

## 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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### STAFF

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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	BİL 150	Fundamentals of Information Technology	4+0 5,0
BYT 103	Fonts and Typography	2+1 3,0	BYT 102	Print Business and Publishing	1+1 2,0
BYT 105	Introduction to Printing and Publication	2+1 3,0	BYT 104	Reproduction and Color Theory	3+0 3,5
İLT 105	General and Technical Communication	2+0 2,0	BYT 106	Computerized Page Design I	2+1 3,0
İNG 175 (Eng) English I		3+0 3,0	GTS 201	Visual Communication Design	2+2 5,0
			İNG 176 (Eng) English II		3+0 3,0

İŞL 421	Entrepreneurship	2+0	3,0	TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
MAT 125	General Mathematics	3+1	4,0	TRS 102	Technical Drawing	2+2	4,5
SAN 111	Fundamental Art Education I	3+0	3,0	TÜR 126	Turkish Language II	2+0	2,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0				
TÜR 125	Turkish Language I	2+0	2,0				30,0
	<i>Elective Course (1)</i>	-	2,0				
			30,0				

### III. SEMESTER

BYT 201 (Eng)	Technical English	3+0	3,0
BYT 203	Desktop Publishing	2+2	3,0
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	3,0
BYT 211	Computerized Page Design II	2+2	4,0
	<i>Departmental Elective Courses (2)</i>	-	6,0
	<i>Elective Course (1)</i>	-	3,0
			30,0

### IV. SEMESTER

BYT 202	Digital Printing Technology	2+2	4,0
BYT 204	Production Quality Management Systems	2+0	3,0
BYT 206	Marketing and Advertising Practices	2+1	3,0
BYT 208	Project	2+2	4,0
BYT 210	Other Printing Techniques	3+1	4,0
BYT 212	Publishing Applications in Turkey	2+1	3,0
GTS 217	Computer Aided Graphic Design I	2+1	3,0
	<i>Departmental Elective Courses (2)</i>	-	6,0
			30,0

### DEPARTMENTAL ELECTIVE COURSES

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 217	Web Publishing	2+2	3,0
ETK 211	Professional Ethics	2+0	3,0

FOT 107	Photography	2+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

## 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	5,0
ELO 109	Basic Electronics	3+1	5,0
İNG 175 (Eng)	English I	3+0	3,0
MAT 121	Mathematics I	3+1	4,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0

#### II. SEMESTER

BTP 102	Database and Management Systems I	3+1	4,0
BTP 104	Data Structures and Programming	3+1	4,0
BTP 106	Computer Hardware	2+2	5,0
GRA 110	Graphic and Animation	3+1	4,0
İNG 176 (Eng)	English II	3+0	3,0
MAT 122	Mathematics II	3+1	4,0

TEK 107	Scientific Principles of Technology	3+1	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 Course (1)</i>	-	2,0
			<u>30,0</u>				<u>30,0</u>

### III. SEMESTER

BTP 201	Operating Systems	3+1	4,0
BTP 203	Database and Operation Systems II	3+1	4,0
BTP 205	Visual Programming I	3+1	4,0
BTP 207	Internet Programming I	3+1	4,0
BTP 209	Computer Network Systems	1+1	2,0
BTP 211	Technical English I	1+1	2,0
İLT 105	General and Technical Communication	2+0	2,0
	<i>Departmental Elective Courses (2)</i>	-	8,0
			<u>30,0</u>

### IV. SEMESTER

BTP 202	System Analysis and Design	2+2	4,0
BTP 204	Microcomputer Systems and Assembler	3+1	4,0
BTP 206	Visual Programming II	3+1	4,0
BTP 208	Internet Programming II	3+1	4,0
BTP 212	Technical English II	1+1	2,0
İŞL 209	Business Management	2+0	2,0
KGS 104	Quality Assurance and Standards	2+0	2,0
	<i>Departmental Elective Course (1)</i>	-	4,0
	<i>Elective Course (1)</i>	-	4,0
			<u>30,0</u>

### DEPARTMENTAL ELECTIVE COURSES

BTP 210	Control by Computer	3+1	4,0
BTP 213	Delphi Programming I	3+1	4,0
BTP 214	Delphi Programming II	3+1	4,0
BTP 215	C Programming I	3+1	4,0
BTP 216	C Programming II	3+1	4,0
BTP 217	Visual Basic Programming I	3+1	4,0
BTP 218	Visual Basic Programming II	3+1	4,0
BTP 219	Computer Aided Design and Modeling	3+1	4,0
BTP 220	Research Techniques and Seminar	1+1	2,0
BTP 221	Project	0+4	2,0
BTP 242	Statistics Practices at Computer	3+1	4,0

BTP 244	Electronic Commerce and Marketing Techniques on the Internet	3+1	4,0
İŞL 421	Entrepreneurship	2+0	3,0
MUH 233	Accounting Techniques and Commercial Software I	1+1	2,0
MUH 234	Accounting Techniques and Commercial Software II	1+1	2,0
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 205	Community Services	0+2	4,0

## DEPARTMENT OF CONSTRUCTION DIVISION

### PROGRAM IN BUILDING INSPECTION

#### PROGRAM

#### I. SEMESTER

İNG 175 (Eng)	English I	3+0	3,0
MAT 121	Mathematics I	3+1	4,0
MEK 104	Statics Strength of Materials	3+0	4,5
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0
TOP 102	Surveying	2+2	4,5
TÜR 125	Turkish Language I	2+0	2,0
YPD 101	Building Inspection	2+1	3,0
YPD 103	Structural Design I	3+1	4,0
YPD 105	Construction and Material	3+0	3,0
			<u>30,0</u>

#### II. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
İNG 176 (Eng)	English II	3+0	3,0
MAT 122	Mathematics II	3+1	4,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
TEK 107	Scientific Principles of Technology	3+1	4,0
TRA 108	Highways	2+0	2,0
TÜR 126	Turkish Language II	2+0	2,0
YPD 102	Guidelines for Earthquake Resistant Construction	2+0	2,0
YPD 104	Structural Design II	2+0	2,0

YPD 106	Occupational Health and Safety	2+0	2,0
	<i>Elective Course (1)</i>	-	2,0
			30,0

### III. SEMESTER

İLT 105	General and Technical Communication	2+0	2,0
İNŞ 229	Reinforced Concrete Design	2+2	4,0
KGS 104	Quality Assurance and Standards	2+0	2,0
MEK 211	Soil Mechanics	3+0	4,0
MİM 217	Architectural Drawing Project	2+3	4,0
YPD 201	Repairs and Strengthening of Structures	2+0	2,0
YPD 203	Technical English	2+0	2,0
YPD 205	Application of Building Inspection	2+2	4,0
	<i>Departmental Elective Courses (2)</i>	-	6,0
			30,0

### IV. SEMESTER

İNŞ 230	Soil Improvement Methods	3+0	4,0
İŞL 209	Business Management	2+0	2,0
MİM 216	Architectural Project Analysis	2+1	3,0
TRA 218	Transportation	2+1	3,0
YPD 202	Damage in Buildings	3+0	3,0
YPD 204	Building Site Organization	2+0	2,0
YPD 208	Building Inspection and Legal Aspects of Reconstruction	2+1	3,0
YPD 210	Water Supply and Sewerage	2+2	4,0
	<i>Departmental Elective Course (1)</i>	-	3,0
	<i>Elective Course (1)</i>	-	3,0
			30,0

### DEPARTMENTAL ELECTIVE COURSES

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
ŞPL 201	City Admiration and Environment	3+0	3,0
ŞPL 202	Plans of Map and Expropriation	2+0	3,0
TÜR 120	Turkish Sign Language	3+0	3,0
YPD 206	Structures and Earthquake	2+0	3,0

YPD 207	Introduction to Computer Aided Design	2+1	3,0
YPD 212	Geographical Infonmation 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
BİL 150	Fundamentals of Information Technology	4+0	5,0
GTS 107	Drawing I	2+1	3,5
İNG 175 (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
TİP 111	Typography I	2+1	2,5
TÜR 125	Turkish Language I	2+0	2,0
	<i>Elective Course (1)</i>	-	2,0
			30,0

#### II. SEMESTER

FOT 107	Photography	2+1	3,0
GTS 108	Drawing II	2+1	3,5
GTS 110	Introduction Graphic Design	2+1	3,0
GTS 112	Illustration	2+1	3,0
İNG 176 (Eng)	English II	3+0	3,0
SAN 112	Fundamental Art Education II	3+0	3,0
SNT 114	History of Art II	2+0	3,0
TİP 112	Typography II	2+0	2,0
TRS 102	Technical Drawing	2+2	4,5
TÜR 126	Turkish Language II	2+0	2,0
			30,0

<b>III. SEMESTER</b>			
ANİ 225	Animation	2+1	3,0
GRA 211	Web Design	1+1	2,0
GTS 201	Visual Communication Design	2+2	5,0
GTS 205	Printing Techniques	3+0	3,5
GTS 217	Computer Aided Graphic Design I	2+1	3,0
GTS 219	Original Printmaking I	2+1	2,5
GTS 221	Packing Design I	2+1	3,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0
	<i>Departmental Elective Course (1)</i>	-	3,0
	<i>Elective Course (1)</i>	-	3,0
			30,0

<b>IV. SEMESTER</b>			
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 224	Project	0+2	3,0
GTS 226	Visual Communication and Advertising	2+1	3,0
GTS 228	Graphic Production Techniques	2+1	3,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
	<i>Departmental Elective Courses (2)</i>	-	6,0
			30,0

#### **DEPARTMENTAL ELECTIVE COURSES**

ETK 211	Professional Ethics	2+0	3,0
GTS 202	International Advertising	2+0	3,0
GTS 207	Internet Advertising	3+1	3,0
GTS 208	Technical English	3+0	3,0
GTS 209	Positioning Strategies in Advertising	3+1	3,0
GTS 214	Organization and Management in Advertising Agencies	3+1	3,0
GTS 216	Semiotics	3+1	3,0
GTS 229	Illustrator Graphic Applications I	3+1	3,0

GTS 230	Illustrator Graphic Applications II	3+1	3,0
İSN 102	Public Relations	3+0	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**

<b>I. SEMESTER</b>			
BİL 137	Computer I	2+0	2,5
ELE 103	Electrical and Electrical Measurements	3+1	5,0
ELE 105	Direct Current Circuit Analysis	3+1	5,5
ELO 104	Analog Electronics	3+1	4,0
İNG 175 (Eng)	English I	3+0	3,0
MAT 121	Mathematics I	3+1	4,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0
TÜR 125	Turkish Language I	2+0	2,0
	<i>Elective Course (1)</i>	-	2,0
			30,0

<b>II. SEMESTER</b>			
BİL 140	Computer Aided Design I	2+0	2,0
EEÜ 104	High Voltage Technics	1+1	2,0
EEÜ 106	Traditional Sources of Energy	2+1	2,0
ELE 104	Alternative Current Circuit Analysis	3+1	5,0
ELO 103	Digital Electronics	3+1	4,0
İNG 176 (Eng)	English II	3+0	3,0
MAT 122	Mathematics II	3+1	4,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0
TEK 107	Scientific Principles of Technology	3+1	4,0
TÜR 126	Turkish Language II	2+0	2,0
			30,0

<b>III. SEMESTER</b>			
EEÜ 201	Electrical Energy Generation	2+1	3,0
EEÜ 205	Energy and Environment	2+0	2,0
EEÜ 208	Energy Management and Policies	2+0	2,0
ELE 106	Electric Systems (Networks) and Foundations	1+1	2,0
ELE 212	Electricity Installation Plans	3+1	5,0

<b>IV. SEMESTER</b>			
EEÜ 202	Electricity and Energy Project	2+2	4,0
EEÜ 203	Electrical Energy Transmission and Distribution	2+1	2,0
EEÜ 204	Energy Analysis and Savings	2+0	2,0
EEÜ 206	Renewable Sources of Energy	2+0	2,0
EEÜ 210	Contract, Exploration and Planning	2+1	3,0

ELE 227	Electrical Machines	3+1	3,0
ELO 205	Power Electronics	3+1	5,0
ELO 211	Microprocessors / Microcontrollers	3+1	5,0
	<i>Departmental Elective Course (1)</i>	-	3,0
			<u>30,0</u>

EEÜ 212	Occupational Safety	2+0	2,0
ELE 207	Electrical Maintenance and Troubleshooting	1+1	3,0
ELE 215	Electromechanical Control Systems	3+1	4,0
ELE 222	Related Electrical Service and Systems	1+1	2,0
	<i>Departmental Elective Course (1)</i>	-	3,0
	<i>Elective Course (1)</i>	-	3,0
			<u>30,0</u>

#### DEPARTMENTAL ELECTIVE COURSES

EEÜ 232	Hydrojen 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
EEÜ 244	Energy Plant Management	3+1	3,0
EEÜ 246	(Eng) Technical English	3+1	3,0

EEÜ 248	Fuels and Combustion Technology	3+1	3,0
ELO 212	Advanced Digital Applications	3+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 ELECTRONICS AND AUTOMATION

### PROGRAM IN MECHATRONICH

#### PROGRAM

##### I. SEMESTER

BİL 137	Computer I	2+0	2,5
İNG 175	(Eng) English I	3+0	3,0
MAK 117	Manufacturing Process I	3+1	4,0
MAT 121	Mathematics I	3+1	4,0
MTR 101	Circuit Analysis	3+0	3,5
MTR 103	Introduction to Mechatronics	3+0	3,0
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 Course (1)</i>	-	2,0
			<u>30,0</u>

##### II. SEMESTER

BİL 140	Computer Aided Design I	2+0	2,0
ELO 110	Digital Electronics	3+0	3,0
ELO 112	Analog Electronics	3+0	3,0
İNG 176	(Eng) English II	3+0	3,0
MAK 128	Materials Technology I	3+0	3,0
MAT 122	Mathematics II	3+1	4,0
MEK 108	Mechanics	2+0	2,0
MTR 102	Measurement Techniques	1+1	2,0
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
			<u>30,0</u>

##### III. SEMESTER

BİL 287	Computer Aided Design II	2+0	2,0
MAK 227	Materials Technology II	3+1	4,0
MAK 229	Mechanical Science and Elements	3+1	5,0
MAK 240	Hydraulic and Pneumatic Systems	3+1	4,0
MİK 201	Microprocessors/Microcontrollers	1+1	2,0
MTR 201	Programmable Logic Controllers (PLC)	1+1	2,0
MTR 203	Mechatronic System Components	2+0	2,0
MTR 205	Process Control I	1+1	2,0

##### IV. SEMESTER

ELE 228	Electrical Machines and Drivers	3+1	4,0
ENO 204	Data Addition and Control with Computers	3+1	5,0
İŞL 209	Business Management	2+0	2,0
KGS 104	Quality Assurance and Standards	2+0	2,0
MTR 202	Process Instrumentation and Control	1+1	2,0
MTR 204	Electro hydraulics/Electro pneumatics	2+1	3,0
MTR 206	Process Control II	1+1	2,0
MTR 208	Mechatronic System Design	1+1	2,0

MTR 207	Sensors and Transducers	1+1	2,0	MTR 210	Technical English	2+0	2,0
TER 201	Thermodynamics	2+0	2,0		<i>Departmental Elective Courses (2)</i>	-	6,0
	<i>Elective Course (1)</i>	-	3,0				<u>30,0</u>
			<u>30,0</u>				

### DEPARTMENTAL ELECTIVE COURSES

ELO 214	Automatic Control	3+1	4,0
ENO 208	Robot Technology	3+1	4,0
ENO 209	Control with Computer	3+1	4,0
ENO 210	Microcontroller Based Control	3+1	4,0
İŞL 421	Entrepreneurship	2+0	3,0
MAK 252	Energy Management	1+1	2,0
MTR 212	Process Measurements	3+1	3,0
MTR 214	Applications of Mechatronics in Industry	1+1	2,0

MTR 218	Fuzzy Logic	3+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

## 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

ELO 111	Basic Electronic	2+1	3,0
FOT 107	Photography	2+1	3,0
İNG 175 (Eng)	English I	3+0	3,0
MAT 125	General Mathematics	3+1	4,0
RTV 119	Audio Technics I	3+0	4,0
RTV 121	Measurement and Maintenance at RTV	2+1	3,0
RTV 123	Video Technics I	1+1	2,0
RTV 125	Radio Broadcasting Systems	2+2	4,0
TÜR 125	Turkish Language I	2+0	2,0
	<i>Elective Course (1)</i>	-	2,0
			<u>30,0</u>

#### II. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
İNG 176 (Eng)	English II	3+0	3,0
RTV 102	Video Technique II	2+0	3,0
RTV 112	Studio Equipment and Usage	2+1	3,0
RTV 114	General Communication	3+0	3,0
RTV 116	Radyo Programming	2+2	4,0
RTV 118	Television Broadcasting Systems	3+0	3,0
RTV 120	Audio Technics II	3+0	4,0
TÜR 126	Turkish Language II	2+0	2,0
			<u>30,0</u>

#### III. SEMESTER

RTV 110	New Communication Technologies	2+0	2,5
RTV 229	Television Program Production Techniques	2+1	3,0
RTV 231	Digital Recording Systems	2+1	3,0
RTV 233	Digital Audio Video Archiving	2+1	3,0
RTV 235	Television Business	2+1	2,5
RTV 237	Camera Technics	1+1	2,0
RTV 239	Video Editing Technics	2+1	3,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	2+0	2,0

#### IV. SEMESTER

RTV 222 (Eng)	Technical English	3+0	3,0
RTV 236	Digital Video Effect Systems	2+1	3,0
RTV 238	IP Based Broadcasting	2+1	3,0
RTV 240	Lighting Technics	1+1	2,0
RTV 242	Video Editing Applications	1+2	3,0
RTV 244	Interactive Television	2+1	3,0
RTV 246	TV Program Production Applications	1+1	2,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	2+0	2,0

Departmental Elective Courses (3) - 9,0  
 30,0

Departmental Elective Courses (2) - 6,0  
 Elective Course (1) - 3,0  
 30,0

**DEPARTMENTAL ELECTIVE COURSES**

ANİ 216 Graphic Animation at TV 2+1 3,0  
 İŞL 421 Entrepreneurship 2+0 3,0  
 RTV 217 Creation, Production and Broadcast Process of TV Program 2+0 3,0  
 RTV 232 The Basic Techniques of Diction, Announcing and Sound Recording 2+1 3,0  
 RTV 234 Working Life in Media 2+1 3,0  
 RTV 241 Television Reporting 2+1 3,0  
 RTV 248 Television Advertising 2+1 3,0

RTV 258 Vision Mixer 2+1 3,0  
 RTV 260 Media Literacy 2+0 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

**DEPARTMENT OF MACHINES AND METAL TECHNOLOGIES**

**PROGRAM IN MECHANICAL DRAWING AND CONSTRUCTION**

**PROGRAM**

**I. SEMESTER**

BİL 137 Computer I 2+0 2,5  
 İNG 175 (Eng) English I 3+0 3,0  
 MAK 115 Mechanical Drawing I 3+1 4,0  
 MAK 117 Manufacturing Process I 3+1 4,0  
 MAK 119 Mechanical Technology I 1+1 2,5  
 MAT 121 Mathematics I 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  
 Elective Course (1) - 2,0  
 30,0

**II. SEMESTER**

BİL 138 Computer II 2+0 2,5  
 İNG 176 (Eng) English II 3+0 3,0  
 MAK 104 Engineering Science I 3+1 4,0  
 MAK 116 Mechanical Drawing II 1+1 3,0  
 MAK 118 Manufacturing Process II 3+1 4,0  
 MAK 120 Mechanical Technology II 1+1 2,5  
 MAK 128 Materials Technology I 3+0 3,0  
 MAT 122 Mathematics II 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  
 30,0

**III. SEMESTER**

İLT 105 General and Technical Communication 2+0 2,0  
 MAK 221 Computer Aided Design I 3+1 5,0  
 MAK 225 Engineering Science II 3+1 4,0  
 MAK 227 Materials Technology II 3+1 4,0  
 MAK 229 Mechanical Science and Elements 3+1 5,0  
 MEK 209 Mechanics of Materials (Dynamics) 3+0 3,0  
 MRK 203 Construction I 2+2 4,0  
 Departmental Elective Course (1) - 3,0  
 30,0

**IV. SEMESTER**

KGS 104 Quality Assurance and Standards 2+0 2,0  
 KLP 201 Mould Design 2+2 3,0  
 MAK 222 Computer Aided Design II 1+1 3,0  
 MAK 236 Computer Aided Manufacturing 3+1 4,0  
 MAK 240 Hydraulic and Pneumatic Systems 3+1 4,0  
 MAK 242 Administrating Management and Manufacturing Control 1+1 3,0  
 MRK 204 Construction II 2+2 3,0  
 MRK 216 Measurements Techniques 2+0 2,0  
 MRK 218 Basic Principles of the Machine Construction 3+0 3,0  
 Elective Course (1) - 3,0  
 30,0



## DEPARTMENTAL ELECTIVE COURSES

ELE 102	Basics of Electricity	2+2	3,0
MAK 238	System Analysis and Design	2+2	3,0
MRK 201	Advanced Computer Applications	2+2	3,0
MRK 213	Technical English	3+0	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

## 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 137 Computer I** 2+0 2,5

Windows Operating System: Introduction and using of desktop and objects, Options of Start Menu; Microsoft Office Suite: Opening file, preparation, arranging, preparation of top and bottom information with MS Word, Cell, line, column, page layout, cell forming and formula editing with MS Excel, Slide editing and slide shows operations with MS PowerPoint, Using of dairy and calendar options, Mail importing and exporting with MS Outlook, Explorer objects and searching the web with Internet Explorer.

### **BİL 138 Computer II** 2+0 2,5

Basic Concepts of Internet: Servers, Clients, TCP-IP Protocol, Web based Services, (HTTP; SMTP, DNS, FTP, TELNET, POP3, PROXY); Introduction to Web Design:

Installing server side software for development; Developing WEB files, FTP Clients; Presentation Software: Applying Templates for Presentation, Generating Presentations, Presentation Editing; Database Application: Generating Tables, Table design, Form generation and data input, Reports and report generating, Shortcut to tables, Queries.

### **BİL 140 Computer Aided Design I** 2+0 2,0

Introduction to Software Suites: Properties, Menus, Sub menus, Design environment and menus; Circuit Diagram Design and Drawing; Forming Components of a Circuit Diagram, Connections, Blocking and Regulation of Properties; Circuit Analysis and Test Operations: Test equipments, Test operations with simulations; Printing from Plotters and Printers: Printer adjustment, Drawing area; Determining printing properties.

### **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 287 Computer Aided Design II** 2+0 2,0

Using and Beginning Arrangements; Minimum requirement concept of hardware for software, Installation of software, Operating; Basic Drawing Elements: Basic drawing commands (Circle, Arc, Line?) functions, Forming object and object groups; Correction and Interrogation Operations: Correction and interrogation command functions, Correction and arrangement on object; Spectre Control Operations: Basic spectre command function; Blocking Operations and layers; Measuring and Scanning Process; Operations of Printer and Plotter.

**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 5,0

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 205 Visual Programming I** 3+1 4,0

Definition of Variables and Functions as Objects, Characteristics of Objects and to Change These Characteristics; Programming Techniques; Using Objects in Programming; Changing the Characteristics of Objects by Using Functions in Programming; Preparing more Useful Interfaces to Users by Using Objects in Programming; Differences between Classical Programming and Object Oriented Programming.

**BTP 206 Visual Programming II** 3+1 4,0

Principles of Object Oriented Programming: Fundamentals of language; Language Environment; Visual Programming; Structure of Program; Elements of Language; Simple Types; Sliding Point Data Structures; Indicators, Input/Output Registering; Visual Database Tools; Charts; Data Units; SQL; Objected Oriented Programming: Components, Objects, Developed programming commands.

**BTP 207 Internet Programming I** 3+1 4,0

Fundamental Internet Concept: Server client logic, TCP-IP protocol, HTTP, SMTP, DNS, FTP, TELNET, POP3, PROXY concepts; Introduction to WEB Design: Creating Web Files, Usage of FTP software; HTML: HTML commands; Script Usage: Script usage; Design Project; HTML Editors.

**BTP 208 Internet Programming II** 3+1 4,0

Designing Dynamic Page to Prepare Web Site; Installing and Adjusting the Programmes Necessary for the Source Computer; Using HTML Form Tags and HTML Scripts for the Dynamic Pages; Using CGI Language; To be able to Connect to a Database Using CGI Language: Definitions of variable; The usage of the variables; Data Types and Operators; Controlling Terms, Loop Statements, Functions; File Operations.

**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 210 Control by Computer** 3+1 4,0

Basic Properties and Structure of Industrial Computers; Knowing and Inserting and Running the Cards Used in Industrial Computers; Measuring and Controlling Operations by Using Industrial Computers; Network and its Basic Properties Used in Automation Systems; The Network Organization for Measuring and Controlling Systems; Industrial Communication; Communication Controlling Based PC; Controlling Modules and Remote Data Measurement; Dispersed Data Measurement and Controlling System.

**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 213 Delphi Programming I** 3+1 4,0

Installing Programming Language (Delphi); Compounds of the Programming Language Properties and the Parts of Screen such as Tool Bars; to be able Use the Basic Components; to be able to Arrange the Components

Visually; Using the Properties of the Components; Variables on Programme Writing Controlling Terms and Using Loops; Comprehending and Using the Terms and Definitions Related to Class and Object Concept.

**BTP 214 Delphi Programming II** 3+1 4,0

Creating and Developing New Components; Forming the Components as Dynamic; The Usage of the Components as Dynamic; Applications; Graphic Operations; Toolbars; Various Data Base Applications: Input data, Questioning and reporting, Planning and writing a practical data base; Making the Software Movable, Installing the Software on the Other Computers; Using SQL; Accessing to Various Data Base; Internet Software: Using Active X, Creating HTML files, Message on internet, E-mail, File operations.

**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 217 Visual Basic Programming I** 3+1 4,0

Comprehending the Structure of Visual Basic Programming; To be able to Understand Operators and Data Types on Visual Basic; To be able to Know Controlling Objects; To be able to Comprehend the Properties and the Methods of Controlling Objects; To be able to Understand Controlling and Loop Statements and Providing Programme Flow by the Desired Way; Comprehending the Logic of the Arrays and Applying Into the Programme; Using the Sub-Programme; Using the File.

**BTP 218 Visual Basic Programming II** 3+1 4,0

Object Oriented Programming Logic: Class structure, Encapsulation concept, Inheritance concept, Polymorphism concept; Active X Concept: The components and the controls of Active X, Forming and using Active X DLL and Active X EXE; Database Concept: Database models, Active X data object (ADO) technology, SQL statements; Creating and Controlling Database Using Visual Basic; The

Properties and the Controls of Web Browser; Concepts about Data Structure.

**BTP 219 Computer Aided Design and Modeling 3+1 4,0**

Installing Designing Software and Modelling Software; Tool Bars and Drawing Elements; Drawing 2D and 3D Elements; Forming Compound and More Complex Figures from 2D and 3D Elements; Making Correction on the Existing Figures; Getting More Affective Images By the Drawings Which Was Done Into the Motion and Turn The Drawings Into the Animation; Using AUTOCAD Programme and Applications.

**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 221 Project 0+4 2,0**

Project: Description and context, Procedures, Development tools and OS, Prototype and deadlines, Analysis, System architecture, Project planning and deadlines, Context, Architecture, Data design, Interface design, Process design, Planning and scheduling, Debugging, User guides, Testing, Test processes, Project presentation.

**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 102 Print Business and Publishing 1+1 2,0**

General Information: Basic concepts, Objectives, Types, and Legal forms; Business Enterprise; Functions of Businesses; Production Systems: Characteristics, Classification, Evaluation, Evaluation of enterprises in view of on production systems; Production, Organizational Structure and Layout in Printing Companies; Publishing: Definition, Scope and Characteristics; Sample Analysis.

**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 3,5**

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 105 Introduction to Printing and Publication 2+1 3,0**

General Information: Basic concepts, What is printing, What is publishing; Printing Industry: Definition, Development, Importance; Printing Industry in the World and in Our Country: The present and the future, Printing-related jobs; Business Processes in the Printing Industry: Pre-printing, printing, post-printing procedures; Professional Terminology Related to Printing Industry; Relationship between Publishing and Printing.

**BYT 106 Computerized Page Design I** 2+1 3,0

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 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 203 Desktop Publishing** 2+2 3,0

Definition of Desktop Publishing; Importance, Development, Introduction to graphic image processing programs and printing layout of page; Data Transfer Methods and Image Formats in Desktop Publishing Programs; Relationship between Desktop Publishing and Printing Processes: Tracing-film output settings appropriate for the printing system, Points to consider in film output; Preparation of Logos, Emblems, etc. on Computer with the Help of Graphic Programs; Projects Including Brochure and Poster Design.

**BYT 204 Production Quality Management Systems** 2+0 3,0

Standardization: Definition, Objectives and principles, Turkish Standards Institution and its duties of, Regional and international standardization institutions; Quality and Quality Management: Definition of quality and related concepts, Quality approach, Quality costs and risks, Concept of quality control, Total quality management; Professional Standards: Professional standards, Quality problems faced by enterprises, Quality circles in printing industry; Implementation of Quality Control Methods in Press Companies: Quality assurance system in the printing industry, Pre-printing, printing and post-printing stages of quality control processes.

**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 206 Marketing and Advertising Practices** 2+1 3,0

General Information and Basic Concepts: Definition, Scope, Types, Historical development of marketing; Marketing and Communication: Scope of marketing communication; Process of Communication and Functions of Marketing Communication; Consumer Behavior: Definition, Factors affecting consumer behavior and Effects of advertising; Advertising and Advertising Communication; Advertising Production Processes: Preliminary studies, Preparation of ad texts, Advertising and graphic design; Relationship between Advertising and Consumer Culture; Applications: Print advertising design exercises.

**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 3,0

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 212 Publishing Applications in Turkey 2+1 3,0**

Publishing: Definition, Scope and Historical development; Publication Types: Newspaper publishing, Magazine publishing, Book publishing; Legal Dimension of Publishing; Electronic Publishing: Definition, Scope and Advantages; Types of Electronic Publication: Electronic newspapers, Electronic journals, Electronic books; Comparison of Traditional Publishing and Electronic Publishing; Publishing Applications in Turkey and in the World; The Future of Publishing.

**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 217 Web Publishing 2+2 3,0**

Internet and Intranet: Definition, Properties, and History; Organization of Web Content: General settings, Web access control, Content advisor; Web Publishing: Concept of HTML, Commands, Arrangement of HTML documents, FrontPage Dreamweaver, Development of website content; Customizations of Content; Maintenance of Website; Personal Webpage: Development of content, Web domain, Methods for making a website popular, Adding the website into search engines; Digital Publishing; Preparation of Digital Education Material; Transfer and Control of Products Ready for Printing on the Internet.

**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 ImportanWorld 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 201 Electrical Energy Generation 2+1 3,0**

Electrical Power and Generators; Thermal and Geothermal Power Plants; Nuclear Power Plants; Hydroelectric Power Plants; Wind Energy for Electrical Energy Production; Electrical Energy Production from Solar Energy Systems; Application of Composite Heat and Power Production, Autoproducer; Hybrid Electric Power Generation Systems.

**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 203 Electrical Energy Transmission and Distribution 2+1 2,0**

Current, Voltage and Power in Electrical Energy Systems; Electrical Energy Transmission and Distribution Networks; Substations and Equipment; Overhead Line Conductors and Insulators on Poles and Underground Cables; Electrical

Energy Distribution and Transformer Selection; Electrical Energy Transmission and Distribution Protection Systems.

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

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 208 Energy Management and Policies 2+0 2,0**

Energy Efficiency Related Laws and Regulations; Energy Management Policy; Energy-Intensive Industrial Sectors; Economic Analysis Methods in Energy Efficiency Projects; Energy Investment Models; Energy Demand Forecasting Methods; Comparison of Energy Management Policies in Turkey and in the European Union Countries.

**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 212 Occupational Safety 2+0 2,0**

Basics of Safety; Elements Threatening Safety; Biological threats, Chemical threats, Physical threats; Concepts Related to Workplace Safety; Protective Safety Measures; Occupational Diseases; Analysis and Classification of

Accidents; Injury, Vital Hazards and First Aid; Accident Reports; Fire; Workplace Safety Legislation.

**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 Collector 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 5,5**

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 2,0**

Basics Concepts About Electric System and Foundations: Phase, neutral, mean and conservation conductors, Insulation balks, 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; Switchs 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 212 Electricity Installation Plans 3+1 5,0**

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 2,0**

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 109 Basic Electronics 3+1 5,0**

Unit Systems: Current, Voltage, Power; Circuit Types and Elements: Basic circuits, Ohm's law, Kirchhoff's laws; Some Techniques Used in Circuit Analysis: Nodal and mesh analysis, Source transformations, Superposition, Thevenin and Norton theorems; Inductance and Capacitance; RL and RC Circuits; RLC Circuits; Semi Conductors and Principles: Diodes, Rectifiers, Cutter circuits; Basic Logic Circuits: Number systems And-Or-Nand etc. logic gates, J-K Flip Flop, R-S Flip Flop, T and D Types Flip Flops, Counters, Registers, Decoder, Encoder.

**ELO 110 Digital Electronics 3+0 3,0**

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; Digital Modulations.

**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 112 Analog Electronics 3+0 3,0**

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 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.

**ELO 212 Advanced Digital Applications 3+1 4,0**

Sequential Logic: RS flip flop, D flip flop, T flip flop, JK flip flop; BCD Counters: Asynchronous counters, Synchronous counters, counters; Registers: Serial and parallel registers; Memory Units: RAM, ROM, PROM, EPROM, EEPROM; Algorithms Machines: PLA, FPLA; Converters, Types and operation of numeric/analog converters, Types and operation of analog / numeric converters.

**ELO 214 Automatic Control 3+1 4,0**

Principles of Control: Power supply in servo mechanism, Potentiometer and amplifiers, Open circuit and closed circuit controls of D.C machines, Open circuit and closed circuit controls of A.C machines; Torque; Basic Construction of Control Synchronous: Operation and characteristic of synchronous position control system, Operation principles of torque conductor and receiver, Operation principles of differential control transmitter and differential control receiver, Operational amplifiers.

**ENO 204 Data Addition and Control with Computers 3+1 5,0**

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 syncro-angular sensors, Robotic syncro-resolver sensors; Principles of Robot-Mechanic Systems; Robot Control System: Decision mechanisms, Position servo system, Concept of optimal control; Robot Applicators; Robot Programming: Flow diagram, Coordinate values.

**ENO 209 Control with Computer 3+1 4,0**

Industrial Computers: Technique properties of solid state memory, Transmitter modules, Receiver modules, VGA and TV signal converters, Flat panel / CRT screen modules; Speedy Data Measurement and Control Cards; Signal Processing and Measurement Modules; Industrial Communication; PC Based Communication Control; Distant Data Measurement and Control Modulations; Scattered Data Measurement and Control Systems.

**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.

**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 2,0**

Basic Internet Terms: Server- client logic, TCP-IP Protocols, 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 107 Drawing I 2+1 3,5**

Pattern: Definition, Types, Tools and equipment used in drawing; Academic Understanding of Patterns; Human Anatomy; Line Values, Proportions, Balance, Movement, Composition; Model Drawing and Nature Drawing; Introduction to Different Materials and Techniques.

**GTS 108 Drawing II 2+1 3,5**

Drawings of Figures and Objects and Use of Various Technical Materials; Exercises for the Use of the Language of Graphic Expression in Graphic Design.

**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 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 202 International Advertising 2+0 3,0**

What is international advertising?; essential considerations of international advertising; Effective factors of consumer behaviours in international advertising: Culture, Traditions, Time, Policies; Legal accommodations in international advertising; Analysis of applied international advertisements.

**GTS 205 Printing Techniques 3+0 3,5**

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 207 Internet Advertising 3+1 3,0**

Advertisement Types; Online Advertising Tools; What is Internet Advertising?; Internet Advertising Types: Banner, Pop-up; The Issues to Be Considered for Internet Advertisement Preparation; Internet Advertising Applications.

**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 209 Positioning Strategies in Advertising 3+1 3,0**

Marketing Communications, Integrated Marketing, Positioning; Positioning Strategy Approaches: Product Properties and Consumer Price and Quality, Utilization and Application, Product and user interactions, Product classification, Global Icons, competitors, Advertising Studies, Consumer-Oriented Positioning Strategies , Competition, Competitors definition, Identification, Positioning, Consumer Solving, Control of selected location.

**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 214 Organization and Management in Advertising Agencies 3+1 3,0**

Organization and Management Relationship; Necessary Advertising Agency Departments, Customer Relations, Creative, Strategic Planning, Accounting, Publishing, Media Planning, Task Description of the Departments, Personnel Eligibility Determination, Work Flow Process; Office Planning; Organizational Structure.

**GTS 216 Semiotics 3+1 3,0**

Sign and Semiotics; Signs in Communication Process; Meaning and Ideology; Historical Development of Semiotics: Charles Sanders Pierce and semiotics, Ferdinand de Saussure and signifier/signified concepts, Louis Hjelmslev and logical formalization, Roland Barthes and signification; Phases of Semiotical Analysis; Signification: Denotative and connotative meaning; Signifier, Signified, Sign; Relation between Advertisement and Semiotics; Analysis of Advertorial Scripts using A Semiotical Approach.

**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 2,5**

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 224 Project 0+2 3,0**

Project Description and Project Processes: Principles of project selection and planning, Review of the literature, Feasibility study, Basic information, e.g. originality of the project, Development of a project plan; Selection of a Specialization Area; Presenting a Report of All Project Stages.

**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 229 Illustrator Graphic Applications I 3+1 3,0**

What Is Vectorial Graphic: Introduction to Illustrator, Interface; Using 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 230 Illustrator Graphic Applications II 3+1 3,0**

Understanding Objects: Layers; Transform Operations: Align tool, Rotate tool, Scale tool, Reflect tool; Tools for Composing Objects: Pen tool; Basic Drawing Tools: Line, Arc, Spiral, Rectangular/Polar Grid tool; Text Composing and Arrangement: Character panels, Paragraph panels; Composing Object Tools: Stroke panel, Appearance panel, Clipping mask; Working with Colors: Swatches panel, Color panel, Gradient panel, Transparency panel; Options for Saving Documents: Saving as an Illustrator document; Term Project.

**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 175 English I 3+0 3,0**

Using the Verb 'to be'; Saying Name, Phone Number and e-mail Address; Describing Things and Places in a Classroom; Asking for Help While Studying; Using the Verb 'to be' in Questions, Describing Favourite Celebrities, Friends and Family; Using Simple Present Statements, Yes-No Questions and Short Answers; Talking about Daily and Weekly Routines; Saying How Often You Do Things; Talking about Free-time Activities and TV shows; Using 'there is, there are'; Using 'some, no, a lot of, and a couple of'; Describing Neighbourhood and Local Events; Asking for and Telling the Time.

**İNG 176 English II 3+0 3,0**

Using the Present Continuous; Talking About the Weather and Sports; Using 'like to', 'want to', 'need to' and 'have to' with Other Verbs; Using 'this', 'that', 'these', 'those'; Asking Questions with 'How much'; Talking about Clothes, Colours, Shopping and Prices; Using can ; Talking about Countries, Languages, and Nationalities; Talking about International Foods; Using the Simple Past of Regular and Irregular Verbs; Using the Past of be; Asking Simple Past Information Questions; Describing Past Experiences; Using Many and Much; Using Some and Any; Using Would Like; Describing Favourite Foods and Eating Habits; Using 'or something' and 'or anything'.

**İNS 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.

**İNS 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.

**İNŞ 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 201 Mould Design 2+2 3,0**

The Importance, Properties and Choice of Mould Process in Machine Construction; The Study of Basic Mould Elements: Mould sets, Bushes, Guide pillars, Female mould and emeries, Skinning plates, Pilots; Fundamental Operations: Filing, Marking, Drilling, Pivoting and guiding, Centring, Removable joinings; Worktables Used in Mould Manufacturing; Manufacturing of Simple Cutting Moulds; Construction Basics in Blow and Injection Moulds; Manufacturing and Mounting of Blow and Injection Mould.

**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 104 Engineering Science I 3+1 4,0**

Circular Movement: Angular velocity, Angular acceleration, Torque, Moment of a couple; Potential/Kinetic Energy and Momentum; Principle of Conservation of Momentum: Impulse, Involving torque, Constant torque, Potential energies, Kinetic energies; Simple Machines: Flow, power and loss in fluid; Temperature and Temperature Measurement Equipments: Internal energies, Enthalpy, Specific enthalpy, Water depends, Freezing point, Steam; Foundation of Gas Laws: Constant volume, Constant temperature, Constant pressure, Cycle of Carnot.

**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 116 Mechanical Drawing II 1+1 3,0**

Tolerances and Surface Roughness: Surface finish symbols, Lay of surface, Design a pair of mating gears for specified gear centres; Production Drawings: Basic forms of standards screw thread, Single start square screw, Multistart square screw, Acme square screw, Buttress threads screw, Screw threads, Bearings; Gears; Installation Drawing; Drawing Studies: Engineering drawings to Turkish standard, Working drawings, Turkish standard including tolerancing.

**MAK 117 Manufacturing Process I 3+1 4,0**

General Information About Manufacturing in Mechanical Technology; Knowledge and Skills Process of Variable Equipment of Measurement and Control; Giving Information About the Equipment Related to the Handwork; Basic Drilling on Drilling Machine; Basic Turning on Universal Lathe; Basic Milling on Universal Milling Machine; Grinding Cutting Tools on Grinding Machine, Knowledge and Skills; Undetectable Elements; Basic Welding with Electrical Welding Machine.

**MAK 118 Manufacturing Process II 3+1 4,0**

Basic Knowledge and Skills Process in Universal Turning Lathe; Basic Knowledge and Skills Process in Universal Milling Machine; Knowledge and Skills Process of Variable Equipment of Measurement and Control; Grinding Tool to Free Hand in Carborundum Disc Machines; Basic Knowledge and Skills Process of Abrasion Machine: Stones, Tarpered work internal and external using; Basic Knowledge and Skills Process of Welder's Bench.

**MAK 119 Mechanical Technology I 1+1 2,5**

Manufacturing Process; Cutting Tools for Scale Removing; Principles of Scale Removing in Turning Lathe; Principles of Scale Removing in Drill Bench: Describes the functions and uses of the centre lathe, Describes the machining of holes to a given tolerance; Undetectable Elements

Principles of Scale Removing in Milling Machine: Describes the three main types of milling machine, Typical milling machine operations; Principles of Scale Removing in Guide and Screwplate.

**MAK 120 Mechanical Technology II 1+1 2,5**

Principles of Scale Removing in Turning Lathe; Principles of Scale Removing in Drill Bench: Milling cutters, Up cut and down cut milling, Mill flats at different angles, Drill holes at different angles; Principles of Scale Removing in Mule and Shape Machine; Principles of Scale Removing in Abrasion Machine: Following on the speed, Feed of the work; Grinding Wheel: Wheel dressing; Principles of Scale Removing in Brooch.

**MAK 128 Materials Technology I 3+0 3,0**

Classification of The Materials: Crystalline state, Simple cubic, Body centred cubic, Face centred cubic; Atomic Structure and Relative Force, A compound, An alloy; Latent Heat of Fusion: Solid solution, Equilibrium, Phase, Liquids, Solids, Eutectic composition, Eutectic temperature; Equilibrium Diagram: The iron carbon phase diagram; Iron Alloys; Steel; Non Iron Metals: Aluminium, Copper, Brass, Magnesium, Steel standards.

**MAK 221 Computer Aided Design I 3+1 5,0**

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 Mirrormirrtxt, 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 222 Computer Aided Design II 1+1 3,0**

Dimensions: Measuring line, Measuring arrow, Dimension line, Extension lines, Arrows, Text location, Text format, Style of drawing, Perspective drawing; Screenwriter; Three Dimensional Drawing: Characteristics, Colours; Linear Measuring: Horizontal measuring, Vertical measuring, Baseline measuring, Rotate measuring, Continue measuring, Angular measuring, Radial measuring, Diameter measuring, Radius measuring, Ordinate measuring; Three Dimensional Drawing.

**MAK 225 Engineering Science II 3+1 4,0**

Fluids in Motion: Flow power, Regional lose, Pressure change for parallel circuits, Pressure change for output circuits; Measure and Control: Measurement of speed, Measurement of dynamic, Measurement of pressure, Measurement of temperature, Manuel control, Automatic control; Heat Energy: Change of internal energy, Enthalpy, Specific enthalpy; Gases: Constant volume, Constant pressure, Constant temperature, Adiabatic, Polytrophic.

**MAK 227 Materials Technology II 3+1 4,0**

Destructive Tests: Tensile testing, Impact testing, Brinell diamond testing, Vickers diamond testing, Rockwell diamond testing; Experiment; Forming Process, Metallography; Polymers; Plastic, Thermosetting plastic, Thermoplastic, Amorphous and crystalline polymer structures, Plasticers, Fillers, Glass, Flexible PVC, Rigid PVC, Polyethylene, Nylon, Internal Plasticization, External plasticization, composites; Corrosion.

**MAK 229 Mechanical Science and Elements 3+1 5,0**

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 236 Computer Aided Manufacturing 3+1 4,0**

General Structure and Coding Systems of Machine Tools; Preliminary Studies Required to Program The Milling Machines; General Preparations of CNC Turning Machines Before Programming, and Programming in Common Codes; CYCLE and Subroutine Turning Functions of Turning Machines and Programming and Usage of The BOXFORD 280 TLC CNC Turning Machines; Programming of The EMCO Compact 5 Milling Machine, Coding Systems and General Structure of CNC Milling Machines; Preliminary Studies Required to Program the CNC Milling Machines.

**MAK 238 System Analysis and Design 2+2 3,0**

Feasibility Working: Project, Selection of material, Bearing, Piston, Wedge, Screw, Working condition, Aided condition, Use for energy, Actuating components, Technology of control, Automatic control, Semi automatic control, Manual control, Maintain, Cost price, Scheme of organization, In line operation, Cards of operation, System of manufactured, Scheme of flow, Time of production, Instruction book, Maintain Working; Periodic Maintain: Daily, Monthly, Cards of maintain.

**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 252 Energy Management 1+1 2,0**

General Energy Situation of Turkey; Structure of Turkish Industry; Consumption of Energy; Energy Management; Measurement Instruments and Measurement Techniques; Rising Productivity of Energy in Cauldron; Electricity Systems: Economy of Energy in Lighting; Methods of Economic Analysis; Environment; Alternative Energy Sources; Compound Heat Power Production Systems; Environment Laws; Heat Production Systems; Power Production Systems; Source of Energy: Coal, Petroleum, Natural gas, Hydraulic energy, Electric energy.

**MAT 121 Mathematics I 3+1 4,0**

Numbers: Aritmetical Operations, Power and root calculation, Binary, Octal and Hexadecimal systems; Algebra: Algebraic operations, Formulas, Transformation of formulas, Factorization, Simplificaion of rational expressions, Equation and Unequalities: Equation systems and their solution; Functions: Derivation of values, Graphic plotting; Logarithm: Exponential functions, Operation with powers; Trigonometry: Transformation of angles, Trigonometric ratios, Function skipping; Geometry: Area and volume calculations, Pythagoras and Ochlides Equations.

**MAT 122 Mathematics II 3+1 4,0**

Linear Equation Systems and Matrix: Solution of linear equation systems, Calculation of Determinant, Reverse matrix finding; Limits: Continuity, Diagnosis of limit, Rules of limit, Continuity of functions; Derivative: Definition of derivative; Integration and Applications: Integration, Gravity center calculation with area and volume; Differential Equations: Basic differential equations, Boundary conditions, Solutions of differential equations; Statistic: Fundamental terms, Frequency dissipation, Graphic representation of data.

**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.

**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 108 Mechanics 2+0 2,0**

Vector Algebra and Vector Systems; Force Systems; Centre of Mass. Statics of Particles; Equilibrium; Moment; Friction and Laws of Friction; Velocity and Acceleration; Linear Motion; Curvilinear Motion; Newton's Second Law; Dynamics of Particles; Work and Energy; Hydrostatics (fluid statics); Hydraulics.

**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.

**MİK 201 Microprocessors/Microcontrollers 1+1 2,0**

General Structure of Microcomputer System: Central processing unit, RAM and ROM memory characteristic, ROM kinds, Comparison of RAM and ROM memory, Series transfer, Parallel transfer, Address bus, Data bus, Control bus; Comparison of Microprocessors and Microcontroller: Installation of Microprocessors and Microcontroller System; Introduction to Programming: Assembly language structure, Instructions, Flow diagrams transfer to machine language (Hex Code); Programming: Data transfer, Loop consumption, Sub programme concepts, Addition and subtraction, Shift process.

**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.

**MRK 201 Advanced Computer Applications 2+2 3,0**

Standard Data Base between CAD Software's; Introduction to Solid Model Design with SOLIDWORKS: Working planes, Parametric design, Plane modeling, Images of solid model disassemble; Animation of Solid Model Mounting with Animation Software; Solid Model Calculation, Handling Construction Drawings; Solid Model Arrangement Command; Semester Project.

**MRK 203 Construction I 2+2 4,0**

Design and Construction of Organization; Sketch Drawings; Intersection and Side Views: Various examples of intersection and side views; Axle; Pulleys; Bevel Gear: Horizontal bevel gear; Bevel gears with bigger or lower than 90° axis angles; Worm Gear; Rock and Pinion; Steel Construction; Drawing Techniques of Standard Moulding Equipment.

**MRK 204 Construction II 2+2 3,0**

Construction Drawings of Casting Equipment: Model drawing, Moulding drawing; Clamping Stripper, Striper Plate; Drilling, Stamping, Curling, Rolling, Hauling, Plastering, Montage and Detail Drawing of Pressure Mould; Blow and Injection Mould Drawing.

**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 216 Measurements Techniques 2+0 2,0**

Mechanical, Optic, Digital, Electric, Electronic, Pneumatic Measuring Equipments, Principles and Equipments of Coordinate Measure; Measuring Rates; Measuring Sensitivity; Measuring Errors and Calculations: Control hardware and equipment, Specific control and measuring equipment; Surface Strength; Surface Roughness; Template; Presentation of New Control and Measuring Hardware.

**MRK 218 Basic Principles of the Machine Construction 3+0 3,0**

Construction Properties: Lightness, Simplicity, Safety, Standardization, Precaution of tensile stress; New Design's Manufacturing, Transportation, Montage, Conveniences; Construction Design According to Strain Types; Precaution to Facilitate Surface Processes; Rules of Drawing; Heat Treated Piece Design; Hint Points in the Design of Casting Piece; Development of Usual Systems.



**MTR 101 Circuit Analysis 3+0 3,5**

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 103 Introduction to Mechatronics 3+0 3,0**

Electrical Security; Basic Electrical Measurements, Operation of Oscilloscope and Signal Generators; Electrostatic Sensitive Components Subjects; Mechatronic Structural Components; Mechanical Systems: Design of mechanical system; Electronic Systems; Automation Systems; Informatics Systems; Process Systems; Mechatronic Systems and Design.

**MTR 201 Programmable Logic Controllers (PLC) 1+1 2,0**

Introduction to Programmable Controller: Central process unit (CPU), Input modules, Output modules, Analogue Input/Output Modules and Functions; Programing with Ladder Logic Diagram; Analogue Modules Properties and PLC Links; Software with Command Chart; Trouble Analysis at Programmable Controllers; Programmable Controllers Interface.

**MTR 202 Process Instrumentation and Control 1+1 2,0**

Introduction to Process Measurement and Control; Fundamental Process Measurements (level, pressure, temperature, flow rate, etc.); Feedback Control; Dynamic Components in Control Cycle; Real Process Analysis; Five General Control Cycles; Flow Control; Pressure Adjustment; Liquid Level Control; Quality Control; Selection of Feedback Controller; Multiple Cycle Systems; Feed-forward Control; Applications; Energy Transfer and Conversion; Heat Transfer; Boiler control; Pumps and Compressors.

**MTR 203 Mechatronic System Components 2+0 2,0**

Mechatronic Structural Components; Mechanical Systems; Design of mechanical system; Electronic Systems; Automation Systems; Informatics systems; Process Systems; Mechatronic Systems and Design.

**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 205 Process Control I 1+1 2,0**

Automatic Control Terms: Set point, Error, Process variable and definitions of measurement, Overshoot, Rise time, Settling time definition; Automatic Control Symbols; Automatic Control Methods; Definition of Open Cycle and Closed Cycle Control Systems; Control Structures; Stabilities at Control Systems; Final Driver Elements.

**MTR 206 Process Control II 1+1 2,0**

Automatic Control Symbols; Automatic Control Methods; Definition of Open Cycle and Closed Cycle Control Systems; Control Structures; Stabilities at Control Systems; Final Driver Elements.

**MTR 207 Sensors and Transducers 1+1 2,0**

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 2,0**

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 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.

**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.

**MUH 233 Accounting Techniques and Commercial Software I 1+1 2,0**

Basic Concepts and Accounting Systems: Basic concepts, Opening account, Closing account, Registration, Reports and documents in accounting; Balance Sheet and Income Table: Balance sheet arrangement principles, Properties and processes of accounts in balance sheet, Income and expenditure calculations, Cost calculations and process; Use of Packet Program: Keeping and processing accounting registrations in computer.

**MUH 234 Accounting Techniques and Commercial Software II 1+1 2,0**

Application of Business Account Approach with Packet Program: Usage areas of business account approach, Registering and keeping outputs in computer according to business account approach; Personnel Following and Insurance Processes: Transferring personal affairs to computer, Payroll arrangement in computer, Insurance documents arrangement in computer; Card Processes: Arrangement of checks, notes and bank cards, Arrangement of stock cards, Arrangement of current account cards, Product cost calculation.

**RTV 102 Video Technique II 2+0 3,0**

Physic of Color: Spectrum of electromagnetic wave, Visible electromagnetic waves, Evaluation of colors according to

dimensions of a wave, Saturation of colors, Tone of a color, Type of a color, Brightness, Luminance, Chrominance, Component signal, Temperature of a color; Electronic Cameras: Working principle of cameras, Features of tubed cameras, Cameras with CCD, Types of CCD; Basic Principles of Video Recording: Video Recording: Electronic assembly and editing, Numerical recording and analog technique; Formats of Numerical Recording; Technique of Numerical Image; Television Studio Design.

**RTV 110 New Communication Technologies 2+0 2,5**

Communication Satellites: Technical structure of the satellites, Frequencies used in satellite broadcasting, Television systems in transition period, Satellite transmitters, Satellite receivers; Transition Period Television Systems: Edtv, Mac, Pal Plus; New Television Technologies; High Diagnosed Television (HDTV), HDTV broadcast systems; Use of Hdtv in Electronic Movie; Numerical Television Technique (Dvb): Standards of Dvb; Data Broadcast; Techniques of Data Broadcast; Cable-Television; Teleconference; Virtual Studio.

**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 118 Television Broadcasting Systems 3+0 3,0**

Terrestrial Transmitters; Digital Television Transmitters and Characteristics; Radio Link Systems: Satellite broadcasting systems, Video coding in satellite; Broadcasting: Cable broadcasting systems, Cable TV network centers; Cable TV System Units: Coaxial cable, Binary copper cable, Fiber optic; 3D TV broadcasting. The Operation of Transmitter and Receiver Systems; Satellites: Types of communication satellites, Functions of satellites.

**RTV 119 Audio Technics I 3+0 4,0**

Definition of Sound: Basic physical and perceptual characteristics of sound; Audio Signal: Structure of analog and digital audio signals, Mono and multi-channel audio signals; Audio Signal Transmission and Connection Types: Balanced and unbalanced connections; Audio Cables and Connectors: Audio monitors; Microphones: Structural and directional characteristics of microphones, Microphone use techniques, Microphone accessories; Audio Recording Techniques: Audio recording devices and recording techniques; Audio Mixers: Basic structure and types of audio mixers.

**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 123 Video Technics I 1+1 2,0**

Film Image: Technical specifications of film cameras, Basic specifications of electromagnetic waves; Modulation Techniques: Electronic Image Generation, Horizontal and vertical synchronization; Image Scanning Techniques: Electronic color generation, Color temperature; Technical Specifications of CCDs' and CMOSs': Technical specifications of electronic Cameras, Color difference signal productions.

**RTV 125 Radio Broadcasting Systems 2+2 4,0**

Definition and Historical Development of Radio; Propagation of Sound in Radio; Characteristics of Radio; Common Characteristics of Radio and Television; Functions of Radio; Radio Studio: Acoustic, Microphones and their characteristics; Sound Studios and Their Characteristics: Sound studio control room, Mixer in radio broadcasting, Band broadcasting, Live broadcasting; Program Types in Radio.

**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 2,5

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 237 Camera Technics** 1+1 2,0

History of Camera; Electronic Cameras: Studio camera, EFP camera, ENG Camera; F Number in Electronic Cameras; Depth of Field and Variables Affecting Depth of Field; Lenses and Types of Lenses: Normal focal length lenses and their characteristics, Short focal length lenses and their characteristics, Long focal length lenses and their characteristics, Zoom lenses and their characteristics; Facilities of Electronic Cameras; Studio Control Room and Mobile Recording Vehicles, Camera Mountings; Power Supplies in Electronic Camera.

**RTV 238 IP Based Broadcasting** 2+1 3,0

Development of IP Based Broadcasting; Digital TV Broadcasting; Broadcasting Standards and Interaction; Internet Based TV Broadcasting; IPTV: Characteristics of IPTV platforms, Infrastructure and components of IPTV, IPTV applications: services, subscriber management; Content Presentation Methods: Unicast, Multicast; WEBTV: WEB TV broadcasting and its characteristics;

Mobile TV Broadcasting; Internet Based Radio Broadcasting: Development of digital radio, Characteristics of digital radio, Internet radio and mobile radio applications.

**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 240 Lighting Technics** 1+1 2,0

Definition of Lighting and Purpose of Lighting; Intensity of Light and Color Temperature; Lighting Sources: Hard light sources, Soft light sources; Lighting as a Dramatic Factor: Lighting for Creating an Atmosphere; Psychological Aspects of Lighting; Illumination Aesthetics; Rembrandt lighting, Cameo lighting, Silhouette lighting; Color and Color Control in Lighting; Light Filters and Their Usage; Internal and External Light in Camera.

**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 244 Interactive Television** 2+1 3,0

Digital Television Broadcasting: Communication standards, Transmission areas, Receiving the broadcasting; Digital TV Broadcasting and Interaction: Definition of interaction, Interactive TV services, Interaction levels; Half Interaction: Channels, EPG, VOD, NVOD; Full Interaction: Interactive TV Program and User Interaction; Interface design for ITV: Criteria for design, Content development.

**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 258 Vision Mixer** 2+1 3,0

Basics of Picture Selection; Image Transition; Basic Image Transitions: Cutting, Chaining, Imposing, Fadeout; Special Visual Effects; Standard Electronic Effects: Wipe, Border, Hard, Soft, Wiping; Electronic Coding; Luminance coding, Chrome coding, External coding, Internal coding with colour discrimination; Special Numerical Effects.

**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.

**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.

**ŞPL 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.

**ŞPL 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, Vectorial 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 pressure, Relative Pressure; Electric and Magnetism: Simple circuits with serial and parallel connected resistants, Current, voltage difference and resistant problems.

**TER 201 Thermodynamics** 2+0 2,0

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.

**THU 205 Community Services** 0+2 4,0

The course aims to integrate the students with the community and enable them to utilize the knowledge they have accumulated in their courses. The students participate in different community projects such as helping young students at 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. The students also try to work in projects which raise environmental awareness.

**TİP 111 Typography I** 2+1 2,5

Definition and Scope of Typography; Anatomy of the Latin Alphabet Letters; Basic Rules of Writing; Presentation of Certain Typefaces; Typographical Regulatory Studies; Creating Meaning Through Connotation: Meaning of the

word; Design Elements in Writing: Heading, Sub-heading, Text, etc., Analysis of Elements.

**TİP 112 Typography II** 2+0 2,0

Historical Development of Typography; Structure and Anatomy of Letters; Font Family, Font Size, Space, Editing, Optical Alignment, Emphasis, Readability and Abstraction, Special Effects; Importance of Typography and Its Relationship with Other Graphic Elements.

**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 108 Highways** 2+0 2,0

The terms highway and road traffic; Driver and pedestrian characters; Characteristics of vehicle; Transportation and traffic concept; Urban transportation; Traffic arrangement and beginning of traffic; Changes in traffic trend; Transferring traffic and saturation point; Basic elements of traffic and relations between them; Capacity concept and speed-flow relationship for capacity; Service level; Concrete pavement design; Concrete pavement construction; Defects and restoration of concrete pavements.

**TRA 218 Transportation** 2+1 3,0

Modes of Transportations: Highways, Railways: The structure of the transport system: Routes; Geometric design; Study of surveying works; The experiments of bituminous asphalts, liquid asphalt, aggregates and bitumen; Surface coatings.

**TRS 102 Technical Drawing** 2+2 4,5

Engineering Drawing and Tools: Drawing tools, introduction, use and care; Engineering Drawing Papers: Papers used at drawing, Measurements of paper standards; Scales: Applications; Standard Line: Areas of application; Line studies; Standard 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.

**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 106 Occupational Health and Safety 2+0 2,0**

Development and Importance of Occupational Health and Safety; Causes of Work Accidents and Occupational Illnesses; Measures against Work Accidents and Employee Health Problems; Occupational Health and Safety in

Turkey; Legal Responsibilities of Employers; Organization and Practice of Safety Control in Turkey.

**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.