composition: Written composition, Paragraph and ways of expression in paragraphs; Punctuation; Spelling Rules; Types of Written Expression and Practices I: Expository writing; Types of Written Expression and Practices II: Narrative writing; Academic Writing and Types of Correspondence; Reading and Listening: Reading, Reading comprehension strategies, Critical reading; Listening; Relationship between Listening and Reading; Oral Expression: Basic principles of effective speech; Body Language and the Role of Body Language in Oral Expression; Speech Types; Principles and Techniques of Effective Presentation; Some Articulatory Features of Oral Expression.

UCS1001 Remote Sensing and GIS Studio I -Basic Applications 2+6 8.0
General Concepts: Definition of geography, The place where we live, Earth sphere, Parallel - meridian, Clock concepts; Map Information: Map types, Scale and types; Coordinate Systems: What is coordinate, Types, Datum geoid and ellipsoid concepts; Map Projections: Projection types, Map projections used in Turkey; Basic Concepts of Measurement and Measurement Knowledge: Basic measuring instruments, Cartography calculations; Basic Concepts of Geographic Information Systems: History, Components, Software; Software Installation and Use: Using basic menus, opening, editing, saving data; Vector data: Data types, data layout, digitization, georeferencing, Organization of attribute data, Vector based analysis functions, Queries based on attribute data, Queries based on location; Raster Data: Data layout, Usage areas, Resolution, Raster based analysis functions; Data Management: Data acquisition techniques, metadata, examination of data

quality, data transformations; Presentation of Data and Analysis as Output and Thematic Mapping; GIS Application Examples: Urban information systems, Land information systems, Decision support systems.

UCS1002 Remote Sensing and GIS Studio II -Data Processing and Analysis 2+6 8.0
Spatial Data Model: Spatial data, Transformation, Comparison, Evolution; Spatial Database Theory; Vector Data: Spatial objects and geometry, spatial reference, spatial object tables, relationships between tables; Spatial Object Types: Point, Line, Polygon, Label, Measurement, Multiple point, Multiple patches; Raster Data: Properties, Uses, Management strategies, Data organization; Attribute and Location Based Query Applications; Spatial Data Processing: Buffer, Cut, Intersect, Join, Merge, Integration; Three Dimensional Surface Generation: Digital surface model, Digital terrain model, Irregular triangular mesh, Digital elevation model; Surface Analysis: Slope, Aspect, Relief, Relief, Field of view, Elevation curve, Watershed calculations; Data Transformations; Reclassification; Overlapping Analyses; Multi-criteria Decision Making Methods.

UCS1004 Statistics and Data Analysis 2+1 3.0
Definition of Statistics: Uses, Data collection methods; Basic Statistical Concepts; Graphical Representation and Interpretation of Data; Simple Linear Regression and Correlation; Introduction to Spatial Statistics; Spatial Central Measurement Statistics; Point Pattern Analysis; Spatial Autocorrelation; Regional Measurements of Spatial Autocorrelation; Local Measurements of Spatial Autocorrelation; Classical regression model and Spatial Alternatives.

UCS2001 Remote Sensing 1+2 3.0
Basic Concepts in Remote Sensing: Definitions, History of remote sensing, Applications of remote sensing; Electromagnetic Energy: Electromagnetic spectrum, Interaction of electromagnetic radiation with the atmosphere, Interaction of electromagnetic radiation with earth objects, Spectral properties of vegetation, soil and water; Detection Types in Remote Sensing: Sensing systems, Sensing platforms; Thermal Remote Sensing; Microwave Remote Sensing; Digital Imagery: Spatial resolution, Spectral resolution, Radiometric resolution, Temporal resolution; Image Processing and Enhancement: Rayometric correction, Geometric correction, Spectral transformations, Spatial transformations; Classification: Controlled classification, Uncontrolled classification; Satellite Imagery: Downloading images, Opening images, Band merging, Image cutting; Three Dimensional Analysis and Modeling Applications; Topographic Analysis Applications; Image Processing and Accuracy Analysis Applications; Vegetation Identification Applications.

UCS2003 Remote Sensing and GIS Studio III- Service Management 2+6 8.0
Introduction of Automatic Mapping-Service Management and GIS Relationship; SCADA Systems and Application Examples; Computer Aided Mapping and Design; AutoCAD Basic Menus and Functions; Basic Drawing Functions; Basic Editing Functions; Display Functions; Basic Dimensioning and Text Functions; Application of Other Commands and Functions; Data Transfer and Conversion in Different Software; Drawing Studies and Project Design and Development.

UCS2004 Remote Sensing and GIS Studio IV- Project Development 2+6 8.0
What is Project and Project Management: Determination of topics for the project; Project Design in GIS; Project Management and Objectives in GIS; Project Design Methodology in GIS; Decision Making in GIS Projects; Literature Review for the Project; Data Collection for the Project; Analysis of Project Data; Interpretation of Results and Findings; Reporting; Presentation

UCS2005 Basic Spatial Data Analytics 1+2 3.0
Basic concepts: Information hierarchy, Spatial data, What is information and why is it important; Relationship between Spatial Data and Decision Making: Examples of decision making with spatial data in public and private sector (disaster management-logistics-marketing); Data Based Strategy Development; Data Sources and Quality Assessment: Open data portals, Data quality, Data selection considerations; Data Collection and Preprocessing: Integration of survey, IOT, Social media data into spatial analysis; Data Visualization and Effective Presentation: Designing understandable maps for decision makers, Dashboard, Story mapping; Basic statistics and Spatial Pattern Analysis: Density (population-traffic), Clustering (hotspot) and Correlation analysis maps; Data-Driven Policy Development: Using spatial data in public policies, Impact analysis; Evaluating Data Analyses Correctly; Evaluating Real Life Scenarios According to the Criteria Learned in the Course; Designing a Business Model Based on Spatial Data.

UCS2007 Applications of Web Mapping and Analysis 3+2 5.0
Introduction to web mapping; Fundamentals of web mapping; Data sources in web mapping; Web map services; Creating web maps; Design in web mapping; Interactive map tools; Open source web mapping; Analysis in web mapping; Configurable web applications I; Configurable web applications II; Web mapping field applications; Applied project work I; Applied project work II.

UCS2299 Internship 0+2 5.0
Internship concept; To support theoretical training with practical and current applications in the field, to gain knowledge and experience about the applications and/or production methods used in the sector.

UCS2502 Graduation Project 0+5 6.0

Under the supervision of the instructor: Literature review, research, theoretical investigation, modeling, simulation, project planning, project implementation, analysis, report preparation and presentation.