

PORSUK VOCATIONAL SCHOOL

Porsuk Vocational School offers programs in Computer Technology and Programming (normal and evening education), Highway Transportation and Traffic, Design and Printing - Publishing (normal and evening education), Radio-Television Technique (normal and evening education), Railroad Construction, Railroad Electric and Electronic Technology, Railroad Machine Technology and Railroad Transportation Management. Besides Automotive, Child Development, Electric, Furniture and Interior Design, Handcrafts, Industrial Automation, Industrial Electronics, Industrial Moulding, Mechanics, Mechanics Drawing Construction and Textile Technology programs have opened and accepted students in evening education 2002-2003 educational term. Porsuk Vocational School serves in restored building for education by University that is in Porsuk Campus on Basın Şehitleri Street. Vocational school trains well equipped, skilled technicians to serve industry. All programs consist of 4 terms of both theory and laboratory studies. Laboratories are designed to serve both technological and physical needs of each program.

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DEPARTMENT OF AUDIO-VISUAL TECHNIQUES AND MEDIA PRODUCTION

PROGRAM IN PRINTING AND PUBLISHING TECHNOLOGIES

Printing industry is the oldest occupation in the world and this industry developing with information technologies. Nowadays, rapidly changes are advancing qualified labour force in printing industry. The aim of this programme is to train individuals that could accomplish the operations for designing, printing, publishing, and marketing communications of these products so as to work in printing - publishing organizations. Evening education is also available.

PROGRAM

I. SEMESTER				II. SEMESTER			
BYT 101	Printing Equipment	2+1	3,0	BYT 104	Reproduction and Color Theory	3+0	4,0
BYT 103	Fonts and Typography	2+1	3,0	BYT 106	Computerized Page Design I	2+1	4,0
BYT 107	Printing and Publishing	2+1	3,0	BYT 108	Printing Management and		
EST 101	Aesthetics and Design	2+1	3,0		Entrepreneurship	2+0	3,0
GTS 201	Visual Communication Design	2+2	5,0	GTS 112	Illustration	2+1	3,0
MAT 125	General Mathematics	3+1	4,0	İSG 401	Occupational Health and Safety I	2+0	2,0
TAR 165	Atatürk's Principles and History of			TAR 166	Atatürk's Principles and History of		
	Turkish Revolution I	2+0	2,0		Turkish Revolution II	2+0	2,0

TÜR 125	Turkish Language I	2+0	2,0	TKY 102	Quality Management Systems in Production	2+1	4,0
İNG 187 (Eng)	English I	3+0	3,0	TÜR 126	Turkish Language II	2+0	2,0
	<i>Elective Courses (1)</i>	-	2,0	İNG 188 (Eng)	English II	3+0	3,0
			<u>30,0</u>		<i>Elective Courses (1)</i>	-	3,0
							<u>30,0</u>

III. SEMESTER

BYT 205	Binding and Cardboard Packing Production	2+2	4,0
BYT 207	Offset Printing Technology	2+2	4,0
BYT 209	Cost Calculation	2+2	4,0
BYT 211	Computerized Page Design II	2+2	4,0
GTS 212	Desktop Publishing	2+2	3,0
	<i>Departmental Elective Courses (3)</i>	-	11,0
			<u>30,0</u>

IV. SEMESTER

BYT 202	Digital Printing Technology	2+2	4,0
BYT 208	Project	2+2	4,0
BYT 210	Other Printing Techniques	3+1	4,0
GRA 211	Web Design	1+1	3,0
	<i>Departmental Elective Courses (4)</i>	-	15,0
			<u>30,0</u>

DEPARTMENTAL ELECTIVE COURSES

BYT 201 (Eng)	Technical English	3+0	3,0
BYT 213	Total Quality Management in Printing Industry	2+2	3,0
BYT 214	Information Technology in Printing Industry	2+2	3,0
BYT 215	Product Planning and Management in Printing Industry	2+2	3,0
BYT 218	Visual Narration	2+1	4,0
ETK 211	Professional Ethics	2+0	3,0
FOT 107	Photography	2+1	3,0
GTS 228	Graphic Production Techniques	2+1	3,0

RTV 245	Radio Broadcasting Systems and Applications	2+1	4,0
RTV 260	Media Literacy	2+0	3,0
RTV 262	Television Publishing Systems and Applications	2+1	4,0
TÜR 120	Turkish Sign Language	3+0	3,0

ELECTIVE COURSES

BEÖ 155	Physical Education	2+0	2,0
KÜL 199	Cultural Activities	0+2	2,0
SAN 155	Hall Dances	0+2	2,0
THU 203	Community Services	0+2	3,0

DEPARTMENT OF COMPUTER TECHNOLOGIES

COMPUTER PROGRAMMING

Usage of computers at homes and in offices spread wide due to recent developments in IT technologies. Computer networks, software development for web, office and specific purposes, hardware, maintenance and back office, system administration are concepts of Computer Technology and Programming. Graduated students who will have computer technician title are well trained in theoretical and application fields.

PROGRAM

I. SEMESTER

BTP 101	Algorithms and Introduction to Programming	3+1	5,0
BTP 103	Integrated Office	3+1	4,0
ELO 103	Digital Electronics	3+1	4,0
MAT 125	General Mathematics	3+1	4,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0
TEK 107	Scientific Principles of Technology	3+1	4,0
TÜR 125	Turkish Language I	2+0	2,0
İNG 187 (Eng)	English I	3+0	3,0

II. SEMESTER

BİL 131	Computer Aided Design and Modeling	1+1	2,0
BİL 181	Internet Programming I	3+1	4,0
BTP 102	Database and Management Systems I	3+1	4,0
BTP 104	Data Structures and Programming	3+1	4,0
İSG 401	Occupational Health and Safety I	2+0	2,0
MAT 140	Vocational Mathematics	3+1	4,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
TÜR 126	Turkish Language II	2+0	2,0

<i>Elective Courses (1)</i>	-	2,0	İNG 188 (Eng) English II	3+0	3,0
		<u>30,0</u>	<i>Elective Courses (1)</i>	-	3,0
					<u>30,0</u>
III. SEMESTER			IV. SEMESTER		
BİL 284	Object Oriented Programming	3+1 4,0	BİL 812	Visual Programming	3+1 4,0
BTP 106	Computer Hardware	2+2 5,0	BTP 201	Operating Systems	3+1 4,0
BTP 203	Database and Operation Systems II	3+1 4,0	BTP 202	System Analysis and Design	2+2 4,0
BTP 209	Computer Network Systems	1+1 2,0	BTP 204	Microcomputer Systems and Assembler	3+1 4,0
BTP 211	Technical English I	1+1 2,0			
	<i>Departmental Elective Courses (4)</i>	- 13,0		<i>Departmental Elective Courses (4)</i>	- 14,0
		<u>30,0</u>			<u>30,0</u>
DEPARTMENTAL ELECTIVE COURSES			DEPARTMENTAL ELECTIVE COURSES		
BİL 182	Internet Programming II	3+1 4,0	GRA 110	Graphic and Animation	3+1 4,0
BTP 212	Technical English II	1+1 2,0	İLT 105	General and Technical Communication	2+0 2,0
BTP 215	C Programming I	3+1 4,0	İŞL 209	Business Management	2+0 2,0
BTP 216	C Programming II	3+1 4,0	İŞL 421	Entrepreneurship	2+0 3,0
BTP 220	Research Techniques and Seminar	1+1 2,0	KGS 104	Quality Assurance and Standards	2+0 2,0
BTP 242	Statistics Practices at Computer	3+1 4,0	TÜR 120	Turkish Sign Language	3+0 3,0
BTP 244	Electronic Commerce and Marketing Techniques on the Internet	3+1 4,0			
DJT 203	Digital Electronic	3+1 4,0	ELECTIVE COURSES		
ELO 106	Digital Design	3+1 4,0	BEÖ 155	Physical Education	2+0 2,0
ELO 211	Microprocessors / Microcontrollers	3+1 5,0	KÜL 199	Cultural Activities	0+2 2,0
ETK 211	Professional Ethics	2+0 3,0	SAN 155	Hall Dances	0+2 2,0
			THU 203	Community Services	0+2 3,0

DEPARTMENT OF CONSTRUCTION DIVISION

PROGRAM IN BUILDING INSPECTION

PROGRAM			PROGRAM		
I. SEMESTER			II. SEMESTER		
İNG 187 (Eng) English I		3+0 3,0	BİL 129	Information and Communication Technologies	2+1 3,0
MAT 125	General Mathematics	3+1 4,0	İNG 188 (Eng) English II		3+0 3,0
MEK 104	Statics Strength of Materials	3+0 4,5	İSG 401	Occupational Health and Safety I	2+0 2,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0 2,0	MAT 140	Vocational Mathematics	3+1 4,0
TOP 102	Surveying	2+2 4,5	ŞPL 201	City Admiration and Environment	3+0 3,0
TÜR 125	Turkish Language I	2+0 2,0	TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0 2,0
YPD 101	Building Inspection	2+1 3,0	TEK 107	Scientific Principles of Technology	3+1 4,0
YPD 103	Structural Design I	3+1 4,0	TÜR 126	Turkish Language II	2+0 2,0
YPD 105	Construction and Material	3+0 3,0	YPD 102	Guidelines for Earthquake Resistant Construction	2+0 2,0
		<u>30,0</u>	YPD 108	Building Electrical Installation Knowledge	2+0 3,0
				<i>Elective Courses (1)</i>	- 2,0
					<u>30,0</u>

III. SEMESTER			
MEK 211	Soil Mechanics	3+0	4,0
YPD 201	Repairs and Strengthening of Structures	2+0	2,0
YPD 205	Application of Building Inspection	2+2	4,0
YPD 207	Introduction to Computer Aided Design	2+1	3,0
	<i>Departmental Elective Courses (4)</i>	-	14,0
	<i>Elective Courses (1)</i>	-	3,0
			30,0

IV. SEMESTER			
İNŞ 230	Soil Improvement Methods	3+0	4,0
MİM 216	Architectural Project Analysis	2+1	3,0
TRA 220	Road Knowledge	2+1	3,0
YPD 204	Building Site Organization	2+0	2,0
YPD 208	Building Inspection and Legal Aspects of Reconstruction	2+1	3,0
	<i>Departmental Elective Courses (4)</i>	-	15,0
			30,0

DEPARTMENTAL ELECTIVE COURSES

ETK 211	Professional Ethics	2+0	3,0
İLT 105	General and Technical Communication	2+0	2,0
İNŞ 229	Reinforced Concrete Design	2+2	4,0
İNŞ 231	Static of Structure	3+0	3,0
İNŞ 232	Analyses of Concrete	3+0	3,0
İNŞ 235	Methods of Concrete Technology	2+2	3,0
İNŞ 236	Steel Structure Design	3+0	3,0
İNŞ 237	Application of Geotechnics	2+1	3,0
İŞL 209	Business Management	2+0	2,0
KGS 104	Quality Assurance and Standards	2+0	2,0
MİM 217	Architectural Drawing Project	2+3	4,0
ŞPL 202	Plans of Map and Expropriation	2+0	3,0

TÜR 120	Turkish Sign Language	3+0	3,0
YPD 104	Structural Design II	2+0	2,0
YPD 202	Damage in Buildings	3+0	3,0
YPD 203	Technical English	2+0	2,0
YPD 206	Structures and Earthquake	2+0	3,0
YPD 210	Water Supply and Sewerage	2+2	4,0
YPD 212	Geographical Information Systems in Building Inspection	2+1	3,0

ELECTIVE COURSES

BEÖ 155	Physical Education	2+0	2,0
KÜL 199	Cultural Activities	0+2	2,0
SAN 155	Hall Dances	0+2	2,0
THU 203	Community Services	0+2	3,0

DEPARTMENT OF DESING

GRAPHIC DESING PROGRAM

PROGRAM

I. SEMESTER			
BİL 129	Information and Communication Technologies	2+1	3,0
FOT 107	Photography	2+1	3,0
GTS 111	Pattern	2+1	3,5
İNG 187 (Eng)	English I	3+0	3,0
MAT 125	General Mathematics	3+1	4,0
SAN 111	Fundamental Art Education I	3+0	3,0
SNT 111	History of Arts I	2+0	2,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0
TİP 113	Typography	2+1	2,5
TÜR 125	Turkish Language I	2+0	2,0
	<i>Elective Courses (1)</i>	-	2,0
			30,0

II. SEMESTER			
EST 106	Aesthetics	2+1	2,0
GTS 110	Introduction Graphic Design	2+1	3,0
GTS 112	Illustration	2+1	3,0
İNG 188 (Eng)	English II	3+0	3,0
İSG 401	Occupational Health and Safety I	2+0	2,0
SAN 112	Fundamental Art Education II	3+0	3,0
SNT 114	History of Art II	2+0	3,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
TRS 104	Technical Drawing	2+2	4,0
TÜR 126	Turkish Language II	2+0	2,0
	<i>Elective Courses (1)</i>	-	3,0
			30,0

III. SEMESTER			
ANİ 225	Animation	2+1	3,0
GRA 211	Web Design	1+1	3,0
GTS 217	Computer Aided Graphic Design I	2+1	3,0
GTS 219	Original Printmaking I	2+1	3,0

IV. SEMESTER			
GTS 212	Desktop Publishing	2+2	3,0
GTS 218	Computer Aided Graphic Design II	2+1	3,0
GTS 220	Original Printmaking II	2+2	4,0
GTS 222	Packing Design II	2+1	3,0

GTS 221	Packing Design I	2+1	3,0
	<i>Departmental Elective Courses (4)</i>	-	15,0
			<u>30,0</u>

GTS 226	Visual Communication and Advertising	2+1	3,0
GTS 234	Project	2+1	4,0
	<i>Departmental Elective Courses (3)</i>	-	10,0
			<u>30,0</u>

DEPARTMENTAL ELECTIVE COURSES

ETK 211	Professional Ethics	2+0	3,0
GTS 201	Visual Communication Design	2+2	5,0
GTS 205	Printing Techniques	3+0	4,0
GTS 208	Technical English	3+0	3,0
GTS 211	Graphic Applications	2+1	3,0
GTS 213	Portfolio Design	3+0	4,0
GTS 223	Plastic Arts	2+1	4,0
GTS 225	Critical Thinking and Creativity	3+0	4,0
GTS 232	Illustrator Graphic Applications	3+1	3,0
GTS 236	3D Design	2+2	4,0

GTS 238	Design Culture	3+0	4,0
İSN 102	Public Relations	3+0	3,0
TİP 204	Typography Applications	1+1	3,0
TÜR 120	Turkish Sign Language	3+0	3,0

ELECTIVE COURSES

BEÖ 155	Physical Education	2+0	2,0
KÜL 199	Cultural Activities	0+2	2,0
SAN 155	Hall Dances	0+2	2,0
THU 203	Community Services	0+2	3,0

PROGRAM IN GENERATION, TRANSMISSION AND DISTRIBUTION OF ELECTRICITY

PROGRAM

I. SEMESTER

EEÜ 204	Energy Analysis and Savings	2+0	3,0
ELE 103	Electrical and Electronical Measurements	3+1	5,0
ELE 105	Direct Current Circuit Analysis	3+1	5,0
İNG 187 (Eng)	English I	3+0	3,0
MAT 125	General Mathematics	3+1	4,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0
TEK 107	Scientific Principles of Technology	3+1	4,0
TÜR 125	Turkish Language I	2+0	2,0
	<i>Elective Courses (1)</i>	-	2,0
			<u>30,0</u>

II. SEMESTER

EEÜ 106	Traditional Sources of Energy	2+1	2,0
EEÜ 244	Energy Plant Management	3+1	3,0
ELE 104	Alternative Current Circuit Analysis	3+1	5,0
ELO 104	Analog Electronics	3+1	4,0
İNG 188 (Eng)	English II	3+0	3,0
İSG 401	Occupational Health and Safety I	2+0	2,0
MAT 140	Vocational Mathematics	3+1	4,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
TÜR 126	Turkish Language II	2+0	2,0
	<i>Elective Courses (1)</i>	-	3,0
			<u>30,0</u>

III. SEMESTER

EEÜ 104	High Voltage Technics	1+1	2,0
ELO 103	Digital Electronics	3+1	4,0
ELO 205	Power Electronics	3+1	5,0
ELO 211	Microprocessors / Microcontrollers	3+1	5,0
MAK 251	Energy Management	3+1	4,0
	<i>Departmental Elective Courses (3)</i>	-	10,0
			<u>30,0</u>

IV. SEMESTER

EEÜ 210	Contract, Exploration and Planning	2+1	3,0
ELE 209	Electric Generation, Transmission and Distribution	3+1	5,0
ELE 212	Electricity Installation Plans	3+1	4,0
ELE 227	Electrical Machines	3+1	3,0
	<i>Departmental Elective Courses (4)</i>	-	15,0
			<u>30,0</u>

DEPARTMENTAL ELECTIVE COURSES

EEÜ 202	Electricity and Energy Project	2+2	4,0
EEÜ 205	Energy and Environment	2+0	2,0
EEÜ 206	Renewable Sources of Energy	2+0	2,0
EEÜ 232	Hydrogen Energy and Usage	3+1	3,0

EEÜ 234	Solar Energy Systems	3+1	3,0
EEÜ 236	Production of Electricity with Wind	3+1	3,0
EEÜ 238	Hydroenergy	3+1	3,0
EEÜ 240	Thermal Power Plant	3+1	3,0

EEÜ 242	Geothermal Energy	3+1	3,0	MAK 221	Computer Aided Design I	3+1	4,0
EEÜ 246	(Eng) Technical English	3+1	3,0	TÜR 120	Turkish Sign Language	3+0	3,0
EEÜ 248	Fuels and Combustion Technology	3+1	3,0	ELECTIVE COURSES			
ELE 106	Electric Systems (Networks) and Foundations	1+1	3,0	BEÖ 155	Physical Education	2+0	2,0
ELE 207	Electrical Maintenance and Troubleshooting	1+1	3,0	BİL 150	Fundamentals of Information Technology	4+0	5,0
ELE 215	Electromechanical Control Systems	3+1	4,0	KÜL 199	Cultural Activities	0+2	2,0
ELE 222	Related Electrical Service and Systems	1+1	3,0	SAN 155	Hall Dances	0+2	2,0
ETK 211	Professional Ethics	2+0	3,0	THU 203	Community Services	0+2	3,0

DEPARTMENT OF ELECTRONICS AND AUTOMATION

PROGRAM IN MECHATRONICH

PROGRAM

I. SEMESTER				II. SEMESTER			
İNG 187	(Eng) English I	3+0	3,0	ELO 104	Analog Electronics	3+1	4,0
MAT 125	General Mathematics	3+1	4,0	İNG 188	(Eng) English II	3+0	3,0
MTR 101	Circuit Analysis	3+0	4,0	İSG 401	Occupational Health and Safety I	2+0	2,0
MTR 102	Measurement Techniques	1+1	2,0	MAK 105	Production and Manufacturing Technology I	3+1	4,0
MTR 105	Mechatronic System Fundamentals	3+0	3,0	MAT 140	Vocational Mathematics	3+1	4,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0	MEK 209	Mechanics of Materials (Dynamics)	3+0	3,0
TEK 107	Scientific Principles of Technology	3+1	4,0	MLZ 112	Materials Knowledge	3+0	3,0
TRS 104	Technical Drawing	2+2	4,0	TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
TÜR 125	Turkish Language I	2+0	2,0	TÜR 126	Turkish Language II	2+0	2,0
	<i>Elective Courses (1)</i>	-	2,0		<i>Elective Courses (1)</i>	-	3,0
			30,0				30,0
III. SEMESTER				IV. SEMESTER			
ELO 103	Digital Electronics	3+1	4,0	ELE 228	Electrical Machines and Drivers	3+1	4,0
ELO 211	Microprocessors / Microcontrollers	3+1	5,0	ENO 204	Data Addition and Control with Computers	3+1	4,0
MAK 229	Mechanical Science and Elements	3+1	4,0	MAK 240	Hydraulic and Pneumatic Systems	3+1	4,0
MAK 263	Material and Mechanical Testing	3+1	4,0	MTR 214	Applications of Mechatronic in Industry	1+1	2,0
	<i>Departmental Elective Courses (4)</i>	-	13,0	MTR 220	Process Control	3+0	4,0
			30,0		<i>Departmental Elective Courses (4)</i>	-	12,0
							30,0
DEPARTMENTAL ELECTIVE COURSES				İŞL 209	Business Management	2+0	2,0
ELE 215	Electromechanical Control Systems	3+1	4,0	İŞL 421	Entrepreneurship	2+0	3,0
ENO 208	Robot Technology	3+1	4,0	KGS 104	Quality Assurance and Standards	2+0	2,0
ENO 210	Microcontroller Based Control	3+1	4,0	MAK 221	Computer Aided Design I	3+1	4,0
ETK 211	Professional Ethics	2+0	3,0	MAK 242	Administrating Management and Manufacturing Control	1+1	3,0

MAK 251	Energy Management	3+1	4,0	TÜR 120	Turkish Sign Language	3+0	3,0
MAK 272	Computer Aided Design II	2+1	3,0	ELECTIVE COURSES			
MAK 274	Computer Aided Machine Tools	2+1	4,0	BEÖ 155	Physical Education	2+0	2,0
MTR 204	Electro hydraulics/Electro pneumatics	2+1	3,0	BİL 150	Fundamentals of Information Technology	4+0	5,0
MTR 207	Sensors and Transducers	1+1	3,0	KÜL 199	Cultural Activities	0+2	2,0
MTR 208	Mechatronic System Design	1+1	3,0	SAN 155	Hall Dances	0+2	2,0
MTR 210	Technical English	2+0	3,0	THU 203	Community Services	0+2	3,0
MTR 212	Process Measurements	3+1	3,0				
MTR 218	Fuzzy Logic	3+1	4,0				
TER 201	Thermodynamics	2+0	4,0				

PROGRAM IN RADIO AND TELEVISION TECHNOLOGY

The maintenance and application of all the electronic equipments of audio and video production and editing in radio and television studios and broadcast centres, are thought. The workshops are provided by the Open Educational Faculty Radio and TV Production Center Studios located in campus. The latest technology is applied in studios for educational purposes. Our students have an opportunity to practise their theoretic knowledge and to be integrated to business life by getting training in important enterprises about Radio and Television industry (TRT and Private Televisions). Students have to get training total 30 working days. The graduates get Radio & TV Technician title. Evening Education is also available.

PROGRAM

I. SEMESTER				II. SEMESTER			
FOT 107	Photography	2+1	3,0	ELO 103	Digital Electronics	3+1	4,0
MAT 125	General Mathematics	3+1	4,0	İSG 401	Occupational Health and Safety I	2+0	2,0
RTV 112	Studio Equipment and Usage	2+1	3,0	RTV 114	General Communication	3+0	3,0
RTV 127	Audio Technique	3+0	4,0	RTV 116	Radyo Programming	2+2	4,0
RTV 129	Image Technique	3+1	3,0	RTV 239	Video Editing Technics	2+1	3,0
RTV 131	Radio-Television Broadcast Systems	2+2	4,0	RTV 268	Camera Technique	2+1	4,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0	TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
TÜR 125	Turkish Language I	2+0	2,0	TÜR 126	Turkish Language II	2+0	2,0
İNG 187 (Eng)	English I	3+0	3,0	İNG 188 (Eng)	English II	3+0	3,0
	<i>Elective Courses (1)</i>	-	2,0		<i>Elective Courses (1)</i>	-	3,0
			30,0				30,0
III. SEMESTER				IV. SEMESTER			
RTV 217	Creation, Production and Broadcast Process of TV Program	2+0	3,0	RTV 236	Digital Video Effect Systems	2+1	3,0
RTV 229	Television Program Production Techniques	2+1	3,0	RTV 246	TV Program Production Applications	1+1	2,0
RTV 231	Digital Recording Systems	2+1	3,0	RTV 272	Lighting Techniques	2+1	3,0
RTV 233	Digital Audio Video Archiving	2+1	3,0	RTV 274	Interactive Television Applications	2+2	4,0
RTV 242	Video Editing Applications	1+2	3,0	RTV 276	Text and Scenario Writing	2+1	4,0
RTV 248	Television Advertising	2+1	3,0		<i>Departmental Elective Courses (4)</i>	-	14,0
	<i>Departmental Elective Courses (3)</i>	-	12,0				30,0
			30,0				
DEPARTMENTAL ELECTIVE COURSES				ETK 211	Professional Ethics	2+0	3,0
ANİ 216	Graphic Animation at TV	2+1	3,0	İŞL 421	Entrepreneurship	2+0	3,0
ELO 111	Basic Electronic	2+1	3,0	RTV 120	Audio Technics II	3+0	4,0

RTV 121	Measurement and Maintenance at RTV	2+1	3,0	RTV 266	Short Film	2+1	3,0
RTV 222	(Eng) Technical English	3+0	3,0	RTV 270	Sound Application	2+2	4,0
RTV 232	The Basic Techniques of Diction, Announcing and Sound Recording	2+1	3,0	TÜR 120	Turkish Sign Language	3+0	3,0
RTV 234	Working Life in Media	2+1	3,0	ELECTIVE COURSES			
RTV 235	Television Business	2+1	3,0	BEÖ 155	Physical Education	2+0	2,0
RTV 241	Television Reporting	2+1	3,0	KÜL 199	Cultural Activities	0+2	2,0
RTV 243	Kamera-Lighting Applications	2+2	3,0	SAN 155	Hall Dances	0+2	2,0
RTV 260	Media Literacy	2+0	3,0	THU 203	Community Services	0+2	3,0
RTV 264	Radio News	2+1	3,0				

DEPARTMENT OF MACHINES AND METAL TECHNOLOGIES

PROGRAM IN MECHANICAL DRAWING AND CONSTRUCTION

PROGRAM

I. SEMESTER				II. SEMESTER			
İNG 187	(Eng) English I	3+0	3,0	İNG 188	(Eng) English II	3+0	3,0
MAK 105	Production and Manufacturing Technology I	3+1	4,0	İSG 401	Occupational Health and Safety I	2+0	2,0
MAT 125	General Mathematics	3+1	4,0	MAK 106	Production and Manufacturing Technology II	3+1	3,0
MEK 209	Mechanics of Materials (Dynamics)	3+0	3,0	MAK 115	Mechanical Drawing I	3+1	4,0
MRK 109	Basic Principles in Machine Construction	2+0	2,0	MAK 134	Engineering Science	3+1	4,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0	MAT 140	Vocational Mathematics	3+1	4,0
TEK 107	Scientific Principles of Technology	3+1	4,0	MLZ 112	Materials Knowledge	3+0	3,0
TRS 104	Technical Drawing	2+2	4,0	TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
TÜR 125	Turkish Language I	2+0	2,0	TÜR 126	Turkish Language II	2+0	2,0
	<i>Elective Courses (1)</i>	-	2,0		<i>Elective Courses (1)</i>	-	3,0
			30,0				30,0
III. SEMESTER				IV. SEMESTER			
MAK 221	Computer Aided Design I	3+1	4,0	KLP 220	Mold Design	2+1	3,0
MAK 229	Mechanical Science and Elements	3+1	4,0	MAK 240	Hydraulic and Pneumatic Systems	3+1	4,0
MAK 259	Machine Drawing II	3+1	4,0	MAK 272	Computer Aided Design II	2+1	3,0
MAK 263	Material and Mechanical Testing	3+1	4,0	MAK 274	Computer Aided Machine Tools	2+1	4,0
MTR 102	Measurement Techniques	1+1	2,0	MRK 222	Construction	2+1	3,0
	<i>Departmental Elective Courses (3)</i>	-	12,0		<i>Departmental Elective Courses (4)</i>	-	13,0
			30,0				30,0
DEPARTMENTAL ELECTIVE COURSES				İŞL 421	Entrepreneurship	2+0	3,0
BTP 202	System Analysis and Design	2+2	4,0	KGS 104	Quality Assurance and Standards	2+0	2,0
ELE 102	Basics of Electricity	2+2	3,0	KLP 222	Molding Practices	2+2	4,0
ETK 211	Professional Ethics	2+0	3,0	MAK 242	Administrating Management and Manufacturing Control	1+1	3,0
İLT 105	General and Technical Communication	2+0	2,0	MAK 251	Energy Management	3+1	4,0

MAK 257	Non-Destructive Testings	2+2	4,0
MAK 261	Application of Engineering Science	2+2	4,0
MAK 265	Machine Drawing Applications	2+2	4,0
MAK 278	Heat Treatment Technology	2+2	4,0
MRK 213	Technical English	3+0	3,0
MRK 221	Construction Applications	2+2	4,0
TÜR 120	Turkish Sign Language	3+0	3,0

ELECTIVE COURSES

BEÖ 155	Physical Education	2+0	2,0
BİL 150	Fundamentals of Information Technology	4+0	5,0
KÜL 199	Cultural Activities	0+2	2,0
SAN 155	Hall Dances	0+2	2,0
THU 203	Community Services	0+2	3,0

COURSE CONTENTS

ANİ 216 Graphic Animation at TV 2+1 3,0

Graphic Design: Definition, Uses, Functions; Principles of Graphic Design: Line, Color, Texture, Form, Scale, Direction; Basic Design: Motion graphic design; Language and Technologies of Graphic Narratives; Electronic Graphic Animation: Systems and Functions; Graphic Production: Pixel based, Vector based; 2D and 3D Graphic Animation; Production.

ANİ 225 Animation 2+1 3,0

Moving Image Design: Definition, Content, Properties, Areas of use; Basic Concepts: Resolution, Pixel, Anti-aliasing, Bitmap, etc.; Image Formats; Application Programs; Flash, 3D Max, and Other animation programs; Points to Consider in Practice; Exercises.

BEÖ 155 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.

BİL 129 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.

BİL 131 Computer Aided Design and Modeling 1+1 2,0

Computer Use in Design; Installing Designing and Modelling Software; Tool Bars and Drawing Elements; Drawing 2D and 3D Elements; Forming Compound and Complex Figures from 2D and 3D Elements; Editing the Existing Figures; Getting More Affective Images with the Use of Light and Camera; Turning the Drawings into Animations: Using AUTOCAD programme and applications.

BİL 150 Fundamentals of Information Technology 4+0 5,0

Introduction to Computer: History of Computer; Operating Systems: Introduction to operating systems; Office

Software-Word Processors and Document Systems: General Characteristics of the Office Software; Office-Software-Spreadsheets Programs: Spreadsheets Programs; Office Software-Presentation Programs: Presentation Programs; E Mail-Personal Communication Management: General Characteristics of the E Mailing System; Effective use of the Internet and Internet Security; Network Technologies. Computer Hardware and Error Detection: Types of Computers; Social Networks and Social Media: Social Media and Introduction to Social Media; Special Application Software: Multimedia; Law and Ethics of Informatics: Intellectual Property and Informatics Law; E-Learning: Developments in E-Learning; E-Government Applications; Computer and Network Security; Latest Strategic Technologies of Informatics: Factors Affecting Technological Developments.

BİL 181 Internet Programming I 3+1 4,0

Fundamental 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.

BİL 182 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.

BİL 284 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.

BIL 812 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.

BTP 101 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.

BTP 102 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.

BTP 103 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.

BTP 104 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.

BTP 106 Computer Hardware 2+2 5,0

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 Big-Medium-Small Computer Equipment.

BTP 201 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, Implementation of required system settings.

BTP 202 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.

BTP 203 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.

BTP 204 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.

BTP 209 Computer Network Systems 1+1 2,0

Introduction to Computer Networks: LAN, MAN, WAN concepts; Computer Network Cables: Cable types, Proper cable selection; Network Hardware Units: Repeater, Bridge types, Ethernet keys, Routers, Router Connection; Network Protocols: History, FTP protocols, TELNET, SMTP, DNS knowledge and usage, Electronic mail usage and knowledge.

BTP 211 Technical English I 1+1 2,0

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.

BTP 212 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.

BTP 215 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.

BTP 216 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 Text and Binary Files; File Saving Operations on Text Files; The Control of Computer Ports by Using Programming Language.

BTP 220 Research Techniques and Seminar 1+1 2,0

Collecting and Analysing Data in Terms of Scientific Research; Research; Reporting the Results of the Research according to the Principles of Report Writing; Presentation of Research Subjects; The Usage of the Equipment such as Data show and Slide Machine and Internet (WEB pages) etc.; Introducing to Business Life; To be able Follow The Developments by Searching the Innovations in Computer Field; Developing Self-Confidence by Expressing himself/herself in a Society.

BTP 242 Statistics Practices at Computer 3+1 4,0

Basic Concepts; Statistical Series, Central Tendency and Measures of Variables; Continuous Random Variables and The Normal Distribution; Sampling; Statistics Estimation, Hypothesis Testing, Chi-Square Tests, Simple Linear Regression; Correlation; Method of Data Collection: Sample survey method, Experimental method, Method of Observation, Interview, Lining; Statistics Practices of SPSS;

Flotation, Preparation Analysis of Data, Analysis of Data and Exposition with SPSS, Draw a table and graph with SPSS; Preparation of Research Report.

BTP 244 Electronic Commerce and Marketing Techniques on the Internet 3+1 4,0

New Economy and Development of e-Commerce: The Emergence of Internet, Businesses and Business Approaches in the New Economy, Development of Marketing in the Electronic Mediums; Virtual Communities and Consumer Needs; Markets on the Internet; Marketing Process on the Internet: Preparation of Marketing Medium, Characteristics of Internet Users, Development of the Marketing Strategy, Development of the Marketing Mix, Virtual Shopping Models, Payment Systems on the Internet, Consumer Protection on the Internet; Internet Advertising: Attributes and Ground Rules of Advertising, Techniques of Advertising.

BYT 101 Printing Equipment 2+1 3,0

Fibre and Main Raw Materials Used in Making Paper: Production of cellulose, Additives, Production of glossy paper, Production of cardboard, Calendaring and super calendaring, Production of corrugated cardboard; General Testing Methods for Printing Paper: Paper and climate, Grain direction in paper, Paper problems; Press Inks: Raw materials of inks and their features; General Testing Methods for Printing Inks: Senility of light, Tackiness, Thixotropy, Printability, Drying, Viscosity; Problems of Printing and Solutions to Problems; Printing Plates; Offset Printing Plates: Definition, Characteristics, Preparation of the plate, Image transfer; Other Materials Used in Offset Printing System.

BYT 103 Fonts and Typography 2+1 3,0

Developments before the Invention of Writing and Alphabets: Pictographic writing, Ideographic writing, Phonetic writing; Font in History; Typography: Definition, Origin and Scope; Printing Fonts and Their Characteristics: Definition, Characteristics, Development, Points to consider in design processes; Structural Characteristics of Printing Fonts; Composition: Definition and concept of space, Letter strings, Image height, Legibility; Text String Types; Quality Control in Typesetting: Image quality, Technical quality; Cost Calculations; Typesetting Applications.

BYT 104 Reproduction and Color Theory 3+0 4,0

Definition of Reproduction; Introduction of Machines, Tools and Equipment Used in Reproduction Technology; Originals and Classification of Originals; Method of Reproduction: Line reproduction, Halftone reproduction; Tram Points: Sections of tram points, Types of tram points; Sensitometer; Colour Separation: Colour separation filters, Relations of exposing system of plates and colour separation; Colour: Definition, Specifications, Colour vision effect, Psychological effects of colour; Light and Paint Colours; Colour in Reproduction.

BYT 106 Computerized Page Design I 2+1 4,0

Design and Typesetting: Definition and Scope; Application Programs: Adobe Illustrator, InDesign, Photoshop, Macromedia Freehand, Corel-Draw; Digital Media Pictures Formats: EPS, TIFF, JPEG; Computer Color Formats: RGB, CMYK, Determining the appropriate color format; Exercises: Press release, Packaging, Posters, Magazine design.

BYT 107 Printing and Publishing 2+1 3,0

Printing Industry: Definition, Historical development, Importance; Printing Industry in the World and in our Country: Past, Present and Future; Occupations Related to Printing Industry; Work Flow Process in Printing Industry: Pre- printing, Printing and Post-Printing Processes; Publishing: Definition, Scope, Historical development; Types of Publishing: Newspaper publishing, Magazine publishing, Book publishing; Legal Dimensions of Publishing; Electronic Publishing: Definition, Scope, Advantages; Types: Electronic newspaper, Magazine and book; Comparison of Traditional Publishing and Electronic Publishing; Relationship Between Publishing Industry and Publishing; Publishing Practices in Turkey and in the World.

BYT 108 Printing Management and Entrepreneurship 2+0 3,0

Business and Entrepreneurship: Basic concepts, Business goals, Types and legal forms; Business Establishment Studies; Functions of Businesses; Production Systems: Properties, Classification, Evaluation of printing establishments according to production systems; Production Organization and Layout in Printing Establishments; Concepts Related to Entrepreneurship; Types of Entrepreneurship: Internal and External Entrepreneurship; Entrepreneurship and Motivation; Characteristics in Entrepreneurs; Entrepreneurship Stories; Case Studies in Entrepreneurship.

BYT 201 Technical English 3+0 3,0

Printing Industry Terminology: Basic operations, Printing systems, Printing, Pre-and post-printing processes; Publishing Terminology; Translation of Selected Parts from the Literature on Printing and Publishing; Use of Related Instructional Computer Software and Films in the Classroom; Technical Report Writing.

BYT 202 Digital Printing Technology 2+2 4,0

Digital Printing: Definition, Principles, Applications and Advantages; Methods of Digital Printing System; Interior & Exterior Printing: Uses, Points to consider in printing, Raw materials used, Inks and their properties, Post-printing procedures; Digital Printing Quality: Printing problems and their solutions; Relationship between Digital Printing and Offset Printing; Digital Printing System; Workflow and Business Models; Industrial Applications in Digital Printing System: Backing layer, Reel to reel, Short-run, Personalization, Variable data.

BYT 205 Binding and Cardboard Packing Production 2+2 4,0

Binding Technology: Definition and basic concepts, Tools, equipment and machines used in bindery; Processes of Binding: Wire seam, Sting seam, Mechanical seam, Mechanical binding, Glue binding; Cardboard and Cartonnage: Definition, Production, Uses; Types of Packaging Production: Preparations, Design, Construction design and manufacturing; Blades Used in Cardboard Box Making; Cardboard box-cutting machines; Cardboard Box Gluing Techniques; Cost Calculations.

BYT 207 Offset Printing Technology 2+2 4,0

Offset Printing System: Definition of offset, Printing rules, Areas of application; Workflow in Offset Printing System: Pre-printing, printing and post-printing processes; Offset Printing Materials and Their Properties; Plates and their properties, Toray waterless printing plates and their properties, Water and damp system, PH, Paper of offset printing, Ink for offset printing, Other materials, Printing solutions; Machines of Offset Printing; Machine Settings: Plate, Blanket and other settings; Quality Criteria for Offset Printing: Slur-Doubling, Dot gain, Trapping, Densitometric measuring; Problems of Offset Printing and Solutions to Problems.

BYT 208 Project 2+2 4,0

Project Description and Project Processes; Determining the Topic and Planning: Selecting subject of the project, Time planning, Work schedule; Project Implementation: Review of national and international literature, Points to consider in literature review, Feasibility study, identifying the materials and location of application, Application; Reporting on the Project: Points to consider in report writing, Report writing, Presentation of the report.

BYT 209 Cost Calculation 2+2 4,0

Cost Calculations in Printing: Expenses, Items causing expense, Establishing cost centres, Selection of cost calculation system, Estimated costs and real costs; Cost Control: Identifying deviations and corrections; Establishing and Operating Standard Cost System in Printing; Establishment and Operation of the Standard Cost System in Printing Companies: Determination of standards; Building a Cost System According to the Type of Printing Companies: Definition, Types and Characteristics, Points to consider in the selection of an appropriate cost system; Calculating Total Cost and Cost Per Unit of Products Printed: Calculation rules for typesetting, paper, printing, ink, binding, plate and film costs; Calculation Exercises.

BYT 210 Other Printing Techniques 3+1 4,0

Production Techniques: Definition, Scope, Historical development, Artistic production systems and industrial production systems; Industrial Propagating Systems: Relationship between printing and printing systems; Basic Printing Systems: Definition and principles of letterpress, offset, screen printing and rotogravure printing, Printing materials, Plate preparation methods; Other Printing Techniques: Flexo, Tampon, Digital, Hologram, Barcode;

Printing Systems: Definition and principles of letterpress, offset, screen printing and rotogravure printing, Printing materials, Plate preparation methods.

BYT 211 Computerized Page Design II 2+2 4,0

Layout Software: Control toolbar and tasks, Tolls, Paragraph, Color palettes; Standard Page and Book Sizes: Structure and properties of the columns in layout, Arrangements to be made according to the characteristics of book binding; Standard Magazine Sizes and Arrangements Required by the Characteristics of Magazine Binding; Exercises: Exercises of book, magazine, newspaper layout.

BYT 213 Total Quality Management in Printing Industry 2+2 3,0

Total Quality Management (TQM): Definition and Scope, Basic principles, Process tools and techniques; Elements of Total Quality Management; Data Collection and Data Analysis: Histograms, Group works, Development process, Brainstorming, Fishbone diagram, Comparison; Quality Assurance System: Quality system documentation; Total Quality Management in Printing Industry.

BYT 214 Information Technology in Printing Industry 2+2 3,0

Stages of Printing: Pre-printing, printing, post-printing processes; New Developments in Printing World: Desktop publishing, Design, Machines of film output and development, Printing machines, System of binding, System of packaging, Materials and accessories of printing; Information Technology in Printing Industry; Selection, Correct use, Efficiency; Change Management in Printing Industry; Definition and scope; Public Relations in Printing Industry; Exercises.

BYT 215 Product Planning and Management in Printing Industry 2+2 3,0

Product Management: Definition and scope, Production systems, Objectives, Functions; Selection of Technology: Aspects of technology, New production technologies; Layout and Material Transfer in Printing Companies: Effect of layout on production systems, Types of workflow, Material transfer factors; Capacity Planning and Business Analysis in Printing Industry: Capacitor measurement criteria, Method development and Work measurement; Production Planning and Quality Control in Printing Industry: Importance of planning, strategy and quality control; Exercises.

BYT 218 Visual Narration 2+1 4,0

What is Narration? What is Visual Narrative? Types of Visual Narration; Basic Components of Visual Narration; Preparation of Visual Narration: Choice of topic, Selection of appropriate message, Creation of scenario, Selection of audio and visual materials, Creation of storyboard; Examples from the World and Turkey.

DJT 203 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.

EEÜ 104 High Voltage Technics 1+1 2,0

Production of Impact; Measurement and Statistical Evaluation of Potential Impact; Partial Vacancies; Paschen's Law; Characteristics of Electrode Systems Based on Alternative Voltage; Characteristics of Electrode Systems; Corona Losses Measurement; Dimensioning of Transmission Lines and High-Voltage Direct Current; Direct Current Surge Arresters and Cutters; Insulation Coordination in Transmission Lines in Direct Voltage.

EEÜ 106 Traditional Sources of Energy 2+1 2,0

Energy, Renewable Energy and the Important World and in Turkey, and Potential; The Formation of Properties and Preparation of the Coals; Usage of Coal and Coal Technologies; Oil Production; Petroleum Refinery Processes; Natural Gas Production; Natural Gas Usage.

EEÜ 202 Electricity and Energy Project 2+2 4,0

Selection of the Project; Needs Analysis; Project Design, Planning, Coding, Testing, Implementation; Debugging and Error Detection; Error Correction; Maintenance, Cost, Time and Labour Management; Problem Statement and Resolution.

EEÜ 204 Energy Analysis and Savings 2+0 3,0

Energy Terminology; Energy Management, Measurement and Control; Basic Concepts of Thermodynamics; Thermodynamics and Energy; Industrial Energy Applications; Energy Audits in Industry; Thermal Comfort; Environmental Factors for Thermal Comfort; Human Factors for Thermal Comfort ; Energy Savings and Isolation; Heat Transfer Methods; Regulations Related to Isolation; Environmentally-Sensitive Energy-Efficient Building and Installation; Industrial Energy Saving and Environmental Impact; Energy Saving in Home Appliances and Lighting Systems; Energy Storage.

EEÜ 205 Energy and Environment 2+0 2,0

Environment Pollution Caused By Energy Production; Environment Pollution Caused By Energy Consumption; Effect of Isolation Environment; Scientific Reasons of Global Climate Change; Effects of Global Warming on the World; Ecology and Its Importance; Basic Concepts for the Environmental Impact Assessment (EIA); Environmental Impact Assessment (EIA) Act and Its Applications.

EEÜ 206 Renewable Sources of Energy 2+0 2,0

Solar Energy; Solar Energy Technologies; Wind Energy; Usable Wind Energy; Geothermal Energy; Geothermal Energy in Turkey and in the World; Bio-Energy; Definition of Biomass and Importance Biomass Energy; Environmental Energy; Environmental Energy Supply: Air, Soil, Water,

Building's waste heat; Wave Energy; Wave Energy Converters; Hydrogen Energy; Hydroelectric Energy.

EEÜ 210 Contract, Exploration and Planning 2+1 3,0
Organizational Structure of an Electrical Contracting Company; Stages of Project Design; Structure and Components of a Valid Agreement; Factors Affecting Acceptance of the Agreement; Framework of Exploration Procedures; Contract Form; Exploration Summary; Specifications; Authentic and Simulated Electrical Distribution Equipment for Exploration; Framework of Planning Procedures; Determination of Critical Orbit for Electrical Wiring; Explaining the Effect of Delays in Secondary Trajectories on Critical Orbit.

EEÜ 232 Hydrojen Energy and Usage 3+1 3,0
Fossil Fuels and Adverse Effects; Seeking an Alternative to Fossil Fuels and Energy Variables; The Nature of Hydrogen and Features; Hydrogen Production, Storage and Transport Technologies; Hydrogen Conversion and Application Systems; Hydrogen in the Quest Of Energy Requirements and Energy Problems.

EEÜ 234 Solar Energy Systems 3+1 3,0
Solar Energy and Formation; Some Basic Calculations Associated with Solar Energy; Solar Energy Technologies; Heat Treatment Technologies; Brooms With Colector Box Solar Hot Water Systems; Planar Solar Collectors; Collector Energy Balance; Medium and High Temperature Energy Producing Technologies; Turkey is Engaged in a few Words it is in Energy Studies in some Institutions.

EEÜ 236 Production of Electricity with Wind 3+1 3,0
Basic Concepts Related To Wind Energy; Wind Formation and Classification; Wind Energy is Used to Evaluate the Data and Methods; Weibull Distribution; Rayleigh Distribution; WASP (wind Atlas Analysis and Application Program) Program; Power and Power Density Function; Classification of Wind Turbines; Available Wind Energy.

EEÜ 238 Hydroenergy 3+1 3,0
Hydrodynamic and Hydro-electric Energy; Characteristics of Fluids; Continuity Equation; Bernoulli Equation; Viscosity; The Surface Tension In Liquids; The Energy Flowing Fluid; Hydroelectric Power Plants; Classification Of Hydroelectric Power Plants; Hydroelectric Turbines Used in Power Plants; The Importance of Hydroelectric Energy in Turkey; Hydroelectric Power in the World.

EEÜ 240 Thermal Power Plant 3+1 3,0
Thermal Power Plants; Thermal Power Plants Produce Electricity Running Coal Thermal Power Plants; Working with Fuel Oil Thermal Power Plants; Working With Diesel Fuel Thermal Power Plants; Gas-Powered Thermal Power Plants; The Thermal Power Plants in our Country.

EEÜ 242 Geothermal Energy 3+1 3,0
Geothermal Energy Concept; Geothermal Energy Sources; The use of Groundwater as a Source of Energy-saving and

Hot. In the tradition of geothermal vapors and energy resource use. The use of Geothermal Energy Heating Energy Systems; Generation Of Electricity Using Geothermal Energy.

EEÜ 244 Energy Plant Management 3+1 3,0
The Definition of Energy; Types of Energy; Classification of Energy Facilities; Fuel, oil-gas Production and Distribution Facilities; Hydro-electric Power Plants (HEPP); Gas-Cycle Power Plants, Wind Power Plants; Nuclear Power Plants and Thermal Power Plants; The Design of the Plants and the Equipment Used; EN-VER (Energy Efficiency Act) In Order to Ensure Efficiency In Power Plants Required Procedures Within the Scope of The Law; The Necessary Measures Within the Scope of the Job Security in Power Plants.

EEÜ 246 Technical English 3+1 3,0
Speaking: Introduction 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, Curriculum vitae, Business letters, Passive structure usage; Reading-Understanding: Conjunctions indicate time, purpose, condition, Expressions in passive structure, Expressions indicate contrariness, Dictionary usage.

EEÜ 248 Fuels and Combustion Technology 3+1 3,0
Introduction; Basic Concepts Related to Fuels and Combustion Technologies, Classification of Natural Fuels; Secondary Fuels; Pulverized Coal, Smokeless Fuel, Coke and Metallurgical Coke Production Process Chemistry and Technology; Liquid and Gas Fuels; Properties, Combustion Processes Chemistry and Technology; Effects of Solid and Liquid Fuels and the Reduction of Negative Environmental Impacts and Improvements. Analysis of Solid, Liquid and Gas Fuels; Combustion Processes Related to Quality Control and Digital Applications.

ELE 102 Basics of Electricity 2+2 3,0
Formation and Properties of Electricity; Basic Electrical Laws; Direct Current and Alternative Current Sources; Electricity-Work and Electricity-Power Relations; Transformers and Electrical Installation Schemes; Operations and Connections of Electric Motors; Equipments Used in Electrical Installations; Stable Electrical Plants; Energy Sources.

ELE 103 Electrical and Electronical Measurements 3+1 5,0
Principles of Measurement and Instruments; Direct Current Measurements: Principles of ampermeter and voltmeter in direct current; Alternative Current Measurements: Principles of ampermeter and voltmeter in alternative current; Power and Work (energy) Measurements: Power measurement in three phases of alternative current circuits, Power measurement in direct current circuits, Power factor, Principles of wattmeter; Measurements of Circuit Components and Parameters; Measurements with

Oscilloscope; Industrial Measurements and Transducer; Description and Classify of System; Uprightness, Sensitivity, Symbol.

ELE 104 Alternative Current Circuit Analysis 3+1 5,0

Alternative Current and Voltage: Maximum value, Average value, Instantaneous value, Effective value, Phase angle; Circuit Equipments AC Behaviour: Ohmic Resistance, Condenser, Current, voltage, power over inductance, R-L-C circuits; Power and Energy on AC: Power and energy on ohmic resistance, Power and energy on condenser, Power types on R-L-C circuits; AC Systems with Three Phase.

ELE 105 Direct Current Circuit Analysis 3+1 5,0

Resistance; Ohm's Law; Work, Power and Efficiency; Kirchhoff's Laws; Electrical Supplies: Current and voltage supplies; Circuit Solution Methods: Mesh currents, Nodal analysis, Circuit theories; Thevenin, Norton, Superposition Theorems, Condensers; Electro Magnetism and Electro Magnetic Induction; Transient Analysis in Direct Current: Resistance-inductance, Resistance-capacitance time constant.

ELE 106 Electric Systems (Networks) and Foundations 1+1 3,0

Basics Concepts About Electric System and Foundations: Phase, neutral, main and conservation conductors, Insulation barks, Electric current and effects, Effects of electric current on human body, Avoid from electric current; Type and Safety of Low Voltages: TN network, TT network, IT network, Conservation insulation; Electric Installation Technology and Applications; Switches and plugs, Light sources, Poor current units.

ELE 207 Electrical Maintenance and Troubleshooting 1+1 3,0

Maintenance: General maintenance, Proactive maintenance, Periodic maintenance; Fault Finding: To use avometer in fault finding; Repairing and Service: Checking of oil in power transformer: Fault finding cause of short circuit and over load on electric networks, To replace of electric machines parts, Checking of diodes, transistors, capacitance.

ELE 209 Electric Generation, Transmission and Distribution 3+1 5,0

Methods of Electric Generation: Electric power stations, Thermic plants, Vapour turbine plants, Gas turbine plants, Nuclear plants, Hydroelectric plants, Renewable energy sources, Cogeneration and ottoproducor; Electric Transmission and Distribution; Cross Section Calculation of Wire; Characteristics of Wire On Air Line.

ELE 212 Electricity Installation Plans 3+1 4,0

Pre-study of Installation Plan: Definition of plan, Selective of materials and applications, Preparing of sketch, Legal procedure, Statutes related project; Preparing Installation Plan: Functional efficiency, Lighting, Energy and distribution of plan, Cost analysis of project, Preparing of project for approval, Finishing of installation plans and presentation; Presentation of Installation Plan.

ELE 215 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.

ELE 222 Related Electrical Service and Systems 1+1 3,0

Water Systems in Buildings: Hot and cold water systems; Heating Systems in Buildings: Schematic diagrams and specifications for various heating systems; Air Conditioning; Lighting Systems: Typical lighting applications characteristics; Fire Alarms Systems: Smoke detectors, Temperature rise detectors, Flame detectors; Conductor Systems; Stand-by-Supply Systems.

ELE 227 Electrical Machines 3+1 3,0

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

ELE 228 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.

ELO 103 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.

ELO 104 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.

ELO 106 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.

ELO 111 Basic Electronic 2+1 3,0

Electrical Current: Definition and comparison of direct and alternating current; Alternans, Period and Frequency; Elements of Electronic Circuit: Characteristics, Types and Uses; Passive Circuit Element: Resistance, Capacitor, Inductor; Active Circuit Elements: Diodes, Transistors; Integrated Circuit: Conductor, Insulator and Semi-conductor; Power Sources.

ELO 205 Power Electronics 3+1 5,0

P?N Juncted Power Elements: Types of power diodes, transistors and thyristors; Electrical Characteristics of Thyristos: V?I characteristic of SCR, Gate characteristic of SCR; Triggering Elements: Usage, types and operation of triggering elements; Thyristor Applications: Rectifiers, Invertors, Static keys, Solid state relays; Protection of P?N Juncted Power Elements.

ELO 211 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.

ENO 204 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.

ENO 208 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 synco-angular sensors, Robotic synco-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.

ENO 210 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.

EST 101 Aesthetics and Design 2+1 3,0

Concept of Aesthetics: Beauty, Beauty in Nature and Art ; the Concept of Aesthetics in Daily Use; Visual Aesthetics and Perception; Visual Expression Methods and Basic Design Principles; Design and Composition: Space-occupancy, Equilibrium, Contrast, Movement and measurement ratio in composition; Design and Color: Definition of color, Color systems, Use of color; Color-Form-Space Relations; Aesthetics and Design Relation: Analysis of design works.

EST 106 Aesthetics 2+1 2,0

Aesthetics: What is Aesthetics? Description of Aesthetics; What is Aesthetic Subject and Object?; Aesthetic Value Analysis: Good and beautiful, Truth and beautiful, Useful and beautiful, Conceptual and substantive determination of beauty in Plato, Mimesis of Aristo; The 17th and 18th Century Thinkers and their Aesthetic Views; Contemporary Art and Aesthetic View.

ETK 211 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.

FOT 107 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.

GRA 110 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.

GRA 211 Web Design 1+1 3,0

Basic Internet Terms: Server- client logic, TCP-IP Protocole, WEB based services; Introduction To Web Design: Softwares required for design and installation, FTP software; HTML: All HTML commands used in HTML; Script Using: The commands belong to script languages supporting design and flexibility while preparing web pages; Design and Planning: The design criteria needed to prepare visual and productive web pages.

GTS 110 Introduction Graphic Design 2+1 3,0

Basic Concepts and Theories of Visual Communication; Basic Principles of Graphic Design; Development of Problem Solving Techniques: Problem statement, Research, Organization of information; Using Various Materials and Techniques in Graphic Image; Visual Analysis.

GTS 111 Pattern 2+1 3,5

Pattern: Definition, Types, Tools and equipment used in patterns; Drawings of Figures and Objects, Line Values; Proportions, Balance, Movement, Composition; Introduction to Different Materials and Techniques; Exercises for the Use of the Language of Graphic Expression in Graphic Design.

GTS 112 Illustration 2+1 3,0

Illustration: Definition, Content, History and Areas of use; Illustration Types and Techniques; Main Materials Used in Illustration; Identification and Analysis of Works Produced by Illustrators; Production and Evaluation of Illustration Works.

GTS 201 Visual Communication Design 2+2 5,0

Historical development of visual communication; Non-verbal communication; Perception and explanation in visual communication; Functions and necessity of visual communication; Marks and symbols in visual communication: analyses of symbols; Components of graphic design: Typography, Photo, Colour, Contrast relations; Visual analysis in advertisements: Creativity and correct and effective usage of visual elements.

GTS 205 Printing Techniques 3+0 4,0

Basic Printing Techniques, offset printing, Press Letters, Gravure Printing, Printing Process: Prepress, Post press; Printing Considerations, Advertising and Publication Relations, Printing Technique Selection, Paper selection, Ink selection, Encountered In print Problems and Solutions.

GTS 208 Technical English 3+0 3,0

Frequently used words and terms in the field of advertising; Recognition and Use, Turkish Provisions; Translation of Selected Texts from Advertising Field Literature; Technical Report Writing.

GTS 211 Graphic Applications 2+1 3,0

Graphics Product Design Process: Operation steps, Relationship between graphics and printing; Graphic Production: Drawing-image processing and Page layout,

Basic principles of graphic design; Graphic Production Techniques.

GTS 212 Desktop Publishing 2+2 3,0

Desktop Publishing; Definition, Importance, Development, Drawing Image Processing and Page Layout programs, Data Transfer Methods and Image Formats Among Desktop Publishing Programs, Graphic Design Fundamentals and Principles; Page Design Studies; Brochure and Poster Design as Research Projects in Practice.

GTS 213 Portfolio Design 3+0 4,0

Personal Presentation: Preliminary preparation for presentation, Researching and Deciding on how to Present the Portfolio; Identifying the Target Group:Deciding on the private sector or personal aims; Presentation Techniques: Digital portfolio, Portfolio of printed works, Presentation plan.

GTS 217 Computer Aided Graphic Design I 2+1 3,0

Design and Typesetting: Definition, Scope: Application Programs: Adobe Illustrator, Design, Photoshop, Macromedia Freehand, Corel-Draw; Image Formats in Digital Environment: EPS, TIFF, JPEG; Color Models: RGB, CMYK; Selection of Appropriate Color Modes; Exercises: Press release, Packaging, Posters, Magazine.

GTS 218 Computer Aided Graphic Design II 2+1 3,0

Graphic Design Techniques; Design Elements; Vector-Based Drawing and Image Processing Computer Programs in Computer-Aided Design; Contemporary Graphic Designs; Studies in Visual Communication.

GTS 219 Original Printmaking I 2+1 3,0

Printmaking: Definition, Content, Techniques, History; Terminology of Original Printmaking; Types of Printmaking; Materials and Methods Used in Printmaking; Pit and High-Print Practices: Determining an original in view of the printing method, Preparation of the original, Mold preparation, Production and evaluation of works.

GTS 220 Original Printmaking II 2+2 4,0

Original Printmaking: Content and Types; Linoleum and Wood Printing Techniques: Materials used, Mold preparation methods, Properties of materials, Properties of inks, Image transfer; Varieties Template Printing Technique in Printmaking: Materials used, Mold preparation methods, Properties of materials under printing, Properties of inks, Image transfer; Exercises.

GTS 221 Packing Design I 2+1 3,0

Packaging Technology: Definition, Content, Properties, Areas of use; Packaging and Graphic Design; Points to Consider in Graphic Design by Type of Packaging; Producing Graphic Design of Product Packages Used for Different Purposes: Food, Clothing, Electronic goods, Retail consumer goods, etc.

GTS 222 Packing Design II 2+1 3,0

Relationship of Forms, Materials and Visual Communication in Packaging Design Process; Project Design in View of Brand Identity of a Product and Product Range Criteria: Analysis of successful examples on the market.

GTS 223 Plastic Arts 2+1 4,0

Interdisciplinary Art: Art theories and interdisciplinary art studies; Interdisciplinary Art Studies: Concept, Methodological and technical relationships, Similarities and differences; Art Theory in Interdisciplinary Arts: Suggestions, Discussions; Exploration of Artistic Materials: Visual, Audial, Plastic art materials; Examination of Interdisciplinary Works of Art.

GTS 225 Critical Thinking and Creativity 3+0 4,0

Critical Thinking, Creation and Application: Problem analysis, Alternative thinking in problem analysis, Conceptual thinking and offering solutions, Conversion of an idea into object and installation; Experimental Production: Use of different techniques and materials, Investigation of appropriate techniques in visualizing the problem, Interdisciplinary applications.

GTS 226 Visual Communication and Advertising 2+1 3,0

Use of Principles of Visual Aesthetics and Perception to Improve Advertising Strategies; Graphic Works in Advertising Campaigns; Advertising Campaign: Definition, Surreptitious advertising, Newspaper, Radio and television, Difference of outdoor campaigns; Analysis of Advertising Campaigns.

GTS 228 Graphic Production Techniques 2+1 3,0

Graphics Product Design Process: Operation steps, Relationship between graphics and printing; Desktop Publishing and Graphic Production: Programs used in desktop publishing, Drawing and image processing and Page layout programs, Basic principles of graphic design; Production Techniques: Preparation of materials produced in graphic design for printing, Pre-printing, printing and post-printing procedures; Exercises.

GTS 232 Illustrator Graphic Applications 3+1 3,0

What is Vectorial Graphics: Introduction to Adobe Illustrator and its Interface; Using the Menu: Control panel, Tools panel; Using Panels: Using workspace; Working with Documents: Creating a new document, Working with template documents; Artboard Tool: Tool-1, Tool-2, Artboard panel, Navigation; Guides and Grids: Smart guides, Guides, Grids; Selection Tools: Direct selection tool, Group selection tool, Magic wand tool, Lasso tool.

GTS 234 Project 2+1 4,0

Project Description and Project Processes: Principles of selecting a project topic and planning, Literature review, Feasibility study, Basic information, e.g. originality of the project, Development of a project plan; Selection of a

Specialization Area; Presentation of all Application Steps in Report.

GTS 236 3D Design 2+2 4,0

Concept of 3d Design; Designing in the Context of Functionality and Aesthetics; Modelling Practice with Dimensional Circles, Squares and Triangular Shapes; Introduction of Plan, Section and View, and their Application to Geometric Forms; Formation of Cubes, Cylinders, Cones and Prisms, and Search for Layout in the Living Space; Sketching Drafts, Transferring Sketches into 3d Spatial Forms.

GTS 238 Design Culture 3+0 4,0

Art and Concepts related to art: Art, Artist, Spectator, Art Work; Art: Definition of art, Classification, Looking at art in historical process, Examining theory and concepts related to art; Artist: Artist's place in and relationship with society; Art Work: Necessary qualifications for a product to be an artwork, The items composing the artwork.

İLT 105 General and Technical Communication 2+0 2,0

Definition and Type of Communication: Communication and its basic concepts, Types of communication; Oral Communication: Techniques, Principles and necessity of oral communication, Its 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.

İNG 187 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.

İNG 188 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.

İNŞ 229 Reinforced Concrete Design 2+2 4,0

Preloading; Vertical Drains; Deep Compaction of Cohesion less Soils: Vibro floatation, Vibratory probes, Compaction piles, and Dynamic compaction, Blasting; Grouting; Permeating grouting, Compaction grouting; Chemical grouting. Jet grouting; Soil Reinforcement: Soil nailing, Micro piles, Reinforced earth, Stone columns, Lime columns, Geotextiles, Freezing, Electro-osmosis.

İNŞ 230 Soil Improvement Methods 3+0 4,0

Preloading; Vertical Drains; Deep Compaction of Cohesion less Soils: Vibro floatation, Vibratory probes, Compaction piles, and Dynamic compaction, Blasting; Grouting; Permeating grouting, Compaction grouting; Chemical grouting. Jet grouting; Soil Reinforcement: Soil nailing, Micro piles, Reinforced earth, Stone columns, Lime columns, Geotextiles, Freezing, Electro-osmosis.

İNŞ 231 Static of Structure 3+0 3,0

Fundamentals of Structural Analysis; Assumptions in Structural Analysis; Loads and Supports; Classification of Structure Systems; Internal Forces in Structure Members; Determining Degree of Indeterminacy in Structural Systems; Determining Internal Forces in Statically Determinacy Systems: Simple beams, Cantilever beams, Hinged girders, Frames, Arches and frames of three hinges; Solving Live Loads Systems Using Influence Lines; Determining Internal Forces in Statically Indeterminacy Systems.

İNŞ 232 Analyses of Concrete 3+0 3,0

Introduction; Quality Control of Concrete Structures: Types of tests applied on concrete; Strength of concrete, Standard testing, Preparation of test samples; Semi-destructive tests; Pull-out tests, Pull-off tests; Non-destructive tests; Rebound hammer test; Ultrasonic pulse velocity test; Radar imaging of concrete, X-ray diffraction on concrete materials; Porosity by mercury intrusion porosimetry; Differential scanning calorimeter tests on concrete; Maturity of concrete; Estimation of concrete strength by combined methods; Project presentations.

İNŞ 235 Methods of Concrete Technology 2+2 3,0

Ordinary Concrete Technology: New developing concrete materials; Additive materials; Quality assurance and quality control; Special production technologies; Concrete pouring in extreme weather conditions (Hot and Cold Weather); Ready mixed concrete; Pump concrete; Shot create; Injection mortar; Vacuum concrete; Concrete under water; Heat treatment application in prefabrication; Massive concrete and Roller compacted concrete; Light weight concrete; Highway and airport concrete.

İNŞ 236 Steel Structure Design 3+0 3,0

Introduction to Steel Structures; Structural Material: Steel; Steel Connection Tools; Bolt and Bolted Connections; Tension Members; Load and Resistance Factor Design; Connection of Tension Members; Compression Members; Effect of Combined Flexural and Axial Load on Constant Cross-Sectional Members; Truss Systems; Plate Girders:

Profile Beams, Welded Beams; Beam Joints; Supports and Connections; Roof Truss.

İNŞ 237 Application of Geotechnics 2+1 3,0

Basic Principles of Geology: Rocks and minerals; Classification of rocks in terms of engineering; Deformations of rocks; Drilling and sampling; Soil Investigation; Earthquakes and earthquake regions of Turkey; Analysis of issues according to civil engineering in terms of Geology.

İSG 401 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.

İSN 102 Public Relations 3+0 3,0

Fundamentals of Public Relations; Historical Development of Public Relations in Turkey and in the World; Development of Public Relations in Private and Public Sector; Career Development in Public Relations; Place of Public Relations Department in an Organization; Interdepartmental Public Relations; Research in Public Relations; Planning a Public Relations Campaign: Identifying problems, Determining objectives, Application and evaluation; Materials Used in Public Relations: Written, Audio-visual and other materials.

İŞL 209 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 definition, Capacity; Functions of Business: Management, Organization, Control, Planning; Organization Operation Process: Leadership and management, Strategical management, Change, Groups, Motivation.

İŞL 421 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.

KGS 104 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.

KLP 220 Mold Design **2+1 3,0**

Importance, Features and Selection of Mold Presses in Machine Construction; Studying Basic Mold Components: Mold sets, Bushes, Guide columns, Columns and abrasives, Scraper plates, Docking, Stages, Pilots; Basic Operations: Filing, Marking, Drilling, Bailing, Pinging and tapping, Centering, Detachable attachments; Machine Tools Used in Mold Making; Construction of Simple Cutting Molds; Construction Principles in Volume Molds ; Construction and Assembly of Volume Molds.

KLP 222 Molding Practices **2+2 4,0**

Mold Components: Materials used, Mechanical properties of the materials, Heat treatments, Mold components and standards; Cutting and Drilling Mold: Design, Modelling and manufacturing drawings; Bending and Drawing Molds: Design, Modelling and manufacturing drawing; Press Automation System: Design, Modelling and manufacturing drawing; Sheet-Metal Mold: Design, Manufacture and assembly; Other Molding Methods.

KÜL 199 Cultural Activities **0+2 2,0**

Participating Actively or as a Spectator in Sports Activities; Participating in Activities Arranged by the Counseling Center; Participating in Workshops in Art; Education on Museums; Participating in Art Trips; Participating in Cultural Trips; Participating in and Taking Duty in activities such as Cinema, theatre, scientific Meeting etc.; Taking duty in Clubs; Being a Student Representative and Participating in Environmental Activities.

MAK 105 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: Definition, Scope, Areas of Use, Comparison Other Manufacturing Methods.

MAK 106 Production and Manufacturing Technology II **3+1 3,0**

Manufacturing Methods: Areas of use, Advantages and disadvantages, Casting-welding-machining-plastic forming, Powder metallurgy, Special manufacturing methods; Adjustable Measuring and Control Instruments, Operations on Outer and Inner Conical Surfaces; Sheet Metal Forming; Lathes; Chip Removal Principles: Lathes, Assembly and planing machines, Grinding machines, Broaches, Chip removal with finishing cut.

MAK 115 Mechanical Drawing I **3+1 4,0**

Geometrical Drawings: Angle, Spring, Curved, Straight line, Constructs the common tangents to two circles; Projection, Drawing View: 1st angle projection, 3rd angle projection including the use of hidden detail lines; Dimensions; Identifying The Standard Symbols for Machined Surfaces; Section Views; Perspective Drawing: Spring, Curved; Standard Machine Components: Bolt, Loaf, Pin, Peg, Rivet, Welding.

MAK 134 Engineering Science **3+1 4,0**

Circular Movement: Angular moment, Angular velocity, Angular acceleration, Torque; Potential-Kinetic Energy and Momentum: Principles of conversation of momentum; Impulse, Torsional moment, Inertia moment; Potential Energy, Kinetic Energy; Simple Machines; Fluids; ; Heat Energy and its Effects: Internal energy, Entalphy, Boiling point, Melting point, Specific entalphy, Steam; Basic Gas Laws: Constant pressure, Constant volume, Constant temperature, Cycle of carnot.

MAK 221 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 Murrormirrtxt, 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.

MAK 229 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.

MAK 240 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.

MAK 242 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.

MAK 251 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.

MAK 257 Non-Destructive Testings 2+2 4,0

Testing with Penetrating Sprayed Paint (Penetrant Paints); Testing with Magnetic Pieces (Magnaflux): Permanent magnets, Electromagnets, Contact current flow, Coil methods; Testing with Eddy Currents; Testing with Infrared Rays; Testing with Industrial Radiography (X and Gamma Rays); Testing with Ultrasonic Waves: Piezoelectric Calibration; Chemical Composition Analysis (Spectrograph).

MAK 259 Machine Drawing II 3+1 4,0

Tolerances and Surface Qualities: Surface process marks, Chip marks; Construction Drawings: Gear wheels, Design of a double gear wheel according to given center distance and data; Assembly Images: Basic standard screw thread profiles, Single square screw, Multi square screw, Square screw, Saw screw, Trapezoidal screw, Screw thread, Bearings, Ball bearings, Cams; Office Practice: Production drawings in accordance with Turkish standards, Production drawings, Tolerances in accordance with Turkish standards.

MAK 261 Application of Engineering Science 2+2 4,0

Engineering Systems: Definition, Fields of application; Design and Implementation of a Mechanical Part; Design and Implementation of Mechatronic Parts; Examination of Case Studies; Application Study: Investigation of the subject, Costing, Designing of the system, Application of the designed system.

MAK 263 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.

MAK 265 Machine Drawing Applications 2+2 4,0

Basic Geometric Drawings; Invisible Detail and Section Drawings; Dimensioning; Surface Treatment Marks; Production and Assembly Drawings: Drawing of basic

material profiles, Drawing and dimensioning standard machine elements; National and International Standards; Drawing of Sample Material Parts: Drawing of the details and sections according to the standards, Dimensioning and evaluation.

MAK 272 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.

MAK 274 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.

MAK 278 Heat Treatment Technology 2+2 4,0

Steel Structure: Crystal structure, Crystal structure errors, Solid solution, Annealing, Rapid cooling, Slow cooling; Steel Annealing: Normalization annealing, Softening annealing, Stress relieving annealing, Recrystallization temperature; Steel Hardening: Watering, Tempering, Cementation; Heat Treatment Methods Suitable for Steel; Building Steels, High-Speed Tool Steels, High-Speed Steels; Crystal Structure Errors, Jominy Experiment.

MAT 125 General Mathematics 3+1 4,0

Basic Concepts: Sets, Number systems, Expressions with whole and rational powers, Identities, First and second degree equations; Ratio and Proportion: Definitions, Types, Problem Solving Using Proportions; Percentage and Interest Ratios: Percentage and Interest Calculations; Functions: Relation and Function Concepts, Function Operations, Linear and Second Order Functions and Their Graphical Representations, Exponential and Logarithmic Functions and Their Graphical Representations.

MAT 140 Vocational Mathematics 3+1 4,0

Linear Equation Systems and Matrices: Equation system solution, Matrix operations, Determinant, Inverse matrix; Limit and Continuity: Limit, Limit taking, Function continuity; Derivative and Applications: Geometric and physical meaning of derivative, Taking Derivatives, Tangent equation, Finding maximum and minimum points; Integral and Applications: Integral, Taking Integral, Calculating center of gravity with area and volume; Differential Equations: Simple differential equations, Boundary

conditions, Solution of differential equations; Statistics: Basic terms, Frequency distribution, Graphic representation of data, Standard and mean deviation. --

MEK 104 Statics Strength of Materials 3+0 4,5
Introduction to Mechanics; Static of Rigid Materials; Truss Systems; Distributed Forces; Center of Gravity; Analysis of Structures; Forces in Beams and Cables; Method of Virtual Work; Friction; Mechanical Properties of Materials; Linear Elasticity; Hooke's law; Moments of Inertia; Bending Moment.

MEK 209 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.

MEK 211 Soil Mechanics 3+0 4,0
Physical and Index Properties of Soil: Gravity-volume relations, Viscosity limits; Classification of Soil; Water Currents on Soil: Permeability and leakage; Stress-Deformation Relation in Soil Block; Compaction; Squeezed Soil: Consolidation settling and sudden settling; Gliding Resistance of Soil; Ground Pressure; Soil Carrying Capacity for Superficial Foundation.

MİM 216 Architectural Project Analysis 2+1 3,0
Operating Principles of CAD-based Computer Programs Used in Construction Sector; Program Commands; Exercise on Commands, Drawing of the Plan, Section and External View of an Architectural Project with CAD-based Computer Program; Modeling a Two-dimensional Project as a Three-dimensional Project together with Environmental Layout.

MİM 217 Architectural Drawing Project 2+3 4,0
Introduction to the Course; Introducing Materials to be used in the Course; Practice with Drawing Materials; Drawing Applications; Presenting Principles of Plan Drawing; Flat Plans for 1/100 in scale; Flat Plans for 1/100 in scale; Presenting principles of a cross-section drawing; Cross-sections for 1/100 in Scale; Cross-sections for 1/100 in Scale; Presenting Principles of External View Drawing; External view Drawing for 1/100 in scale; Position of Real Estate for 1/500 and 1/200 in scales; Flat Plans for 1/50 in scale; Cross-sections for 1/50 in scale;; drawing of A-A and B-B External Views for 1/50 in Scale; Position of Real Estate for 1/500 and 1/200 in Scale.

MLZ 112 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.

MRK 109 Basic Principles in Machine Construction 2+0 2,0
Lightness, Determination, Simplicity, Safety, Compliance with Standards, and Prevention of Stress Stacking in Construction; New Design in Terms of Manufacturing, Transportation and Ease of Installation; Constructive Design According to Forcing Forms; Measures to Facilitate Surface Finishing; Rules to Consider during Production Drawing; Design of the Parts to be Heat-Treated; Points to Consider in Designing the Machine Parts to be Manufactured by Casting; Modification and Improvement of the Systems Used.

MRK 213 Technical English 3+0 3,0
Speaking: Introduction 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, Curriculum vitae, Business letters, Passive structure usage; Reading-Understanding: Conjunctions indicate time, purpose, condition, Expressions in passive structure, Expressions indicate contrariness, Dictionary usage.

MRK 221 Construction Applications 2+2 4,0
Points to Consider When Designing and Drawing Machine Parts; Steel Construction Applications; Machine Construction Preparation and Application of Prefabricated Construction; Construction Drawing Applications: Drawing of parts to be produced by casting, Drawing of moving, presuring, pushing and removing plates, Detailed drawings of extrusion and precision press molds; Drawing Negative and Positive Plastic Volume Molds.

MRK 222 Construction 2+1 3,0
Design and Construction: Definition, Objectives, Basic construction principles, Points to consider in the design of machine parts; Cross Section and Openings; Drawing Techniques of Standard Mold Components; Sketch Drawings; Construction Drawings: Model drawing, Modelling drawing, Molding drawing; Examples of Various Constructions: Mills, Pulleys, Conical gear wheels.

MTR 101 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.

MTR 102 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.

MTR 105 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.

MTR 204 Electro hydraulics/Electro pneumatics 2+1 3,0

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.

MTR 207 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.

MTR 208 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.

MTR 210 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, Curriculum vitae, Business letters, Passive structure usage; Reading-Understanding: Conjunctions indicate time, purpose, condition, Expressions in passive structure, Expressions indicate contrariness, Dictionary usage.

MTR 212 Process Measurements 3+1 3,0

Instrumentation Terms: Definition of sensor, Fluency, Transmitter; Measurement Errors; Position Instruments: The kind of limit switches and its 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.

MTR 214 Applications of Mechatronic in Industry 1+1 2,0

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.

MTR 218 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.

MTR 220 Process Control 3+0 4,0

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.

RTV 112 Studio Equipment and Usage 2+1 3,0

Equipment Used in Studio Environment: Camera control units (CCU), Remote control panels (RCP), Measurement devices (waveform/vector scope, multi meter etc.), Router (signal routing matrix), Video distribution amplifiers (VDA), Converters used for a variety of purposes, Monitoring and reference display devices.

RTV 114 General Communication 3+0 3,0

Definition and Concept of Communication; Elements of communication process; Culture and Communication: Definition and concept of culture, Elements of culture, Types of culture; Non-verbal Communication: Definition, Functions, Codes of non-verbal communication; Organizational Communication: Functions, Organizational

culture, Formal communication channels; Communication Tools; Mass Communication: Definitions, Characteristics, Functions; Basic Communication Theories.

RTV 116 Radyo Programming 2+2 4,0

Basics of Radio Programming: Concept of program, Characteristics of radio programs, Types of radio programs; Program Production Processes: Preparing proposal forms, Guests selection, Determination of music, Writing the text; Types of Broadcasting: Live and Recorded; Program Planning; Characteristics of Radio Studios.

RTV 120 Audio Technics II 3+0 4,0

Audio Editing: Purpose and functions of audio editing, Definition of analog and digital audio editing systems; DAW Systems: Definition and functions of DAW systems; A DAW System Practice: Software presentation, Basic audio editing applications, Audio editing in view of image; Projects: Student projects and evaluation.

RTV 121 Measurement and Maintenance at RTV 2+1 3,0

Concept and Definition of Measurement; Basic Electricity Knowledge; Wiring Specifications in System Installation; Video Signal Measurement and Maintenance; Light Level Measurement and Maintenance; Audio Level Measurement and Maintenance; Camera Maintenance and Preparations Before Shot; Maintenance of Sound Recording Devices; Maintenance of Sound Recording Hardware.

RTV 127 Audio Technique 3+0 4,0

Definition of Sound; Physical Properties of Sound; Decibel; Hearing Curves; Acoustics and Sound Isolation; Microphones: Kinds and forms of microphones; Loudspeakers: Loudspeaker cabin measurements, Mono and stereo systems; Mixers and their Types; Limiter and Compressor; Principles of Magnetic Recording and Digital Recording; Equipment Used in a Sound Recording Studio; Sound Recording Tapes, Phonographs; Duties of Sound Operators in Radio and Television; Interdepartmental communication in Radio and Television. --

RTV 129 Image Technique 3+1 3,0

Basic Cinema Technology: Film cameras, Film formats; Basics of Television Technique: Forming image on television; TV Broadcast Standarts: Properties of PAL, SECAM and NTSC systems, Basics of PAL broadcast system; Physics of Color: Spectrum of electromagnetic waves, Color saturation, Tone of color, Type of color, Brightness, Luminance, Chrominance, Color temperature; Electronic Cameras: Working principles of cameras; Principles of Video Recording and Reading: Video recording, Video reading, Electronic editing.

RTV 131 Radio-Television Broadcast Systems 2+2 4,0

Historical Development of Radio; Basic Information about Radio: Radio waves and frequencies, FM and AM transmitters; Technological Equipment Necessary for Radio Broadcasting; Historical Development of Television; Basic Information about Television; Television Broadcast

Techniques; Radiolinks, Sattellites, Cable broadcasting; Technological Equipment Necessary for Television Broadcasting.

RTV 217 Creation, Production and Broadcast Process of TV Program 2+0 3,0

Technology and TV; Properties of Television as a Communication Devices; TV Production Sector: Production companies, Private and public companies, Advertising agency, Postproduction Companies, Cast Agency, Vocalization studios; TV program types; TV Creation Process; Production Budget; Production Process; Postproduction; Broadcast Precontrol; Legal Obligations on TV program Production; Preparation of TV Program Suggestion.

RTV 222 Technical English 3+0 3,0

Definition and Usage of Frequently Used Technical Terms of Radio Television: Turkish meanings and Definition of this words; Translation of Radio Television Papers from Literature into Turkish; Covering Educational Representations and Computer Softwares; Printing Technical Reports.

RTV 229 Television Program Production Techniques 2+1 3,0

Basic Concepts: TV program types, Broadcasting types and shooting types; Program Production Process; TV Program Narrative Structure and Production Elements: Audio visual narrative elements; Treatment, Scenery technics, Budget; Production Process: Planning, Shooting technics and scales, Shooting rules; Eye lines, Action lines, Continuity; Post Production: Transitions and effects.

RTV 231 Digital Recording Systems 2+1 3,0

Magnetic Tapes and Video Recording: Heads of video recording; Video Recording Formats; Broadcast Quality Formats: Semi-professional formats, Amateur formats; Technical Features of Video Recording Formats; Time Base Correctors; Digital Video Recording Systems; Digital Recording Medias and Features; Optic Discs and Types; Digital Video Signal Compression: Moving picture compression techniques, Compression formats of moving pictures.

RTV 232 The Basic Techniques of Diction, Announcing and Sound Recording 2+1 3,0

Speaking and Listening, The Effective Use of Sound and Voice, Voiceless Communication, The Effective Use of Body Language, The Control of Breath, Voice Training and Articulation, The Usage of Period in Speaking, Sounding and Concepts, Studio Knowledge, The Usage of Microphone, Pursuing The Film and The Text From The Monitor, The Concept of Reggie, The Harmony of Casting and Voicing Artists, The Voicing of Production, Animation, Documentary and Advertising Films, The Presentership of Open Faculty, Radio and Television Programs, The Voicing of Documentary, Radio Theatre, Congress Presentation, Diction, Phonetic, Articulation, News Announcing, Sport Announcing.

RTV 233 Digital Audio Video Archiving 2+1 3,0

Types of Audio and Video Archives; Terminology of Audio and Video Recording; Mass Communication Tools and Record Production: Institutions providing resources for mass communication and record production; Management of Audio and Video Records: Selection and evaluation, Establishment of classification, cataloguing and access system, Storage, Conservation and restoration, Immigration records, Core benefits and legal problems; Bibliographic Control of Digital Resources and Metadata; Thesaurus as a Tool of Information Identification and Retrieval; Digital Archives and Production System (Cinegy) and Examples of Application.

RTV 234 Working Life in Media 2+1 3,0

The Economical and Legal Conditions for Media Personnels; Basic Concepts and Foundations Towards Working Life in Media. Media Expertise as Professional Group, Radio Broadcasting, Journalism, Television Broadcasting, Advertising; The Characteristics and Working Conditions of Media Members, Legal Regulations in Media Towards Working Life, The aim and content of Labor Laws of Press. The Radio Television Chief Committee and Their Aim, The Issues in Media Sector, The Ownership of Media and Relations with Staff, Employment; Media in Respect of Turkish Laws, Principles of Press, The Actual Situation in Turkey, The Principles of Local Television, Radio and Press.

RTV 235 Television Business 2+1 3,0

Management and Organization in Television Businesses: Organizational structure and management systems of TV; TV Production Planning: Characteristics of TV productions, Planning production and production processes; Broadcasting Planning: Planning broadcasting processes and concepts, Streaming and strategies, Measurement; TV Marketing: Characteristics of marketing, Strategies for TV marketing.

RTV 236 Digital Video Effect Systems 2+1 3,0

Vision Mixers: Parts, Effects; Digital Video Effect Units: Operating specifications, Working principle; Character Generators: Operation, Video generator program, Character generator video generation systems; Electronic Graphic and Animation Systems: Pixel and vectorial based graphic generation, Function of animation systems, Areas of use, 2D graphic animation systems, 3D model generation and animation systems; Slide Storage and Presentation Units: Functions and Techniques; Color Correctors; Functions, Adjustments, Converters of television color system.

RTV 239 Video Editing Technics 2+1 3,0

Cable Systems Used in Image and Sound Transmission: Types of video and audio signals, Types of analog and digital cables and connection; Historical Development of Video Cameras; Basic Elements of Video Cameras; Types of Video Cameras; Principles of Video Cameras; Camera Objectives: Structure of objectives, Classification of objectives; Importance and Role of Lighting; Reasons of Using Lighting in Shooting: Technical reasons, Aesthetic reasons; Lighting Equipment; Lighting Methods.

RTV 241 Television Reporting 2+1 3,0

Concept of Reporting: Definition, Properties and Types; Language in Reporting; Structural Properties of Reporting; Differences Between Newspaper, Radio and Television and Internet Reporting; News Bulletin Formats; Methods of Searching News; Writing the Text: Method and Rules.

RTV 242 Video Editing Applications 1+2 3,0

Aim of Editing in Video and Audio; Editing Magnetic Tapes: A-B roll editing system, Necessary software and connections for desktop editing, Differences between A-B roll editing and desktop editing, Preparations before editing in desktop editing systems; Meaning of Time Code and Editing Script; Desktop Editing: Computer and its hardware and software for desktop editing; Video and Audio Signal Transfer to Computer; Concepts of Capture and Import; Editing Orogams: Basic characteristics, Main effect groups, Exporting the projects in editing programs.

RTV 243 Kamera-Lighting Applications 2+2 3,0

Cameraman and Characteristics of A Cameraman; Basic Knowledge of Image And Light; Studio: Studio equipment, Lighting sources in studios and aids equipment, Studio lighting technics; Studio Equipments: Tripod, Stand, Pedestal, Jimmy jib, Crane; Studio Cameras: Structure, Body, Objectives, Visor, Connection Systems; Camera Movements; Shooting Scale; Exterior Shoots: Environments, Equipment, Lighting, Camera movements and scale; News Cameraman; Documentary Cameraman.

RTV 245 Radio Broadcasting Systems and Applications 2+1 4,0

Basic Elements of Radio Broadcasting: Voice, Words, Music; Radio and Radio Listener's Features; Production Preparation and Organization; Radio Broadcasting/Studio Equipment: Radio automation systems; Oratory and Diction; Radio Program Types: Music, Documentary, Culture, Art and News; Studio Practice: Voiceover and Editing.

RTV 246 TV Program Production Applications 1+1 2,0

Pre-production Processes of TV Program: Conceptualization, Proposal, Preparing Synopsis, Treatment and Storyboard, Preparing the budget, Time Forecasting; Scenery: Techniques, Design, Numbering shootings, Sequences, Planning; Shooting techniques: Rules, Scales; Production and Postproduction Processes.

RTV 248 Television Advertising 2+1 3,0

Writing; Story Board; Shooting Board; Types of Camera Shooting; Visual Displays; Camera Movement; Production Companies and Director; Casting; Photo Shootings; Montage; Production and Post-Production.

RTV 260 Media Literacy 2+0 3,0

Media Literacy: Concept, Definition and Importance; Historical Development, Theories and Principles; Critical Approaches; Media Enterprises: Possession and control, Regulation and policy-making, Production and Distribution; Structure of Media Message; Configuration and

Interpretation of Visuals: Power, Gender in public and media, Children and advertising, Censorship, Racism and Monopolization.

RTV 262 Television Publishing Systems and Applications 2+1 4,0

Historical Evaluation of Publishing Systems: Invention of the Printing Press, Newspaper, Magazine and Book Publishing, Radio and television publishing; Television Programme Genres; Television Programme Production Process and Approaches: Pre-production, Production, Post-production processes; Narrative Structure in Television: Audio-visual techniques, Synopsis, Treatment, Script writing techniques.

RTV 264 Radio News 2+1 3,0

Definition of News Concept: Realising the value of an act as news, Conditions of news; Details of News: Explaining the questions of What?, Where?, When?, How?, Why? and Who?; What is Radio News?; The difference of TV and Radio News; The Difference between the Radio News and News Programmes; Generating Radio News Programmes; Preparing and Presenting a Radio News.

RTV 266 Short Film 2+1 3,0

Definition of Short Film: Historical background, Examples of short films; Short Film Production: Scenario, Budget planning, Pre-production, Production, Post-production; Researches for Broadcasting: Festivals, Short film festivals, Marketing the short films; Sample Short Film Production.

RTV 268 Camera Technique 2+1 4,0

Camera History; Camera Types and Structures; Electronic Cameras; Use of Studio, EFP and ENG camera; F-number on Electronic Cameras; Depth of Field and Variables Affecting It; Lenses and Lens Types: Lenses, Normal-focus lenses and their features, Short-focus lenses and their features, Long-focus lenses and features, Variable-focus lenses and their features; Equipment of Electronic Cameras; Studio Control Rooms: Mobile recording tools, Camera supports, Power sources in electronic cameras.

RTV 270 Sound Application 2+2 4,0

Physical Properties of Sound: Frequency of sound, Sound amplitude, Sound tone; Microphones: Structural properties, Dynamic and condensator microphones, Direction properties, Single and multi-directional microphones, Shotgun microphones; Sound Mixers: Broadcast sound mixers, Post-production mixers, In-line mixers; Sound Recording Equipment: Tape recorders, Digital recorders; Sound Signal Processors: Compressor and Limiter; Loudspeaker and Cabin Systems; Stereo Sound Recording: XY and MS methods.

RTV 272 Lighting Techniques 2+1 3,0

Lighting Concept: Definition and purpose of lighting; Light Intensity and Color Temperature; Lighting Sources: Bulk lighting, Diffused lighting; Lighting as a Dramatic Element; Lighting as an Objective Element; Lighting as a Subjective Element; Psychological Effects in Lighting: Expression of

psychological states; Lighting Aesthetics: Rembrandt lighting, Cameo lighting, Silhouette lighting; Color Case and Color Control: Using light filters; Outside Lights and Interior Lights in Cameras.

RTV 274 Interactive Television Applications 2+2 4,0

Interactive Television: Definition of digital TV broadcasting; Standards of Digital Communication: Transmission areas of digital broadcasts, Receiving digital television broadcasts; Interaction on Television: Interactive services on television and interaction levels; Analysing interactive TV applications, Interaction opportunities of DTV broadcasting; Semi-interaction, Full interaction; Designing Interface for Interaction: Designing interface for semi-interaction, Designing interface for full interaction.

RTV 276 Text and Scenario Writing 2+1 4,0

Concept of Scenario: Usage of scenario; Theme: Choosing the theme; Story: Creating the dramatic composition, Characters and types; Filmic Time; Speech: Other sounds in the scenario; Parts of a Scenario: Synopsis, Treatment, Sequencing scenario, Shooting scenario; Scenario Application.

SAN 111 Fundamental Art Education I 3+0 3,0

Goals, Content and Main Concepts of Fundamental Art Education; Design and Creativeness; Basic Plastic Elements: Paint, Line, Colour, Dimension, Shape, Surface; Material Identification; Plastic Components: Action, Rhythm, Volume, Place, Balance, Tissue; Usage Methods of Values and Applications; Light-Dark Values; Composition Setting; Form Associations: 2-D form, Adding third dimension.

SAN 112 Fundamental Art Education II 3+0 3,0

Condition and Principles in Fundamental Art Education; Visual Record Elements; Universal Elements; Drawing Systems; Arrangement Factors; Analysing of Objects; Study Works; Derivation of Artistic Forms from Natural Forms: Getting object lineated synthesis, Migrating to new form; Material Identification; Analysing Artistic Work; Personal and Group Projects; Artistic Research Excursion.

SAN 155 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.

SNT 111 History of Arts I 2+0 2,0

Definition, Content and Fundamental Concepts of History of Arts; Art Branches; Culture and Art Relation; Analysing Methods of Artistic Works: Material and technique, Theme, Figure, Shape, Specific content; Relations with Other Sciences: Philology, Palaeography, Epigraphy, Numismatic,

Chronology, Archaeometry, Geography, Ethnography, Anthropology, History, Archaeology; Developed Theories About History of Arts; Reflection Theory; Pre-historical Art: Antiquity art, Middle age art, Renaissance, Baroque; Art Trends: Classicism, Romantism, Realism, Impressionism, Symbolism.

SNT 114 History of Art II 2+0 3,0
Art Movements and Graphic Design; Arts and Crafts Movement; Typographic Revolutions; Font Designers; Classification of Typefaces; Art Nouveau; Art Movements That Affect Design in the Early 20th Century Art; Cubism, Futurism, Dadaism, Surrealism; Use of Posters in World War I, Russian Suprematism and Constructivism, De Stijl Movement, Bauhaus.

SPL 201 City Admiration and Environment 3+0 3,0
Urban Management; Perception of City; Human and Environment; Globalization; Urban Culture and Identity; Environment and Participation; Industrialization and Urban Transformation; Effects of Urbanization to Environment and Ecological System; Urbanization and Environmental Problems; The Planning and Application Problems of Urban Technical and Social Services; Urban Planning and Administrative Organization; Importance of Public Participation in Urban Planning; Restructuring of Local Governments; Historical Development of Local Governments; Legal and Administrative Regulations.

SPL 202 Plans of Map and Expropriation 2+0 3,0
Existing Maps; Types and Hierarchy of Plans; Development Plans, Regional Plans, Metropolitan Area Plans, Environment Organization Plan, City Plans: Land use plans, Detail plans; Procedures of Elaborating and Implementing city plans; Changing city plans, Expropriation: Process of Making an Expropriation Decision, Notifying the Owners; Organization of land and land subdivision control.

TAR 165 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.

TAR 166 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.

TEK 107 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.

TER 201 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.

THU 203 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.

TİP 113 Typography 2+1 2,5
Defining Typography and its Importance in Graphic Design: Historical development of typography, Birth of writing and the first alphabets, Progress of Roman Alphabet until the Invention of Printing Press; Basic Terms of Typography; Typographical Editing Practice.

TİP 204 Typography Applications 1+1 3,0
Union of Typography and Image; Interaction Between Typography and Image; Using Typography and Image Together: Words within Images; Union of Typography and Image: Image as Letter, Letter as Image, Word as Image, Text as Image; Typographical Applications.

TKY 102 Quality Management Systems in Production 2+1 4,0
Standardization: Definition, Objectives and Principles, TSI and its functions, Regional and international standardization organizations; Quality and Quality Management: Definition of quality and related concepts, Quality approach, Quality costs and risks, Quality control concept, Total quality management; Professional Standards: Comprehending professional standards, Quality problems encountered by enterprises, Quality circles in printing sector; Application of Quality Control Methods to Printing Establishments: Reflection of quality assurance system in printing sector,

Quality control stages in pre-printing, printing and post-printing processes.

TOP 102 Surveying 2+2 4,5

Concepts Related to Topography; Simple Measurement Tools and Horizontal Measurement: Application of right angles, Application of right angles by the help of prisms, Application of lines; Length Measurement: Calculation of Surveying and levelment; Calculation of Area: Calculation of area according to measurement values, Calculation of area according to coordinate values, Calculation of area according to Cross Method; Theodolite and Angle Measurement: Measuring horizontal and vertical angles, Length measuring; Drawing Maps and Plans Using The Dimensions of a Field: Calculation of Coordinates; Calculation of Polygons.

TRA 220 Road Knowledge 2+1 3,0

History of Roads; Road Construction Methods and Inspection; Site Management in Road Construction; Classification of Roads: Highway, Railway, Seaway, Airway; Terms Used in Highway; Route and Survey: Preliminary project, Route definition, Soil, Stabilized, Asphalt and concrete road, Determination and confirmation of the final route; Profile; Road Materials: Bitumen, Bituminous materials, Asphalt, Asphalt cement, Liquid asphalt, Tar.

TRS 104 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.

TÜR 120 Turkish Sign Language 3+0 3,0

Overview of Sign Language: Characteristics of sign language; History of Sign Language in the World: Emergence of language and sign language, Verbal education and approaches to sign language; History of Turkish Sign Language: Early period, Ottoman period, Period of the Republic of Turkey; Introduction to Turkish Sign Language: Finger alphabet, Pronouns, Introducing oneself and family, Greetings, Meeting, Relationship words; Showing Basic Words: Adjectives: Adjectives of quality, Adjectives of quantity; Verbs: Present tense, Past tense, Future tense, Time adverbs, Antonyms; Healthy Living: Expression of health-related problems, Sports terms, Expressing requirements; In a Bank: Expressions required to carry out basic procedures in a bank; Vacation: Basic words about vacation.

TÜR 125 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.

TÜR 126 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.

YPD 101 Building Inspection 2+1 3,0

Legal procedures in building inspection; Application Process: Building Material Standards; Control of material and laboratory tests; Application of Building: Control of steel and mold; Preparation of concrete; Compliance control of materials in projects.

YPD 102 Guidelines for Earthquake Resistant Construction 2+0 2,0

Causes and Characteristics of Earthquakes: Concept and definitions; Seismological assessment; Forms of ground motion; Design for earthquakes; Collecting the geological data's and evaluation; Slope stability analysis and landslides; Liquefactions; The basic design of foundation; Retaining structures; Construction on active faults; Strengthening of structures.

YPD 103 Structural Design I 3+1 4,0

Evolution of Concrete and Concrete Buildings: Structural Behavior of concrete elements; Structure and building loads; Design criteria for concrete framed structures; Elements of Concrete Framed Structures: Foundation, Floors, Stairs; Wall design; Exterior Wall Design: Wall types and assemblies, Metal cladding, Stud-backed walls; Drawing a Wall Section: Points to consider, Drafting guidelines; Reinforced prefabricated buildings; application systems; Assembling techniques of panel facade elements and joint analysis.

YPD 104 Structural Design II 2+0 2,0

Steel in Architecture: Evolution of Steel Structures, Steel-Framed Structures: Developments and achievements; Example of Steel-Framed Buildings; Principles of Design and Construction: Fundamentals of planning, Load bearing

systems, Columns, Bracing, Flooring systems, Integration of building structure with building insulation; Steel stairs; External Walls: Curtain walls, Facade claddings; Internal Walls: Glass walls, suspended ceilings, raised floors; Roofs: Glass roofs; Corrosion and protection, Fire Protection; Wood in Architecture: Wood construction components; Principles of Design and Construction: Fundamentals of planning, Load bearing systems, Bracing, Floor structures, Construction of floors, Integration of building structure with building insulation, Wooden Stairs; External Walls and facade claddings; Internal walls construction; Roofs.

YPD 105 Construction and Material 3+0 3,0

Definition of Materials: History; Natural Stone as an Element of Construction Materials; Aggregate: Classification, Screen Analysis, Granulometry, Properties of Aggregates Used in Foundation Construction; Properties of Bitumen Aggregate; Experiments Applied to Aggregate; Plaster; Lime; Cement, Properties of Cement; Mortar and Properties; Concrete and Properties of Concrete; Mixture Ratios for Concrete Materials; Metals, Woods, Glass, Plastic Materials.

YPD 108 Building Electrical Installation Knowledge 2+0 3,0

Electricity Technology and Applications in Buildings; General Information About Electricity and Installations: Tools and Equipment Used in Electricity Installations; Recessed and Surface Mounted Installation and Rules; Regulations, Implementation and inspection in electrical installations; Electrical Installation Projects and Readings; Electric Motors in Construction and its their Use; Electrical Installation Panels and Hydrophoresofors; Devices Used in Heating and Natural Gas Installations.

YPD 201 Repairs and Strengthening of Structures 2+0 2,0

Damage Assessment in Building: Study of building survey; Non-Destructive Inspection and Destructive Inspection; Strengthening of structures. Repair and strengthening methods; Strengthening techniques of materials; Financial issues in Strengthening.

YPD 202 Damage in Buildings 3+0 3,0

Type of damage and causes in reinforced concrete elements; To apply basic principles to determine the damage status; Basic principles of surveying; The methodology of damage in buildings and their causes; Improvement of damages in buildings; Damages in wood, steel, concrete and reinforced concrete structures.

YPD 203 Technical English 2+0 2,0

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, Curriculum vitae, Business letters, Passive structure usage; Reading-Understanding: Conjunctions indicate time, purpose, condition, Expressions

in passive structure, Expressions indicate contrariness, Dictionary usage.

YPD 204 Building Site Organization 2+0 2,0

The creation of building site; Work programmed; Manufacturing preparation building site; Manufacturing teams and their applications; Excavations works and office works; Preparation of progress payment. applications; Excavations works and office works; Preparation of progress payment.

YPD 205 Application of Building Inspection 2+2 4,0

Regulation of building inspection; Considerations when examining projects; Application of buildings; Preparation of Concrete: Concrete casting and processing; Sampling; To check compliance with standards; Methodology of permission to use the buildings.

YPD 206 Structures and Earthquake 2+0 3,0

Earthquake Movement: The behavior of structure element under the influence of earthquakes; Curating wall system design Structures under torsion; Design of masonry structures; Considerations in earthquake resistance structural system.

YPD 207 Introduction to Computer Aided Design 2+1 3,0

Definition and Aim of AutoCAD 2000: Coordinate System; Command Line; Trim; Erase; Save; Save As; Command Offset; Mirror; Chamfer; Fillet; Move ; Rotate; Scale; Stretch; Lengthen; Extend; Dimension; Polygon; Circle; Rectangle; Ellipse; Point; Hatch; Explode; Inquiry; Option Properties: Make Block; Insert Block; External References; Image ; Format; Jpeg; Bmp; Export; Plot ; Plot Preview.

YPD 208 Building Inspection and Legal Aspects of Reconstruction 2+1 3,0

Administrative Structure of Turkey: Centralized administration; Decentralized administration; Limitations of Authority in City Planning and the Reconstruction Law: Basic principles of city planning; Allotment and unification; Principles of construction, Provisions of penalty; Regulations based on reconstruction law; Regulations on the elaboration of existing maps; Regulations on elaborating and changing city plans; Regulations on land subdivision; Typical reconstruction regulation of municipalities; Regulation on parking areas; Regulation on reconstruction amnesty.

YPD 210 Water Supply and Sewerage 2+2 4,0

Hydrology; Collection of Surface Water: Water Supply from Rivers, Lakes and Dams; Collection of Groundwater Supply: From Hillside and Wells; Water Transmission by Pipe Lines: Hydraulics; Operations and Distribution Systems: Waste Water Collection; Sewers; Flow in Sewers and Sewer Appurtenances; Design of Sewer System; Waste Water Treatment Methods.

**YPD 212 Geographical Information Systems in
Building Inspection 2+1 3,0**

What is Geographic Information Systems (GIS)?; How GIS can be apply to the Building Inspection ; Flow Chart of an General GIS Application Project; Data Collection, Digitization, Vector Data Editing; Data Structure Design in the Building Inspection; Relationships of the Graphic Data and Database; Preparation of Vector Graphic Features of Railroad Definitions: Point, Line and Polygon; Line and Node Logic in the Transportation Analysis; Topology Logic in the GIS; General Overview of the Building Inspection and GIS; Linear Segmentation (AM/FM); General Definitions and Concepts; Some Linear Segmentation Concepts; Some Linear Segmentation Concepts in Turkey; Some Linear Segmentation Software's.