VOCATIONAL SCHOOL OF TRANSPORTATION

Director : Prof. Dr. Ö. Mete KOÇKAR
Deputy Director : Asst. Prof. Dr. Meserret NALÇAKAN
Deputy Director : Lecturer Selçuk ÖZİL
Secretary of High School : Ercan ARMUTLU

STAFF

Assistant professors: Zeynep GÜLTEKİN, Meserret NALÇAKAN, Yağız UZUNONAT

Lecturers: Gökşin AKDENİZ, Erkin KARADAYI, Irnya KURYANOVA, Nadir NALÇAKAN, Selçuk ÖZİL, Mine SERTSÖZ

Research Assistants: Salih Serkan ARTAGAN, Fatih BOZKURT, Z. Hüseyin ERGAN, Selim GÜRGEN, Hasan Hüseyi IŞIK, İbrahim KOCABAŞ, Ahmet ONAY, Seçkin ULUSKAN, S. Umut UMU, Haluk YILMAZ

Others: Ezel GÜNDOĞDU

DEPARTMENT OF MANAGEMENT AND ORGANIZATION

PROGRAM IN LOGISTICS

Logistic Department offers a period of two years education after high school. Students are selected among graduates of related vocational high schools and also by National University Entrance Examination (Students Placement Exam, OSS). About 30 students are admitted each year. Student have to take and pass all compulsory courses and reach a minimum GPA (Grade Point Average) of 2.00 before graduation. Furthermore, students are required to participate in a 30 days of internship in appropriate organizations.

PROGRAM

I. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
HUK 117	Fundamentals of Law	2+0	2,0
İKT 120	Introduction to Economy	3+0	4,0
İNG 103 (Eng)	English I	4+0	3,0
İŞL 155	Introduction to Business	2+0	3,0
LOJ 101	Principles of Logistic I	2+2	4,0
MAT 220	Commercial Mathematics	1+1	3,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	0+0	2,0
TÜR 151	Turkish Language I	2+0	2,0
	Elective Courses (1)	-	2,0
			30,0

II. SEMESTER

İNG 104 (Eng)	English II	4+0	3,0
İST 317	Statistics	2+0	2,5
LOJ 102	Principles of Logistic II	2+2	4,0
LOJ 104	Use of Computer in Logistic	3+0	4,5
MUH 113	Introduction to Accounting	2+2	4,0
PZL 112	Marketing Principles	2+1	4,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	0+0	2,0
TÜR 152	Turkish Language II	2+0	2,0
	Departmental Elective Courses (1)	-	4,0
			30,0

III. SEMESTER

LOJ 201	Technology Use in Logistic	2+0	2,0
LOJ 205	Management of Storage and Ware House	2+1	3,5
LOJ 207	Customs Transactions and Practices	2+0	2,0
PZL 239	Physical Distribution Management	3+0	4,5
PZL 241	Industrial Marketing	2+0	2,0
	Departmental Elective Courses (0)	-	16,0
			30,0

IV. SEMESTER

HUK 128	Law of Transportation	2+1	4,0
İKT 228	International Economy	2+0	2,0
İST 226	Operations Research	2+0	3,0
İŞL 212	Inventory Management	2+0	3,5
LOJ 206	Practices of Logistic	0+6	6,0
SHU 426	Transportation Policies	2+0	3,5
	Departmental Elective Courses (3)	-	8,0
			30,0

DEPARTMENTAL ELECTIVE COURSES

BOP 108	Research Techniques and Seminar	2+1	2,0
ÇEV 204	Environmental Protection	2+0	3,0
EMY 225	Urbanization and Environment Problems	2+0	2,0
ETK 203	Professional Ethics	2+0	3,0
HUK 223	Labor and Social Security Law	2+0	3,0
İŞL 218	Risk and Insurance	2+0	3,0
İŞL 421	Entrepreneurship	2+0	3,0
LOJ 106	Information Systems in Logistics	2+0	4,0
LOJ 208	Hazardous Materials	2+0	3,0
LOJ 211	Vocational English	2+0	3,0
LOJ 213	Project Management	2+0	3,0
LOJ 214	Logistics Costs Analysis	2+0	3,0
PZL 455	Supply Chain Management	2+0	3,0
SEK 107	Commercial Documents	2+0	3,0
SHU 428	Logistics Management	2+0	3,0
TİC 106	International Trade Theory	3+0	4,0
TİC 214	E-Trade	1+1	2,0
TKY 204	Total Quality Management	2+0	2,0

ELECTIVE COURSES

BEÖ 155	Physical Education	2+0	2,0
KÜL 199	Cultural Activities	0+2	2,0
MÜZ 151	Short History of Music	2+0	3,0
MÜZ 155	Turkish Folk Music	2+0	2,0
MÜZ 157	Traditional Turkish Art Music	2+0	2,0
SAN 155	Hall Dances	0+2	2,0
SNT 155	History of Art	2+0	2,0
SOS 155	Folkdance	2+0	2,0
THU 201	Community Services	0+2	2,0
TİY 308	Republic Era Turkish Theatre	2+0	3,0

DEPARTMENT OF MOTOR VEHICLES AND TRANSPORTATION TECHNOLOGY

AIRCRAFT TECHNOLOGY PROGRAM

PROGRAM

I. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
İLT 105	General and Technical Communication	2+0	2,0
İNG 103	English I	4+0	3,0
MAT 121	Mathematics I	3+1	4,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	0+0	2,0
TEK 107	Scientific Principles of Technology	3+1	4,0
TRS 123	Technical Drawing	2+2	4,0
TÜR 151	Turkish Language I	2+0	2,0
UÇT 101	Airplane Knowledge I	2+0	2,0
	Elective Courses (1)	-	2,0
			30,0

II. SEMESTER

ELO 108	Basic Electricity and Electronics	2+2	5,0
İNG 104	English II	4+0	3,0
MAT 122	Mathematics II	3+1	4,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	0+0	2,0
TÜR 152	Turkish Language II	2+0	2,0
UÇT 102	Airplane Knowledge II	2+1	4,0
UÇT 104	Aircraft Materials	2+1	4,0
UÇT 106	Aircraft Hardware	3+2	6,0
			30,0

III. SEMESTER

UÇT 201	Aircraft Maintenance, Repair and Manufacturing I	3+3	7,0
UÇT 203	Aircraft Structures	2+3	6,0
UÇT 205	Aviation Legislation and Regulations	2+0	3,0
UÇT 207	Human Factors	2+0	3,0
UÇT 209	Aircraft Engines I	2+1	4,0
UÇT 211	Aircraft Systems I	2+3	5,0
	Elective Courses (1)	-	2,0
			30,0

IV. SEMESTER

HYO 306	Computer Aided Design	3+0	4,5
UÇT 202	Aircraft Maintenance, Repair and Manufacturing II	3+4	8,5
UÇT 204	Aircraft Propellers	2+1	4,0
UÇT 210	Aircraft Engines II	2+2	5,0
UÇT 212	Aircraft Systems II	3+3	8,0
			30,0

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 201	Community Services	0+2	2,0

PROGRAM IN RAIL TRANSPORT MECHANIC TRAINING

Transportation both in local and countrywide scale is important and got complex relationships with various factors. The recent changes in daily life generated a demand for time, comfort, safety and economy. The role of railway transportation in industrial and economic growth is well understood. The new concepts in signalling and traffic administration made it easier to manage complex networks of railways. Railway has a greater role in transportation. The need of skilled labour in train driving is a growing demand. The construction of subways also generated a demand in skilled technicians. The purpose of the program is graduate the train drivers highly skilled and equipped with technical information and appliances in the industry. TCDD and Anadolu University signed a protocol, which TCDD equipment is supplied and professionals are holding lectures.

PROGRAM

I. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
İNG 103	English I	4+0	3,0
MAT 169	Mathematics I	3+0	3,0
RAY 101	Introduction to Railway Transportation	3+0	5,0
RAY 103	Work Safety	2+0	3,5
RAY 115	Scientific Principles of Technology I	2+0	2,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	0+0	2,0
TRS 102	Technical Drawing	2+2	4,5
TÜR 151	Turkish Language I	2+0	2,0
			30,0

II. SEMESTER

ELE 102	Basics of Electricity	2+2	3,0
İNG 104	English II	4+0	3,0
MAT 170	Mathematics II	3+0	3,0
MEK 104	Statics Strength of Materials	3+0	4,5
RAY 104	Introduction to Machines	2+2	4,5
RAY 116	Scientific Principles of Technology II	2+0	2,0
RAY 148	Railway System Traffic I	3+0	4,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	0+0	2,0
TÜR 152	Turkish Language II	2+0	2,0
	Elective Courses (1)	-	2,0
			30,0

III. SEMESTER

MLZ 104	Handling	2+2	3,0
RAY 201	Urban Railway Transportation Systems I	3+0	4,0
RAY 203	Basics of Engine	2+2	4,0
RAY 207	Electric Engines	2+2	4,0
RAY 249	Railway System Traffic II	3+0	4,0
RAY 251	Train Mechanics I	3+0	3,0
RAY 253	Towing Vehicles	2+2	4,0
	Departmental Elective Courses (1)	-	4,0
			30,0

IV. SEMESTER

RAY 202	Urban Railway Transportation Systems II	3+0	4,0
RAY 234	(Eng) Technical English	3+0	3,0
RAY 245	Telecommunication Technique	2+0	2,0
RAY 246	Train Driving Signal Technique	2+0	2,0
RAY 248	Train Drive Techniques	2+2	3,0
RAY 252	Train Mechanics II	3+0	3,0
RAY 256	Railway Cars	2+0	3,0
RAY 258	Railway Networks	2+0	2,0
	Departmental Elective Courses (1)	-	4,0
	Elective Courses (1)	-	4,0
			30,0

DEPARTMENTAL ELECTIVE COURSES

İŞL 220	Labor Legislation	2+2	4,0
RAY 206	Trains and Roundhouses	2+2	4,0
RAY 228	Introduction to Human Resources	2+2	4,0
RAY 229	Introduction to Electric-Electronics	2+2	4,0
RAY 231	Introduction to Railway System Administration	2+2	4,0
RAY 237	Historical Development of Railways	2+2	4,0
RAY 241	Locomotive Failure and Maintenance Techniques	3+0	2,0
RAY 243	Electrical Management Plants	3+0	2,0
RAY 247	Train Air Conditioning	2+2	4,0
RAY 254	European Union Transportation Legislation	2+2	4,0
RAY 261	Railway System Vehicle Mechatronics I	3+1	4,0
RAY 262	Railway System Vehicle Mechatronics II	3+1	4,0
RAY 264	Cultural Values in Railway Transportation	2+2	4,0
RAY 266	New Approaches in Railroad Traffic Management	2+2	4,0
RAY 268	Scientific Principles in Railway Engineering	2+2	4,0
TOP 102	Surveying	2+2	4,5

ELECTIVE COURSES

BEÖ 155	Physical Education	2+0	2,0
KÜL 199	Cultural Activities	0+2	2,0
THU 205	Community Services	0+2	4,0

PROGRAM IN RAILROAD CONSTRUCTION

Transportation both in local and countrywide scale is important and got complex relationships with various factors. The recent changes in daily life generated a demand for time, comfort, safety and economy. The role of railway transportation in industrial and economic growth is well understood. The new concepts in signalling and traffic administration made it easier to manage complex networks of railways. Railway has a greater role in transportation. The need of skilled labour in construction and maintenance is a growing demand. The construction of subways also generated a demand in skilled technicians. The purpose of the program is graduate the technicians highly skilled and equipped with technical information and appliances in the industry. TCDD and Anadolu University signed a protocol, which TCDD equipment is supplied and professionals are holding lectures.

PROGRAM

I. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
İNG 103	English I	4+0	3,0
MAT 169	Mathematics I	3+0	3,0
RAY 101	Introduction to Railway Transportation	3+0	5,0
RAY 103	Work Safety	2+0	3,5
RAY 115	Scientific Principles of Technology I	2+0	2,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	0+0	2,0
TRS 102	Technical Drawing	2+2	4,5
TÜR 151	Turkish Language I	2+0	2,0
			30,0

II. SEMESTER

İNG 104	English II	4+0	3,0
MAT 170	Mathematics II	3+0	3,0
MEK 104	Statics Strength of Materials	3+0	4,5
RAY 102	Railway System Traffic	3+0	4,0
RAY 116	Scientific Principles of Technology II	2+0	2,0
RAY 118	Construction Materials	3+0	3,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	0+0	2,0
TOP 102	Surveying	2+2	4,5
TÜR 152	Turkish Language II	2+0	2,0
	Elective Courses (1)	-	2,0
			30,0

III. SEMESTER

MEK 211	Soil Mechanics	3+0	4,0
RAY 201	Urban Railway Transportation Systems I	3+0	4,0
RAY 217	Infrastructure and Maintenance	2+2	4,0
RAY 221	Road Machines	2+0	2,0
TRA 203	Bridges and Tunnels	3+0	4,0

IV. SEMESTER

RAY 202	Urban Railway Transportation Systems II	3+0	4,0
RAY 220	Superstructure Technique and Maintenance	3+2	4,0
RAY 222	Rail Welding	2+2	3,0

	Departmental Elective Courses (3)	-	12,0
			30,0

RAY 224	Railroad Project and Railroad Technique	2+2	4,0
RAY 234 (Eng)	Technical English	3+0	3,0
	Departmental Elective Courses (2)	-	8,0
	Elective Courses (1)	-	4,0
			30,0

DEPARTMENTAL ELECTIVE COURSES

İŞL 220	Labor Legislation	2+2	4,0
RAY 228	Introduction to Human Resources	2+2	4,0
RAY 229	Introduction to Electric-Electronics	2+2	4,0
RAY 231	Introduction to Railway System Administration	2+2	4,0
RAY 233	Introduction to Machinery	2+2	4,0
RAY 237	Historical Development of Railways	2+2	4,0
RAY 261	Railway System Vehicle Mechatronics I	3+1	4,0
RAY 262	Railway System Vehicle Mechatronics II	3+1	4,0
RAY 264	Cultural Values in Railway Transportation	2+2	4,0
RAY 266	New Approaches in Railroad Traffic Management	2+2	4,0
RAY 268	Scientific Principles in Railway Engineering	2+2	4,0
TRA 223	Geotechnics for Roads	2+2	4,0

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

PROGRAM IN RAILROAD ELECTRIC AND ELECTRONICS TECHNOLOGY

Transportation both in local and countrywide scale is important and got complex relationships with various factors. The recent changes in daily life generated a demand for time, comfort, safety and economy. The role of railway transportation in industrial and economic growth is well understood. The new concepts in signalling and traffic administration made it easier to manage complex networks of railways. Railway has a greater role in transportation. The need of skilled labour in electrics and electronics is a growing demand. The construction of subways also generated a demand in skilled technicians. The purpose of the program is graduate the technicians highly skilled and equipped with technical information and appliances in the industry. TCDD and Anadolu University signed a protocol, which TCDD equipment is supplied and professionals are holding lectures.

PROGRAM

I. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
İNG 103	English I	4+0	3,0
MAT 169	Mathematics I	3+0	3,0
RAY 101	Introduction to Railway Transportation	3+0	5,0
RAY 103	Work Safety	2+0	3,5
RAY 115	Scientific Principles of Technology I	2+0	2,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	0+0	2,0
TRS 102	Technical Drawing	2+2	4,5
TÜR 151	Turkish Language I	2+0	2,0
			30,0

II. SEMESTER

İNG 104	English II	4+0	3,0
MAT 170	Mathematics II	3+0	3,0
RAY 102	Railway System Traffic	3+0	4,0
RAY 106	Circuit Analysis	4+2	7,0
RAY 110	Measurement Technique	2+2	5,0
RAY 116	Scientific Principles of Technology II	2+0	2,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	0+0	2,0
TÜR 152	Turkish Language II	2+0	2,0
	Elective Courses (1)	-	2,0
			30,0

III. SEMESTER

RAY 201	Urban Railway Transportation Systems I	3+0	4,0
RAY 209	Energy Plants	2+2	4,0
RAY 211	Electrical Management Plants I	2+2	3,0
RAY 213	Communication Technology	2+2	3,0

IV. SEMESTER

RAY 202	Urban Railway Transportation Systems II	3+0	4,0
RAY 212	Electrical Management Plants II	2+2	3,0
RAY 214	Communication Technology II	2+2	3,0
RAY 218	Telephone Station Technology	2+0	2,0

RAY 235	Electronics	3+2	4,0
	Departmental Elective Courses (3)	-	12,0
			30,0

RAY 234	(Eng) Technical English	3+0	3,0
RAY 236	Signal Technique	2+2	3,0
	Departmental Elective Courses (2)	-	8,0
	Elective Courses (1)	-	4,0
			30,0

DEPARTMENTAL ELECTIVE COURSES

İŞL 220	Labor Legislation	2+2	4,0
RAY 228	Introduction to Human Resources	2+2	4,0
RAY 230	Introduction to Railway Networks	2+2	4,0
RAY 231	Introduction to Railway System Administration	2+2	4,0
RAY 233	Introduction to Machinery	2+2	4,0
RAY 237	Historical Development of Railways	2+2	4,0
RAY 242	Computer Aid Circuit Analysis	2+2	4,0
RAY 244	Digital Electronic	2+2	4,0
RAY 261	Railway System Vehicle Mechatronics I	3+1	4,0
RAY 262	Railway System Vehicle Mechatronics II	3+1	4,0
RAY 264	Cultural Values in Railway Transportation	2+2	4,0
RAY 266	New Approaches in Railroad Traffic Management	2+2	4,0
RAY 268	Scientific Principles in Railway Engineering	2+2	4,0
TOP 102	Surveying	2+2	4,5

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

PROGRAM IN RAILROAD MACHINE TECHNOLOGY

Transportation both in local and countrywide scale is important and got complex relationships with various factors. The recent changes in daily life generated a demand for time, comfort, safety and economy. The role of railway transportation in industrial and economic growth is well understood. The new concepts in signalling and traffic administration made it easier to manage complex networks of railways. Railway has a greater role in transportation. The need of skilled labour in mechanics is a growing demand. The construction of subways also generated a demand in skilled technicians. The purpose of the program is graduate the technicians highly skilled and equipped with technical information and appliances in the industry. TCDD and Anadolu University signed a protocol, which TCDD equipment is supplied and professionals are holding lectures.

PROGRAM

I. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
İNG 103	English I	4+0	3,0
MAT 169	Mathematics I	3+0	3,0
RAY 101	Introduction to Railway Transportation	3+0	5,0
RAY 103	Work Safety	2+0	3,5
RAY 115	Scientific Principles of Technology I	2+0	2,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	0+0	2,0
TRS 102	Technical Drawing	2+2	4,5
TÜR 151	Turkish Language I	2+0	2,0
			30,0

II. SEMESTER

ELE 102	Basics of Electricity	2+2	3,0
İNG 104	English II	4+0	3,0
MAT 170	Mathematics II	3+0	3,0
MEK 104	Statics Strength of Materials	3+0	4,5
RAY 102	Railway System Traffic	3+0	4,0
RAY 104	Introduction to Machines	2+2	4,5
RAY 116	Scientific Principles of Technology II	2+0	2,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	0+0	2,0
TÜR 152	Turkish Language II	2+0	2,0
	Elective Courses (1)	-	2,0
			30,0

III. SEMESTER

MLZ 104	Handling	2+2	3,0
RAY 120	Train Mechanics	2+2	3,0
RAY 201	Urban Railway Transportation Systems I	3+0	4,0
RAY 203	Basics of Engine	2+2	4,0

IV. SEMESTER

RAY 202	Urban Railway Transportation Systems II	3+0	4,0
RAY 204	Railway Cars	2+2	4,0
RAY 206	Trains and Roundhouses	2+2	4,0
RAY 208	Basics of Brake	2+2	4,0

RAY 207	Electric Engines	2+2	4,0
RAY 239	Towing Vehicles I	2+2	4,0
	Departmental Elective Courses (2)	-	8,0
			30,0

RAY 234 (Eng)	Technical English	3+0	3,0
RAY 240	Towing Vehicles II	2+2	3,0
	Departmental Elective Courses (1)	-	4,0
	Elective Courses (1)	-	4,0
			30,0

DEPARTMENTAL ELECTIVE COURSES

İŞL 220	Labor Legislation	2+2	4,0
RAY 105	Introduction to Locomotive Electrical Systems	3+1	4,0
RAY 228	Introduction to Human Resources	2+2	4,0
RAY 229	Introduction to Electric-Electronics	2+2	4,0
RAY 230	Introduction to Railway Networks	2+2	4,0
RAY 231	Introduction to Railway System Administration	2+2	4,0
RAY 237	Historical Development of Railways	2+2	4,0
RAY 261	Railway System Vehicle Mechatronics I	3+1	4,0
RAY 262	Railway System Vehicle Mechatronics II	3+1	4,0
RAY 264	Cultural Values in Railway Transportation	2+2	4,0
RAY 266	New Approaches in Railroad Traffic Management	2+2	4,0
RAY 268	Scientific Principles in Railway Engineering	2+2	4,0
TOP 102	Surveying	2+2	4,5

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 TRANSPORTATION SERVICES

PROGRAM IN CIVIL AVIATION CABIN SERVICES

Civil Aviation Cabin Services Programme offers a period of two years education after high school. Students are selected among graduates of relateel vocational high schools and also by National University Entrance Examination (Students Placement Exam, OSS). About 100 students are admitted each year. Students have to take and pass all compulsory courses and reach a minimum GPA (Grade Point Average) of 2.00 before graduation Furthermore, students are required to participate in a 30 days of internship in appropriate organizations.

PROGRAM

I. SEMESTER

ANT 310	Swimming	1+2	3,0
BİL 150	Fundamentals of Information Technology	4+0	5,0
HYO 111	Introduction to Civil Aviation	1+1	2,0
İLT 201	Interpersonal Communication	3+0	4,5
İNG 115 (Eng)	English Speaking Skills I	1+1	2,5
SHK 101	Knowledge of Basic Flight and Aircraft	1+1	2,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	0+0	2,0
TÜR 151	Turkish Language I	2+0	2,0
	Departmental Elective Courses (1)	-	3,0
	Foreign Language Courses I (1)	-	4,0
			30,0

II. SEMESTER

İNG 116 (Eng)	English Speaking Skills II	1+1	2,5
SAĞ 116	Health Information and First Aid in the Cabin	1+2	3,0
SHK 102	Meteorology	2+0	3,0
SHK 106	Introduction to Cabin Attendant	1+2	3,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	0+0	2,0
TÜR 152	Turkish Language II	2+0	2,0
	Departmental Elective Courses (0)	-	8,5
	Elective Courses (1)	-	2,0
	Foreign Language Courses II (1)	-	4,0
			30,0

III. SEMESTER

HYO 227	Airport and Flight Security	3+0	3,0
İNG 217 (Eng)	English Speaking Skills III	3+4	7,0
SHK 201	Normal Safety Procedures	1+3	3,5
SHK 205	In-Flight Customer Services	1+2	3,0
SHK 207	Passenger Service	1+1	2,0
	Departmental Elective Courses (0)	-	7,5
	Foreign Language Courses III (1)	-	4,0
			30,0

IV. SEMESTER

İNG 218 (Eng)	English Speaking Skills IV	2+3	5,5
SHK 202	Emergency Procedures	1+3	3,5
SHK 208	Dangerous Goods	1+1	2,0
SHK 210	In-Flight Resource Management	1+2	3,0
	Departmental Elective Courses (0)	-	12,0
	Foreign Language Courses IV (1)	-	4,0
			30,0

DEPARTMENTAL ELECTIVE COURSES

HTK 406	Aviation Psychology	3+0	4,5
HYO 303	Model Aircraft Constmetion	1+2	3,0
HYO 308	Organizational Behavior	3+0	3,0
HYO 451	General Aviation	3+0	3,5
İLT 303	Communication and Persuasion	3+0	4,5
İLT 356	Non-Verbal Communication	3+0	3,5
İLT 363	Verbal Communication	3+0	4,5
İŞL 102	Management and Organization	3+0	4,0
İŞL 213	Human Sources Management	2+0	3,0
İŞL 352	Organizational Communication	2+0	3,0
SHK 103	Professional English I	2+1	3,0
SHK 104 (Eng)	Professional English II	2+1	4,0
SHK 107 (Eng)	English in Real Life I	3+0	4,0
SHK 108 (Eng)	English in Real Life II	3+0	4,0
SHK 203	Basic Service Knowledge	1+1	2,0
SHK 204	In-Flight Services	1+1	2,0
SHK 206	CRS Application	1+3	3,5
SHK 212	Ground Handling and Operation	1+1	2,0
TÜR 215	Sign Language	1+1	3,0

ELECTIVE COURSES

BEÖ 155	Physical Education	2+0	2,0
KÜL 199	Cultural Activities	0+2	2,0
MÜZ 151	Short History of Music	2+0	3,0
MÜZ 155	Turkish Folk Music	2+0	2,0
MÜZ 157	Traditional Turkish Art Music	2+0	2,0
SAN 155	Hall Dances	0+2	2,0
SNT 155	History of Art	2+0	2,0
SOS 155	Folkdance	2+0	2,0
THU 201	Community Services	0+2	2,0
TİY 308	Republic Era Turkish Theatre	2+0	3,0

FOREIGN LANGUAGE COURSES

FRA 255 (Fra)	French I	3+0	4,0
FRA 256 (Fra)	French II	3+0	4,0
FRA 357 (Fra)	French III	3+0	4,0
FRA 358 (Fra)	French IV	3+0	4,0
İSP 154 (Spa)	Spanish I	3+0	4,0
İSP 255 (Spa)	Spanish II	3+0	4,0
İSP 257 (Spa)	Spanish III	3+0	4,0
İSP 358 (Spa)	Spanish IV	3+0	4,0
İTA 255 (İta)	Italian I	3+0	4,0
İTA 256 (İta)	Italian II	3+0	4,0
İTA 357 (İta)	Italian III	3+0	4,0
İTA 358 (İta)	Italian IV	3+0	4,0
JAP 301 (Jap)	Japanese I	4+0	4,0
JAP 302 (Jap)	Japanese II	4+0	4,0
JAP 403 (Jap)	Japanese III	4+0	4,0
JAP 404 (Jap)	Japanese IV	4+0	4,0
RUS 255 (Rus)	Russian I	3+0	4,0
RUS 256 (Rus)	Russian II	3+0	4,0
RUS 357 (Rus)	Russian III	3+0	4,0
RUS 358 (Rus)	Russian IV	3+0	4,0

ROGRAM IN RAILROAD TRANSPORTATION MANAGEMENT

Transportation both in local and countrywide scale is important and got complex relationships with various factors. The recent changes in daily life generated a demand for time, comfort, safety and economy. The role of railway transportation in industrial and economic growth is well understood. The new concepts in signalling and traffic administration made it easier to manage complex networks of railways. Railway has a greater role in transportation. The need of skilled labour in management is a growing demand. The construction of subways also generated a demand in skilled technicians. The purpose of the program is graduate the technicians highly skilled and equipped with technical information and appliances in the industry. TCDD and Anadolu University signed a protocol, which TCDD equipment is supplied and professionals are holding lectures.

PROGRAM

I. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
İNG 103	English I	4+0	3,0
MAT 169	Mathematics I	3+0	3,0
RAY 101	Introduction to Railway Transportation	3+0	5,0
RAY 103	Work Safety	2+0	3,5
RAY 115	Scientific Principles of Technology I	2+0	2,0
TAR 165	Atatürk's Principles and History of Turkish Revolution I	0+0	2,0
TRS 102	Technical Drawing	2+2	4,5
TÜR 151	Turkish Language I	2+0	2,0
			30,0

II. SEMESTER

İNG 104	English II	4+0	3,0
İŞL 101	Introduction to Business	3+0	4,5
MAT 170	Mathematics II	3+0	3,0
MUH 151	Introduction to Accounting	3+0	4,5
RAY 102	Railway System Traffic	3+0	4,0
RAY 116	Scientific Principles of Technology II	2+0	2,0
RAY 120	Train Mechanics	2+2	3,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	0+0	2,0
TÜR 152	Turkish Language II	2+0	2,0
	Elective Courses (1)	-	2,0
			30,0

III. SEMESTER

HUK 154	Commercial Law	2+0	3,0
İKT 214	Transportational Economics	2+0	2,0
PZL 401	Marketing	2+0	3,0
RAY 201	Urban Railway Transportation Systems I	3+0	4,0
RAY 223	Railway System Management	2+2	3,0
RAY 225	Train and Wagon Planning	3+2	4,0
RAY 227	Railway Transportation I	3+0	3,0
	Departmental Elective Courses (2)	-	8,0
			30,0

IV. SEMESTER

İSN 102	Public Relations	3+0	3,0
İST 201	Statistics	3+0	3,0
RAY 202	Urban Railway Transportation Systems II	3+0	4,0
RAY 226	International Railway Transportation	3+0	3,0
RAY 234 (Eng)	Technical English	3+0	3,0
RAY 238	Railway Systems Cost Analysis	2+0	2,0
	Departmental Elective Courses (2)	-	8,0
	Elective Courses (1)	-	4,0
			30,0

DEPARTMENTAL ELECTIVE COURSES

İŞL 220	Labor Legislation	2+2	4,0
LOJ 212	Logistics Management	2+2	4,0
PZL 456	Services Marketing	3+0	4,5
RAY 107	Transportation of Dangerous Substances	3+1	4,0
RAY 228	Introduction to Human Resources	2+2	4,0
RAY 229	Introduction to Electric-Electronics	2+2	4,0
RAY 230	Introduction to Railway Networks	2+2	4,0
RAY 233	Introduction to Machinery	2+2	4,0
RAY 237	Historical Development of Railways	2+2	4,0
RAY 260	Transportation Management	2+2	4,0
RAY 261	Railway System Vehicle Mechatronics I	3+1	4,0
RAY 262	Railway System Vehicle Mechatronics II	3+1	4,0
RAY 264	Cultural Values in Railway Transportation	2+2	4,0
RAY 266	New Approaches in Railroad Traffic Management	2+2	4,0
RAY 268	Scientific Principles in Railway Engineering	2+2	4,0
TOP 102	Surveying	2+2	4,5

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

PROGRAM IN TRANSPORTATION AND TRAFFIC SERVICES

Scientific and technological improvements of our times have effected society and human life in many ways and increased life standards with new technology and equipments. Transportation vehicles; have positive effects in economic, social and cultural improvements. The fact that the number of vehicles and drivers has increased has created the concept of "Traffic Safety". Traffic safety concept includes deaths, injuries, physical disabilities, social-economical losses, relatives of dead and wounded, and psychological, social effects, environmental pollution. Traffic accidents occured without concern of time, person and location effect all people in society and therefore interest public opinion. In developed countries; there are many projects about traffic safety, and there are institutions educating people about traffic, and highway transportation,also educating experts and producing various research. Depending on the results of these researchs, new plans and social campaigns are being held. Besides the increase in number of motor vehicles and drivers, improvements in the country, the increase in population, unsystematic city planning increase the possibility of traffic accidents and causes difficulties for the solution of the traffic safety problem. Traffic safety; can be solved by the improvements in infrastructure and training of more people about traffic.Highway Transportation and Traffic Program held by Porsuk Vocational School aims at supplying the labor force necessary for highway transportation and traffic.

PROGRAM

I. SEMESTER

BİL 150	Fundamentals of Information Technology	4+0	5,0
İNG 103	English I	4+0	3,0
İST 201	Statistics	3+0	3,0
MAT 169	Mathematics I	3+0	3,0
MEK 103	Vehicle Mechanics	3+2	5,0
RAY 115	Scientific Principles of Technology I	2+0	2,0
TRA 101	Introduction to Transportation and Traffic Technique	3+0	5,0
TÜR 151	Turkish Language I	2+0	2,0
	Elective Courses (1)	-	2,0
			30,0

II. SEMESTER

İNG 104	English II	4+0	3,0
MAT 170	Mathematics II	3+0	3,0
MEK 104	Statics Strength of Materials	3+0	4,5
RAY 116	Scientific Principles of Technology II	2+0	2,0
TOP 102	Surveying	2+2	4,5
TRA 104	Traffic Regulations and Law	2+0	2,5
TRA 106	Transportation Politics and Planning	3+0	4,0
TRS 102	Technical Drawing	2+2	4,5
TÜR 152	Turkish Language II	2+0	2,0
			30,0

III. SEMESTER

HUK 153	Fundamentals Concepts of Law	2+0	3,0
MEK 211	Soil Mechanics	3+0	4,0
PSİ 203	Traffic Psychology	2+0	2,0
SAĞ 102	First Aid	2+0	2,5
TAR 165	Atatürk's Principles and History of Turkish Revolution I	0+0	2,0
TRA 201	Traffic Planning and Application I	2+2	4,5
TRA 217	Road Projects and Highway Techniques	2+2	4,0
	Departmental Elective Courses (2)	-	8,0
			30,0

IV. SEMESTER

İKT 214	Transportational Economics	2+0	2,0
TAR 166	Atatürk's Principles and History of Turkish Revolution II	0+0	2,0
TRA 202	Traffic Planning and Application II	2+2	3,0
TRA 203	Bridges and Tunnels	3+0	4,0
TRA 204	Road Superstructure	2+0	2,0
TRA 210	Accident Location, Investigation and Consultative Authority	2+2	3,0
TRA 212	(Eng) Technical English	3+0	3,0
TRA 214	Computer Applications in Traffic Planning	2+2	3,0
	Departmental Elective Courses (1)	-	4,0
	Elective Courses (1)	-	4,0
			30,0

DEPARTMENTAL ELECTIVE COURSES

İSN 102	Public Relations	3+0	3,0
PSİ 208	Conflict and Stress Management	3+0	5,0
TRA 206	International Traffic Law Enforcement	3+0	4,0
TRA 209	Traffic Documentation Operations	3+0	4,0
TRA 211	Traffic Education	3+0	4,0
TRA 213	Highway Services and Maintenance	3+0	4,0
TRA 215	Motorized Vehicle Technology	3+0	4,0

TRA 216	Highway Traffic Safety Control	3+0	4,0
TRA 219	Traffic Audits and Regulations	3+0	4,0
TRA 221	Geographic Information Systems and Road Modeling	3+0	4,0
TRA 223	Geotechnics for Roads	2+2	4,0

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

COURSE CONTENTS

ANT 310 Swimming 1+2 3,0
Teaching Phases in Swimming: Adaptation to Water, Respiration, Adaptation of Eyes, Floating, Advancing in water; Swimming Techniques and Analyses: Freestyle, Backstroke, Butterfly, Breaststroke; Rules of Competitions and officiating; Triathlon; Organization in Swimming; FINA; Dimensions of Swimming Pools; Biomechanics of Swimming.

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 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.

BOP 108 Research Techniques and Seminar 2+1 2,0
Research Techniques: Importance of Research; Basic Concepts and Tecniques of Data Collection; Selection of Research Topics; Following Topical Developments in Computer Technology; Topic Selection on the Basis of Technological Innovations in the Field; Resources; Following relevant publications such as books and periodicals; Using the Internet and library; Reporting and Presenting Research Topics.

ÇEV 204 Environmental Protection 2+0 3,0
Definitions of Environment and History of Environment: Environment, Environmental science, Pollution, Ecology, Nature, Environmental protection, Waste, Recycling; Environmental rights and Environmental Regulations: Laws 2872 and 5491 on Environment; Natural Resources and their Pollution: Air pollution, Water pollution, Soil pollution, Noise, pollution; Waste Management: Waste regulations, Waste control, Waste reduction; Safeguards against Pollution: International health and security alerts, Occupational health and safety regulations, Environmental protection measures, Personal protection measures.

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.

ELO 108 Basic Electricity and Electronics 2+2 5,0
Electron Theory: Structure Of The Electric Charges and Atoms, Molecules, Distribution in Ions, Conductors, Molecular Structure Of Semiconductors and insulators; Static Electricity and Transmission: Static Electricity and Electrostatic Loads Distribution, Coulomb's Law, Electricity Solids, Liquids, Gases and İn Vacuum Transmission; Electrical Terminology: Electromotor Force, Voltage, Current, Resistance, Conductivity, Conventional Current, Elektron Flow, Electricity Production Methods; Direct Current Supplies, Batteries and Types, Serial and Parallel Batteries, Internal Resistance and Its Effects, Thermocouples, Photocells Study; Alternating Current Theory: Sinüsoidal Waves, Phase, Period, Frequency, Voltage, Current and Power; Triangle / Square Waves; Principles Of Single Phase and Three Phase, Electronic Equipment: Electronic Equipment İn Aircraft, Flight Computers: Basic Computer Structures; Electrostatic Sensitive Devices, Protection Against Electric Shock.

EMY 225 Urbanization and Environment Problems 2+0 2,0
Urbanization; Causes of Urbanization; City Planning; Residence Policy: Slum House, Metropolitan territories planning; Metropolitan Management and Public Utilities; Metropolitan Management in Turkey; Environmental Urbanization; Environment and Envorinmental Problems; Envorinmental Pollution and Protecting.

ETK 203 Professional Ethics 2+0 3,0
Ethics and Moral Concepts: Ethics, Relationship between ethics and morals; Moral Values; Rules of ethic; Relationship between ethics and society; Results of positive

ethics behavior; Factors of individual ethical behavior; Systems of Ethics; Ethics of intended result; Rules of ethics; Ethics of social contract; Personal ethics; Social life ethics; Factors involved in Moral values; Profession ethics; Principles of ethics in business life; Analysis of unethical behavior in business life; Prevention of unethical behavior; Effects of organizational culture and ethical behavior in business; Creating ethical climate in business; Effects of positive moral conditions in business and their effect on employees; Professional degeneration and results of unethical behavior in professional life; Social responsibility.

FRA 255 French I 3+0 4,0
Language Functions: Greetings, Invitations, accepting or refusing invitations; Vocabulary Knowledge: Nourishment, Accommodation, Clothing and colors, Bairams and activities; Grammar: Expressions showing quantity, Demonstrative and possessive adjectives, Prepositions and time indicators, Stressed personal pronouns, Imperatives, Verbs with double pronouns; Learning About French Culture: An area in France: La Baurgogne; Pronunciation, Semi-vowels, Gliding.

FRA 256 French II 3+0 4,0
Language functions: Imperatives and wishes; Evaluation, Proving and Thanking; Vocabulary: Nourishment, Accommodation, Clothing and colors, Bairams and activities; Ordinal Numbers; Grammar: Expressions showing quantity, Demonstrative and Possessive Adjectives, Prepositions and Time indicators, Stressed personal pronouns: Imperative moods, Verbs with double pronouns; Learning about Target Culture: An Area in France: La Bourgogne; Pronunciation: Intonation, Semi-Vowels, Gliding.

FRA 357 French III 3+0 4,0
Language Functions: Expressing One's Opinion, Asking for Somebody's Opinion, Giving Negative Reaction, Confirmation, Asking for Explanation, Making Suggestions; Vocabulary: Education, Transportation, Communication, Family, Health; Grammar: Pronouns, Indirect Speech, Futur Proche and Future Tense, Passé Composé, Imparfait, Negation; Pronunciation: Intonation, Gliding, Vowels; Learning about French Culture: Regions and Social Life in France.

FRA 358 French IV 3+0 4,0
Language Functions: Expressing Wishes, Prohibition and Acceptance, Expressing Opinions and Debating, Expressing Regrets; Vocabulary: Press and Media, Weather Forecast and Seasons, Means of Communication; Grammar: Compound Pronouns, Comparatives, Futur, Imperatives, Passé Recent - Présent Continu, Conditionnel, Impersonnel Verbs, Group III Verbs, Conditional Clauses; Pronunciation: Intonation, Complex Sounds; Learning about French Culture: Regional Life, Economical and Ecological Problems, Traditions and Modern Life.

HTK 406 Aviation Psychology 3+0 4,5
Definition of Aviation Psychology and History; Human Information Processing; Vigilance and Attention; Senses and Perception; Definition of Attention: Main factors affecting person's attention level, Attention in working group; Perception: Senses and functions of perception; Memory and Learning: Basic forms and types of memory; Definition of Motivation: Relationship between motivation and learning, Performance and attention; Personality: Definition, Developing stages, Personality disorders; Human Error and Decision Making; Communication: Various levels of communication, Communication practice in regard to preventing or solving conflicts; Stress Management Techniques.

HUK 117 Fundamentals of Law 2+0 2,0
Systems of Law: The Turkish law system; Branchs and Sources of Law; The Turkish Judgement System; Judgement System and Types of Lawsuit; Legal Actions: Relationships and treatments; Personality Concept; Classified of Persons: Real and legal Persons; Efficiencies of Persons: Right efficiency, Action efficiency; Relationship, Residence; Inheritance Concept and Legal Inheritors; Rights, Examined of The Private Rights; Acquiring of Rights and Goodwill Rules: Losing and Protection of Rights and Proof Responsibility; Ownership Right, Purview and Types of Ownership Right; Obligation Concept and Types of Contract; Laws of Independent Accountancy and Financial Adviser.

HUK 128 Law of Transportation 2+1 4,0
Legislation of Investment and Incentive in Foreign Trade: Case Studies and Practices; Protection and Limitation: Quotas, Damping and Government Grants: Case Studies and Practices; International Transportation and Legislation of Logistic: Case Studies; Contract Regulations for International Transportation; Rights and Charges Caused by Contracts; Association of Transportation: IATA, FIATA, IRU; Promotion and Practices.

HUK 153 Fundamentals Concepts of Law 2+0 3,0
Social Rules and Law; Concept of Law and Legal Sanctions; Characteristics of Legal Rules; Sources of Law; Branchs of Law; Definition and Types of Legal Rights; Legal Capacity: As subject of rights, Capacity to act; Kinship; Domicile; Protection of Personality; Possession; Ownership; Obligation and Responsibility; Judiciary Systems.

HUK 154 Commercial Law 2+0 3,0
Commercial Law Concept and Commercial Enterprise; Merchant; Commercial Name; Commercial Register; Unfair Competition; Commercial Reports; Merchant Assistant; Current Account; Partnership Concept; Definition and Elements of Partnership; Collective Partnerships: Establishment, Operation, Ending; Commanded Partnership: Establishment, Operation, Ending; Joint Stock Corporation: Establishment, Operation, Ending; Limited Company: Establishment, Operation, Ending.

HUK 223 Labor and Social Security Law 2+0 3,0
Individual Labor ;Law Labor Law; General Information and Characteristics of Labor Law; Historical Background of Labor Law in the World and Turkey, Explaining Basic

Principles; Legal Regulations; Basics of Labor Law: Employers, Apprentice and trainees, Deputy employee, Secondary employees; Work Place and Organization; Definition of Contracts; Types of Contracts and Contract Obligations; Case Studies in Contract Services; Arrangements at Work Place; Periods of Work, Breaks, Paid Holidays and Inspection of Work; Collective Labor Law Regulating Formation of Unions, Collective Labor Contracts; Strike and Lockout; Collective Labor Agreements; Institutions Acting on Behalf of Employee and Employers; Labor Conflicts and Solutions, Social Security Law;, Universal Dimensions and Contemporary Trends in Social Security; Institutions of Obligatory Social Security in Turkey, Management of Institutions of Social Insurance, Social Insurance Institutions; Liabilities, Responsibilities of Social Insur

HYO 111 Introduction to Civil Aviation 1+1 2,0
Terms/ Aviation terminology: Aviation Alphabet, Basic concepts, Codes of airport an airlines, Abbreviations, National and International Regulations, National and International Civil Aviation Authorities; Air Transportation Sectors: The general structure of the sector, Airlines, airports, Ground Handlings; Audits of Civil Aviation and Audit Procedures; travel Geography, Countries, Cultural diversity.

HYO 227 Airport and Flight Security 3+0 3,0
Security Related Definitions; International and National Legislation on Aviation Security; Airport Security; Security areas and security measures; Passenger Terminal Security: Security systems; Human Factor in Aviation Security; Role of Cabin Attendants in Aviation Security: Cabin crew collaboration; Unlawful Acts: Bomb threats in aircraft, Detection of suspicious substances, Hijacking, Disruptive passengers, Sabotage and suicide attack; Aircraft Security: Preflight security check; Cockpit Security; Transport of Weapons and Explosives.

HYO 303 Model Aircraft Constmetion 1+2 3,0
Introduction to Building Model Aircraft; Flight Principles of Model Aircraft; Major Parts of Model Aircraft: Wing, Structure, Landing gear, Tail, Flight controls, Engines; Types of Model Aircraft: Free flight models, Radio controlled models; Plans and Building Materials; Building Techniques; Flying Techniques.

HYO 306 Computer Aided Design 3+0 4,5
Basic Concepts: Introduction, User Interfaces, Workspaces, Description of The Menus; Wired Geometry and Surface Modeling: Basic Geometric Elements, 3D Wired Geometry and Advantages, Construction Techniques of Basic and Advanced Surface Elements; Part Design: Profile Drawing, Line, Plane and 3D Operations, Part Analysis; Assembly Design: Adding, Modifying and Constraining Assembly Components, Assembly Analysis; Drafting for Manufacturing: Basic and Auxiliary Views, Sectioning Techniques, Drawing Standards, Dimensioning and Pivoting.

HYO 308 Organizational Behavior 3+0 3,0
Introduction to Organizational Behavior and Scientific Foundations of Organizational Behavior; Historical Development of Organizational Behavior; An Individual and Personality in Organization; Attitudes and Job Satisfaction; Foundations of Personal Differences, Biographical Characteristics; Abilities and Learning; Organizational Culture; Groups and Group Dynamics in Organizations; Working with Group Techniques and Participant Management; Motivation Process and Theories of Motivation; Leadership and Theories of Leadership; Conflict; Stress and Stress Management; Organizational Environment and Technology; Organizational Change; Organizational Improvement.

HYO 451 General Aviation 3+0 3,5
Concept and Content of General Aviation; Development of General Aviation; Regulations in General Aviation; Practices of General Aviation in the World; General Aviation in Turkey: Training facilities, Air taxi operations, Aircraft rent, Corporate aviation, Personal and private purposes in general aviation, Sport, Demonstrational and promotional purposes in general aviation; Types of Aircraft Used in General Aviation; Future of General Aviation.

İKT 120 Introduction to Economy 3+0 4,0
Economics Science and Main Concepts of Economics; Generation and Historical Evolution of Economics Science; Relations with Other Sciences and Importance in Everyday Life; Economic Organization and Basic Economic Systems; Supply and Demand Concepts in Macroeconomics; Factors Effecting Supply and Demand; Elasticity of Supply and Demand; Market Concept: Components, Types and competitive market; Utility; Consumer Equity; Identity Curve Analysis and Budget Line; Production Factors; Production Function Analysis and Cost Analysis; Pricing of Production Factors from Production Interest and Income Distribution; National Income from Macroeconomics Approach: calculating national iIncome; Money and Characteristics: Money types, Functions and policies of money; Economic Instabilities; Inflation; Unemployment and Cyclical Fluctuations; Growing and Development of an Economy; Panel Decisions and Applications.

İKT 214 Transportational Economics 2+0 2,0
Basic Concepts: Demand, Asset-service; Production costs: Total, Variable, Constant, Marginal cost; Transportation Economy: Economical, social and political functions of transportation economy; Approach to Micro and Macro Economy: Demand and equilibrium in transportation; Properties of Transportation; Transportation subsystems; Transportation and Politics in Developed Countries, Benefit-Cost Analysis of Consistency of Transportation System Choosing; Interaction Between Transportation System and Environment; Traffic Accidents and Economical Losts; Economical Analysis of Transportation System in Turkey.

İKT 228 International Economy 2+0 2,0
Economic Growth and International Trade: Globalization in World Economy; International Economic Integration;

International Economic Policies; Trade Restrictions; Dumping; Export Subsidies; Foreign Exchange Markets; Balance of Payments; International Monetary Systems; International Credit Markets; International Monetary Fund and Turkey; International Investment Analysis.

İLT 105 General and Technical Communication 2+0 2,0
Definition and Type of Communication: Communication and it's basic concepts, Types of communication; Oral Communication: Techniques, Principles and necessity of oral communication, It's effects on daily life; Written Communication; examples of written language, The kinds of written text used for institutional communication at business Life; Applying Communication Techniques at Business Life; Graphics Communication; Purpose of using Graphic and Schemes Communication; Communication via Technological Devices; Convenience provided by Technologic Equipments.

İLT 201 Interpersonal Communication 3+0 4,5
Verbal Communication; Speaking Skills As Dimension of Interpersonal Communication; Listening Capabilities As Dimension of Interpersonal Communication; Non-Verbal Communication; Signs And Meanings; Stress And Stress Management; Group; Group Dynamics; Small Group Characteristics; Persuasion; Speaking And Listening; Time And Time Management; Interpersonal Communication; History of Communication Research.

İLT 303 Communication and Persuasion 3+0 4,5
Communication in organizations; Group Communication; Concept of persuasion, historical perspective of persuasion and theories of persuasion; Sources of persuasion in organizations, persuasion for organizational goals, management in organizations and persuasion, motivation in organizations and persuasion; Conflicts in organizations and persuasion, decision making in organizations and persuasion, leadership and persuasion, personality and persuasion; Persuasion tactics in organizations and persuasion, classification of persuasion tactics, types of persuaders and persuaded, bottom-up and top-down persuasion; Resistance to persuasion; Instruments and media used for persuasion in organizations; Barriers to persuasive process.

İLT 356 Non-Verbal Communication 3+0 3,5
The concept of non-verbal communication; Importance of non-verbal communication in daily life; Communication environment; Effects of environment in human communication; The use of personal field in communication; Cultural differences in non-verbal communication; Effects of physical characteristics in human communication; Emotional expressions in non-verbal communication; Non-verbal speech and listening; Mimics, gestures, positioning, appearance, touching, facial expressions, eye movements and control of voice in non-verbal communication; Non-verbal communication skills in various contexts.

İLT 363 Verbal Communication 3+0 4,5
Importance of speech in effective communication process; Meaning and definition of speaking: Speaking and the components of communication process; Types of speech; Elements of speech; Appropriate use of vocabulary, style, and language; Deciding on topics, goals, and argumentative styles; Public Speech: Perceiving the self and the others, benefiting from feedback, self-esteem and fear of stage; Listening activity: Listening for understanding; Types of listening and effective listening; Using materials during speech; Nonverbal communication and speaking; Speaking mistakes; Pronunciation errors, behavioral control; Analysis of effective and ineffective speeches.

İNG 103 English I 4+0 3,0
Articles; Prepositions: Place, Time, Movement; Singular and Plural Nouns: Countable and Uncountable nouns; Tenses: Simple present tense, Present continuous tense, Past simple tense, Future tense, Present perfect tense; Modals: Will, Should, Shouldn't Must, Mustn't, Can; Comparisons; Pronouns: Subject, Object, Demonstrative, Possessives; Adjectives; Statements: Positive, Negative, Question; Conjunctions: And, But, When, While, Because.

İNG 103 English I 4+0 3,0
Articles; Prepositions: Place, Time, Movement; Singular and Plural Nouns: Countable and Uncountable nouns; Tenses: Simple present tense, Present continuous tense, Past simple tense, Future tense, Present perfect tense; Modals: Will, Should, Shouldn't Must, Mustn't, Can; Comparisons; Pronouns: Subject, Object, Demonstrative, Possessives; Adjectives; Statements: Positive, Negative, Question; Conjunctions: And, But, When, While, Because.

İNG 104 English II 4+0 3,0
Tenses: Present simple, Present continuous, Past simple, Past continuous, Will and going to, Present perfect continuous, Past perfect simple; Modals: Might, Could, Can, Must, May; Adverbs: Adverbs of manner, Purpose, Location; Adjectives: Order of adjectives, Comparative, Superlative forms; Passive Voice: Present, Past, Future, Modal passive; Conditionals; Relative Clauses; Reported Speech; Infinitive and Gerund; Noun Clauses; Adverbial Clauses; Comparison and Contrast.

İNG 104 English II 4+0 3,0
Tenses: Present simple, Present continuous, Past simple, Past continuous, Will and going to, Present perfect continuous, Past perfect simple; Modals: Might, Could, Can, Must, May; Adverbs: Adverbs of manner, Purpose, Location; Adjectives: Order of adjectives, Comparative, Superlative forms; Passive Voice: Present, Past, Future, Modal passive; Conditionals; Relative Clauses; Reported Speech; Infinitive and Gerund; Noun Clauses; Adverbial Clauses; Comparison and Contrast.

İNG 115 English Speaking Skills I 1+1 2,5
Required phrases for everyday English; Greeetings, Introducing, Asking for and giving directions. Social Life: giving an order and paying the bill at restaurants, pubs and bars, Making reservations, shopping. Improvement of

listening skills, Pronunciation: improvement of pronunciation and understanding.

İNG 116 English Speaking Skills II 1+1 2,5
Daily life and social expressions at advanced level. Asking for information about transportation. Various expressions for various situations. Expressions for formal/official situations. Asking for an appointment, job applications/interview, form filling. Formal and informal telephone conversations. Dealing with various accents and register, exercises to improve speaking skills, exercises on problematic sounds and words.

İNG 217 English Speaking Skills III 3+4 7,0
Improvement of listening skills, the importance of pronunciation in oral communication, presentation of communication skills and use of them effectively, utilizing effective tone of voice and body language, teaching vocabulary for, word formation and phrases required by cabin attendants.

İNG 218 English Speaking Skills IV 2+3 5,5
Improvement of listening skills, importance of pronunciation in oral communication, communication skills required in the professional area, improvement of English pronunciation, increasing the level of comprehensibility; words, phrases, and sentences required by flight crew in case of emergency.

İSN 102 Public Relations 3+0 3,0
Fundamentals of Public Relations; Historical Development of Public Relations in Turkey and in the World; Development of Public Relations in Private and Public Sector; Career Development in Public Relations; Place of Public Relations Department in an Organization; Interdepartmental Public Relations; Research in Public Relations; Planning a Public Relations Campaign: Identifying problems, Determining objectives, Application and evaluation; Materials Used in Public Relations: Written, Audio-visual and other materials.

İSP 154 Spanish I 3+0 4,0
Saying hello, Introduction, Spanish Alphabet, Pronunciation exercises, Numbers in Spanish, Country names, Nationalities, Personal pronouns, Verb conjugations in Present tense, Use of Ser-Estar and Haber verbs, Demonstrative Pronouns, Grammatical Gender in Spanish, Asking for directions, Giving directions, Asking for time and telling time, Describing people and objects, Comparatives, Shopping, Imperative sentences in Spanish, Use of Poder, Gustar, Querer and Tener verbs, Vocabulary building: Objects in the classroom, Objects at home, Occupations, Food and description of clothes.

İSP 255 Spanish II 3+0 4,0
Polite requests, Asking for permission, Present Perfect tense, Past Perfect tense, Requlars conjugation of verbs, Irregular conjugation of verbs, Asking for opinions, Description of event and people in past tense, Talking about past habits, Future tense, Talking about future plans, Vocabulary building: Parts of body, Colors, Fruits and vegetables, Talking about health, Use of Ser and Estar verbs in Present Perfect and Past Tense, Use of past tense forms.

İSP 257 Spanish III 3+0 4,0
Regular and Irregular Verbs in Imperatives, Negative Forms of Imperatives, Verb Conjugations, Present Perfect Tense, Simple Past Tense, Past Continuous Tense, Past Perfect Continuous Tense, Verb Conjugations in all Tenses, The Use and Comparison of Past Tenses, Future Tense, Future Tense with 'ir+a infinitive', The terms of Traveling, Talking about Climate and Geography, Use of Gustar - Encantar - Odiar - Preferir Verbs, Tambien - Tampoco, Ordering at a Restaurant, Conjunctions, Vocabulary Building.

İSP 358 Spanish IV 3+0 4,0
Introduction to Subjunctives; Verb Forms of Subjunctives; Verb Forms of Future Tense; Use of Future Tense; Making Suggestions; Accepting and Rejecting Suggestions; Analyzing Various Past Tenses; Verb Forms and Use of Perfect Subjunctives; Verb forms and Use of Present Perfect Tense; Verb Forms and Use of Perfect Modals; Vocabulary Building; Pair and Group Work for Spoken Spanish; Introducing Simple Reading Passages.

İST 201 Statistics 3+0 3,0
Definition of Statistics: Data collection; Data presentation techniques, Distribution theory; Sampling: errors, Estimation of population parameters; Hypothesis Testing: Hypothesis testing for two populations, Comparisons of ratios, Hypothesis testing for large and small samples; The Chi-Square Distribution and Chi-Square Testing; Correlation: Simple linear correlation coefficient, Regression coefficient, Forecasting, Determination coefficient.

İST 226 Operations Research 2+0 3,0
Introduction to Operations Research, Model Concept and Model Building, Optimization with Linear Programming: Graphic Method, Solution with Lindo, Transportation and Appointment Problems, PERT/CPM Network Models, Travelling Salesman Problems: Shortest path problem - Maximum flow problem, Queuing Models.

İST 317 Statistics 2+0 2,5
Definition of Statistics: Fundamental concepts in statistics, Data collection techniques, Classification of data, Frequency distributions; Graphs; Averages; Means; Variability: Range, Standard deviation, Moments; Normal Distribution: Normal distribution function, Calculation of the area under the normal curve; Sampling Theory; Indexes: Types of indexes.

İŞL 101 Introduction to Business 3+0 4,5
Concept of business: Economic systems, Production factors, Needs and wants, Demand, Goods and services, Consumption and consumer; Success criterion: Efficiency and related concepts; Characteristics of Businesses: Goals and functions of businesses, Relationships with the environment and responsibilities of businesses, Grouping of businesses; Foundation of businesses: Foundation decision, Determining plant location; Extending Businesses; Business

ethics and social responsibility (Ethical and moral rules); Concept of management; Functions of management; Human resources management; Functions of human resources management; Principles of marketing.

İŞL 102 Management and Organization 3+0 4,0
Management: Definition, Significance of Management for Business Enterprises; Development of Management Science: Classical, Behavioral and Modern Theories; Management Systems; Decision Making and Planning; Concepts of Authority and Power: Characteristics of Authority and Power, Delegation of Authority; Organization: Characteristics and Principles; Comparison of Organization and Planning Processes; Departmentalization; Staffing: Fundamentals, Staffing Process; Leading: Fundamentals, Leading Process; Organizational Structures: Development and Varieties of Organizational Structures; Controlling: Fundamentals and Controlling Process.

İŞL 155 Introduction to Business 2+0 3,0
Introduction to Business: Basic concepts, External environment of business enterprises; Structure of Business Enterprises; Foundations of Business Enterprises: Stages, Feasibility decisions; Functions of Business Enterprises: Management, Marketing, Production and financing; Cost Concept: Variable and fixed costs, Unit and total costs, Job order costing system, Process costing, Case studies.

İŞL 212 Inventory Management 2+0 3,5
Inventory; Content; Inventory Management; Importance for Companies; Functions of Inventory; Inventory Control; The Purpose of Inventory Control; Inventory Systems; Inventory Costs; ABC Approach; Inventory Models; Effects of Discounts on the Costs of Inventory; Determining where to Order.

İŞL 213 Human Sources Management 2+0 3,0
Introduction To Staff Management; Basic Functions; Organizing; Planning of Work Force; Methods; Planning Means; Work Analysis; Work Definitions; Work Necessities; Hiring: Finding; Selecting; Training; Staff Training; Methods; Principles; Evaluating; Staff Evaluating; Methods; Evaluation Mistakes; Discipline; Types; Forming The System; Punishment Application; Salary Management; Salary Methods; Staff services.

İŞL 218 Risk and Insurance 2+0 3,0
Insurance: Basic Concepts; Risk: Definition, Sources of Risk; Insurance Contracts; Insurance Compensation: Definition, Calculating Insurance Compensation; Insurance Sector: Types of Insurance; Contributions of Insurance Sector in Turkey Economy; Insurance Transactions in Logistics, Types of Insurance in Logistics, Obligation of Insurance in Logistics: Profit and Principles.

İŞL 220 Labor Legislation 2+2 4,0
Constitution, Law, Covenant and Regulation Concepts; Labor Laws in History; The Aim and Scope of Labor Law No. 4857; Labor Agreement Types and Regulations Related to The Annulment of Labor Agreements; Wages in Labor Laws; Organization of Occupation; Regulations Related to Occupational Health and Occupational Safety; Social Insurance and Universal Health Insurance Law No. 5510; The Trade Unions Act No. 2821; Strike and Lockout Law No. 2822; Legislation Related to Civil Servants; Working Principles for Civil Servants.

İŞL 352 Organizational Communication 2+0 3,0
Definition and Significance of Organizational Communication; Functions of Organizational Communication; Organizational Communication Process; Channels of Organizational Communication; Communication Methods and Tools in Organizations: Organizational Communication and Managerial Function; Organizational Culture and Communication; Barriers to Organizational Communication; Developing Methods of Organizational Communication.

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.

İTA 255 Italian I 3+0 4,0
Sounds in Italian; Masculine and Feminine Definite Articles; Personal and Demonstrative Pronouns; Use and Conjugation of Verbs 'Essere? and 'Avere?; Introducing Oneself; Improving Reading Comprehension by means of Dialogs ; Describing People ; Days ; Months ; Years ; Asking the Time ; Ordinal and Cardinal Numbers.

İTA 256 Italian II 3+0 4,0
Simple and Compound Prepositions; Past Tense and Conjugation of Verbs in this Tense; Transitive and Intransitive Verbs in Past Tense; Improving Reading Skills; Analyzing Paragraphs and Texts; Interrogatives: Asking Questions; Introduction to Italian Culture and Daily Language.

İTA 357 Italian III 3+0 4,0
Imperfect Tense and Conjugation of Verbs in this Tense; Prepositions; Double Object Pronouns; Possessive Pronouns; The Use of Partitives 'Ci? and 'Ne?; Construction of Passive with 'Si!?.

İTA 358 Italian IV 3+0 4,0
Future Tense; Future Perfect Tense and the Conjugation of Verbs in this Tense; Demonstrative Pronouns; Adverbs; Past Perfect Tense and the Conjugation of Verbs in this Tense.

JAP 301 Japanese I 4+0 4,0
Basic Verbs; Words and Sentence Structures Used In Daily Speech; Greetings; Meeting Someone new; Introducing Oneself; Asking For Price; Time Concept; Numbers; Verbs

And Words About Traveling By Train And By Bus; Likes And Dislikes; Apologizing.

JAP 302 Japanese II 4+0 4,0
Introducing Oneself And One's Family; Ordering Food And Beverages In A Restaurant Or Cafe; Asking for the Bill; Meals And Expressions Used for Ordering Meals; Making A Reservation; Talking On The Phone; Asking For Information; Quantifiers; Demonstrative Adjectives; Talking About Past And Future.

JAP 403 Japanese III 4+0 4,0
Requests and orders for something, giving directions to a taxi driver, asking permission, refusal situations, family terms, giving advice, negative positions of like and dislike at simple present tense and past tense, desire-preference-like and dislike at adjectives and verbs, verbs used for public transportation.

JAP 404 Japanese IV 4+0 4,0
Guessing, expressing feeling about something, writing letter, situations at traffic, talking about business trip; direct and indirect verbs, modal of ability, basic conjunctions, negative positions at simple present tense, differences of -niwa and -dewa, -ta form at verbs, -te/de and -ku/ni form at adjectives.

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.

LOJ 101 Principles of Logistic I 2+2 4,0
Logistic: Basic Concepts, Its Significance; Supply Chain: Relationships, Management, Field of Application, Movement and Stocking up the Products in Supply Chain; Movement and Stocking up the Products in the Physical Distribution and Supply Chain; Explaining Logistic within the Networks of Physical Distribution and Supply Chain; Components of Logistic System; Outsourcing; Customer Satisfaction.

LOJ 102 Principles of Logistic II 2+2 4,0
Logistic Systems; Order Management and Customer Services; Protective Packaging and Material Handling; Stock Management: Principles of Stock Management: Distribution Centers and Stocking Up; Infrastructure and Management of Transportation: Delivering Products to Consumers from Production Line: Carrying the Raw Materials to the Production Line: Efficiency: Cost Management.

LOJ 104 Use of Computer in Logistic 3+0 4,5
Terminology; Local Area Network: Application and its Cost; Wide Area Network: Application Fields and its Cost; Internet, Transportation and Logistic Software: Application and its Cost; Softtrans: Application; Ulaşnet Project: Application; Custom-Edi Project: Application, Systems of Vehicle Follow up: Application in Turkey and the World.

LOJ 106 Information Systems in Logistics 2+0 4,0
Definition of systematic information, Use of information, Creating information, Information planning and control, Establishing a model bank: Decision models, Macro models, Micro analytic models, Micro behavior models, Graphic models, Logical flowcharts, Casual flowcharts, Functional relationship diagrams, Feedback diagrams, Verbal models, Decision support systems, Creating periodical information, Outside information, Reporting, Analytical marketing system, Marketing intelligence system, Socio-technical systems, Information flow on environmental factors.

LOJ 201 Technology Use in Logistic 2+0 2,0
New Trends in Logistic; RFID Technology; RFID Labels: Passive: Semi-passive, Semi-active or Active; RFID Arrangements; Map Systems; Use of GPS; Routing with the help of GPS.

LOJ 205 Management of Storage and Ware House 2+1 3,5
Storage Management; Logistic and Storage Management; Factors Affecting Effective Storage Management; Activities of Storage; Arrangements of Storage Placement; Identifying Dimensions of Storage; Use of Volume and Accessibility; Types of Pallets and their Configurations; Place of Pallets; Methods of Stocking; Measurement of Storage Performance; Productivity of Labor; Ratio of Space Use; Determining the Number of Workers; Cross Shipping; Physical Control and Security; Auditing Stock Records.

LOJ 206 Practices of Logistic 0+6 6,0
Planning and Preparation Related to the Practicing Areas; Studies on Writing and Verbal Expressing; Practicing the Theoretical Logistic Knowledge; Practicing the Theoretical Purchasing Knowledge; Practicing the Theoretical Knowledge of Insurance Trade; Operating Logistic Firms; Reporting; Comparing the Logistic Practices of Different Companies.

LOJ 207 Customs Transactions and Practices 2+0 2,0
Regime of Custom Warehouse; Regime of Free Circulations; Transit Regime; Regime of Internal Transactions; Transaction Regime Under the Control of Customs; Regime of External Transactions; Transactions of Posting; Border Trade; Representation Right; Not-Preferred Place of Origin of Goods; Preferred Place of Origin of Goods; Custom Value of Goods; Presentation of Goods to the Customs; Summary Statement; Transaction Approved by the Customs; Pro Forma Storage; Entrance to Free Circulation; Beginning and Ending the Custom Liabilities; Handling of Penalties Related to the Loss of Tax; Realization and Collection of Customs Tax.

LOJ 208 Hazardous Materials 2+0 3,0
Concept of Hazardous Materials and Classifications; Use of Hazardous Material Charts; Instruction for Packaging and Use of Tables; Features of Packaging and Performance Tests; Marking Packages and Labeling; Liabilities of Sender and Carrier for Hazardous Materials; Preparing Bill of Shipment; Acceptance; Storage; Shipment and Control of Hazardous Materials.

LOJ 211 Vocational English 2+0 3,0
Concept of Vocational English and its Importance in Practice; Terminology Used in Logistic; Practicing on Manuals by use of Translation; Practicing the Principles of Writing in Technical Reports; Writing a CV; Letters of Order and Formal Letters; Translation Practice with Vocational Texts; Preparing Documents; Writing Basic Formal Letters.

LOJ 212 Logistics Management 2+2 4,0
Logistics Management Definition; Basic Logistics operations; Stock Management; Warehouse Management; Transportation Management and Mode of Transportation; Support Logistics Operations; Packaging; Customer Services; Other Operations; Order Processing; Handling; Information Management; Demand Forecasting/ Planning; Services Support After Buy; Factory and Warehouse Facilities; Buying; Clearance; Waste Item Management; Marketing; Distribution Channels; Supply Chain Concept; Supply Chain Management; Unified Supply Chain Management Practices; Outsourcing; Third Party Logistics; Fourth Party Logistics; Inverse Logistics; Information Technologies and Logistics.

LOJ 213 Project Management 2+0 3,0
What is aProject?; Basics of Preparing a Project; Project Team; Classification of Projects; Process of Project Management; Time Management; Resource Management; Cost Management; Technology Management; Project Patent; Notice of Content; Acquired Value Analysis; Gent Diagrams; Performance Indices; Risk Management in Projects; Financial Plan of Project; Implementing and Auditing the Project according to the Targets of the Project; Finalizing the Project.

LOJ 214 Logistics Costs Analysis 2+0 3,0
Logistics and Cost Accounting, Logistics Activities and Activity Based Costing System: Stock ? Facility - Transfer Costing, Classification of Costs, Break Even Analysis, Variable-Standart-Order Costing Systems, Budgeting, Cost Analysis and Pricing Decisions, Supply Chain Costing, Win-Win Strategies, Data Requirement for Logistics Costing.

MAT 121 Mathematics I 3+1 4,0
Numbers: Aritmetical Operations, Power and root calculation, Binary, Octal and Hexadecimal systems; Algebra: Algebric 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: Exponentional 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 169 Mathematics I 3+0 3,0
Basic Concepts: Sets, Number systems, Expressions with whole and rational powers, Identities; Equations: First and second degree equations, Equations reducible to second degree equations; Inequalities: Solutions of first and second degree inequalities; Relations: Definition, Equivalence relation; Functions: Definition, One to one function and subjective functions, Definition of inverse and composite functions, Graphs of some special functions; Limit and Continuity: Definition of limit, Principles of limit, Definition of continuity.

MAT 170 Mathematics II 3+0 3,0
Derivation: Definition of derivative, Rules of differentiation, Geometric meaning of derivative and equation of tangent line, Derivation of some special functions; Applications of Derivation: Extremum problems, Curve sketching; Integral: Definite integral, Indefinite integral; Techniques of Integration; Applications of Definite Integral: Computation of area and volume; Matrix: Definition, Operations on matrix; Determinants: Definition, Properties.

MAT 220 Commercial Mathematics 1+1 3,0
Calculation of Percentage; Calculation of Interest: Simple interest, Description of interest and its features, Compound interest; Calculation of Discount: Simple discount, Compound discount, Discount calculation related to external discount method, Discount calculation related to internal discount method; Equivalent Notes: Consolidation of notes; Calculation of Purchase; Cost, Sale and Profit; Ratio and Calculation Relevant Firms; Mixture; Composition and Alloy Problems; Money and Capital Markets; Annuities: Annuity and amount of annuity, Normal annuities, Other annuities; Debt Payoff: Debt payoff with equal installment, Debt payoff with equal principles, Debt payoff with payment fund

MEK 103 Vehicle Mechanics 3+2 5,0
Technological Revolution of Vehicles; Motorized Vehicles; Specifications of Motorized Vehicles; Resistance Forces Affecting Vehicle; Relationship of Air Resistance and Speed; Motorized Vehicle Systems; Linear Control of Vehicles; Mobility of Vehicles; Vehicle Types; Safe Brake

Distance of Vehicles; Curve Balance; Forces Affecting Vehicle in Curves; Brake Mechanics; Adhesion Concept and Road-Tire Adhesion; Characteristic and Critical Speeds; Differences Between Blocking Types.

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 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.

MLZ 104 Handling 2+2 3,0
Atomic Construction; Composition and Properties of Atoms; Handling Concept; Construction Errors in Handling; Tests on Handling; Mechanical Tests and Characteristics; Deformation; Metallography; Preparing Samples and Microscopic Examination; Operations to Increase Handling Resistance; Thermal Processes; Steels; Cast Iron; Alloys: Aluminium, Titanium and copper alloys.

MUH 113 Introduction to Accounting 2+2 4,0
Concepts: Financial Transactions, Balance of Assets-Liabilities, Balance Sheet and Income Statement; Accounts of Balance Sheet and Income Statement: Concept of account, Types of accounts, Account Chart; Document and Books; Accounting Process: Follow up Goods Transactions; Liquid assets, Marketable Securities, Receivables, Long Term Assets, Liabilities, Shareholders Equity, Transactions of Income and Expenses; Ended Period Transactions: Concepts About Inventory and Inventory Transactions; Measurements of Valuation; Inventory Transactions About Preparation Financial Statements; Inventory Transactions About Income and Expenses; Preparation Trial Balance; Accounting Mistakes and Errors; Reparation Balance Sheet; Preparation Income Statements.

MUH 151 Introduction to Accounting 3+0 4,5
Concepts of Business and Accounting; Financial Transactions; Balance of Assets-Liabilities; Balance Sheet and Income Statement; Accounts: Concept of account, Types of accounts, Account chart; Document and Books; Accounting Process; Follow up Goods Transactions: Inventories and transactions of the purchase and sale of goods, Periodic inventory system, Perpetual inventory system; Liquid Assets: Cash, Banks, Checkups; Marketable Securities: Share certificates, Bonds; Receivables: Trade receivable, Other receivable; Long Term Assets; Liabilities; Shareholders Equity; Transactions of Income and Expenses; End of Period Transactions; Preparing Financial Statements and Closing Transactions.

MÜZ 151 Short History of Music 2+0 3,0
Mile Stones in the History of Music; Music of the Antique Period; Music of Far East; Music of Anatolia; Music of the Middle Ages: Gregorian Chants; Music of Renaissance: Bach and Handel; Music of the Classical Age; Pianoforte in the Classical Age; Romantic Age; Nationalist Movement; Contemporary Music; Nationalism and Universality.

MÜZ 155 Turkish Folk Music 2+0 2,0
Folk songs from different Regions of Turkey are Taught; Aegean Region Zeybek Folk Songs: Eklemedir koca konak, Ah bir ateş ver, Çökertme, Kütahya'nın pınarları, Çemberinde gül oya; Kars Region Azerbaijani Folk Songs: Bu gala daşlı gala, Yollarına baka baka, Dağlar gızı Reyhan, Ayrılık, Dut ağacı boyunca; Central Anatolian Region Folk Songs: Seherde bir bağa girdim, Uzun ince bir yoldayım, Güzelliğin on para etmez, Mihriban ve Acem kızı; Southeastern Anatolian Region; Urfa and Diyarbakır Folk Songs: Allı turnam, Urfanın etrafı, Mardin kapısından atlayamadım, Fırat türküsü, Evlerinin önü kuyu; Blacksea Region; Trabzon, Rize, Artvin Folk Songs: Maçka yolları taşlı, Ben giderim Batuma, Dere geliyor dere.

MÜZ 157 Traditional Turkish Art Music 2+0 2,0
Description of Traditional Art Music: Basic concepts, Characteristics, Types, Notes, Instruments; The Mode System of Traditional Turkish Art Music; The Rhythmic Pattern of Traditional Turkish Art Music; Samples from Different Modes; Samples from Different Rhythmic Patterns.

PSİ 203 Traffic Psychology 2+0 2,0
Basic Behavior and Learning Concepts in Psychology; Behavior Concept; Learning Concept; Test of Learning a Concept; New Behavior Learning; Classical Conditioning; Control-Punishment Relationship; Importance of Psychological Education in Traffic; Control and Application Techniques in Traffic.

PSİ 208 Conflict and Stress Management 3+0 5,0
Stress Concept and Effects on Human Body; Psychosomatic Stress Model; Stress and Personality; Different Types of Behaviors; Stress Symptoms and Effects; Attitude Stress Symptoms; Psychological Stress Symptoms, Stress Resources; Personal Strategies in Stress Management; Managers' Duties in Decreasing Organizational Stress.

PZL 112 Marketing Principles 2+1 4,0
Marketing; Modern Marketing Management; Environmental Factors in Marketing; Strategic Marketing Process; Characteristics of Consumer Markets; Characteristics of Industrial Markets and Customer Behavior; Market Classification; Selection of Target Market; Product, Classification and New Product Development; Life - circle of the Product; Price; Types of Quotation; Distribution Channels; Physical Distribution; Acquainting; Acquainting Methods; Advertisement; Sales Development and Public Relations; Marketing Research;

Data Gathering Methods; Marketing Management and International Marketing.

PZL 239 Physical Distribution Management 3+0 4,5
International Marketing and International Commerce; Collecting Data in International Marketing Research; Integration to International Markets; Internationalization Process; Environment of International Marketing; Market Segmentation and Selection of Target Markets; Export and Insurance Transactions in International Marketing; Banking Transactions; Marketing Mix: Product decisions and strategies, Brand selection, Brand and strategies, Packing and labeling; Price Strategies; Distribution Strategies; Promotion Strategies; International Marketing Organizations.

PZL 241 Industrial Marketing 2+0 2,0
Industrial Marketing; Industrial Markets and Products; Nature of Industrial Markets; Examining Industrial Market Opportunities; Industrial Market Segmentation; Models of Industrial Buying Behavior and Factors Affecting Purchasing; Designing and Managing Industrial Marketing Mix; Planning and Developing Industrial Products; Industrial Pricing, Marketing Channel and Promotion Strategies; Gaining Customers and Establishing Long-term Relationship with Buyers; Case Study.

PZL 401 Marketing 2+0 3,0
Marketing Concept and Understanding of Modern Marketing; Environmental Conditions in Marketing; Marketing Information System; Consumption and Purchasing Behavior in Industrial Markets; Market Division and Choice of Market; Product: Product concept, Classification of products, Product groups, New product concept, New product development alternatives, Product life curve, Product properties; Distribution Channel and Physical Distribution; Effort to Increase Price and Sale; International Marketing.

PZL 455 Supply Chain Management 2+0 3,0
Supply Chain and Concepts Related Supply Chain (Logistic; Supply Chain etc); Logistic and Concepts Related to the Logistic (Production; Purchasing; Stock and Logistic); Design and Management of Supply Chain; Selection and Evaluation of Suppliers; Logistic Information Systems; Stock Management; Purchasing Management; Design and Management of Storage; Management of Carrying; Shipping Management; Identifying Routes of Vehicles; Shipment and Tabulation; Software of Supply Chain Management.

PZL 456 Services Marketing 3+0 4,5
Distinctive Aspects of Services: Characteristics of services, Classification of services; Services and Environment; Marketing Mix for Services: Service as a product; Distribution of Services and Services Intermediaries; Pricing Services and Yield Management; Promoting Services; Human Factor in Service Sector: Importance of personnel, Human resource management, Role of customer in service Production Process; Management of Demand and Capacity in Service Sector; Service Quality: Dimensions of Quality, Measurement of Quality, Gap Model of Quality, Approaches for Quality Improvement, Relationship Marketing: Strategies for Retaining Customers; Internationalization of Services.

RAY 101 Introduction to Railway Transportation 3+0 5,0
Importance and Role of Railroad Transportation; Classification and Features of Trains; Stations and Switches; Signs; Train Traffic Administration Systems; Passenger and Goods Transportation Operations; Safety Systems; Communications Systems; Electric Power Transmission Systems; Signs and Facilities on the Way; Classification and Features of Locomotives and Cars; Classification of Railways; Infrastructure and Superstructure on Railways; Switches; Basics of Railroad Projects and Track Maintenance.

RAY 102 Railway System Traffic 3+0 4,0
Information about Trains and Other Railway Vehicles; Signs and Signals in Railways; Importance of Signs and Signals in Railway Transportation; Regulations and Crisis Management in Breakdowns and Disorders; Classification of Railway Vehicles; Preparation of Trains for Departures; Regulations for Railway Traffic.

RAY 103 Work Safety 2+0 3,5
Basics of Work Safety; Environmental Threats; Biological Threats; Chemical Threats; Physical Threats; Concepts for Safety at Work Places; Proactive Safety Regulations; Analysis and Classification of Accidents; Injuries and First Aid; Reports of Accidents; Fire; Work Safety Regulations

RAY 104 Introduction to Machines 2+2 4,5
Definitions and Classification; Connection Elements; Demountable Connection Elements; Surmountable Connection Elements; Mobilized Connections; Lubrication, Transmission Systems; Brakes; Lifting and Moving; Hydraulics; Pneumatics; Flux Transmission Elements: Pipes, Hoses and Joints; Transforming Linear Motion to Angular Motion and Angular Motion to Linear Motion.

RAY 105 Introduction to Locomotive Electrical Systems 3+1 4,0
Electromechanical Systems: Definition, Block diagram, System components; Switching Elements: Structure, Symbols, Working principles; Package Type Switches; Buttons; Sensors; Limit Switches; Electromechanical Switching Elements: Relays, Contactors; Common Locomotive Equipment; Diesel Electric Locomotives: Electrical diagram, Electrical equipment and its components, Control and safety systems; Starting and Charging Systems of Diesel Engines and Their Failures; Electric Locomotives: Electrical diagram, Power transfer, Electrical equipment and its components, Control and safety systems; Electrical Diagram of Diesel Electric Rolling Stock; Electrical Principles of Rolling Stock Used in Urban Transport.

RAY 106 Circuit Analysis 4+2 7,0
Concepts of Circuit Analysis; Electric Current; DC Circuit Elements; Voltage; Energy, Power; Resistance; Capacitance; Inductance; DC Circuit Analysis; Alternating Current; Frequency; Phase; Impedance; AC Circuits Analysis; Relay Systems; Transformers; Principles of Electric Engines; Generators; Engines.

RAY 107 Transportation of Dangerous Substances 3+1 4,0
Definition of Hazardous Substances; Necessity of Transportation of Hazardous Substances; Classification of Hazardous Substances; Major Types of Hazards; Inspection of Hazardous Substance Transportation and Environmental Protection; Packaging of Hazardous Substances; Marking and Labeling of Hazardous Substances; Storage of Hazardous Substances; Freighting of Hazardous Substances; Transport of Hazardous Goods; Documentation of Hazardous Substances; Emergency Procedures about Hazardous Substances; Regulations Related to Transportation of Hazardous Substances by Sea, Airline, Railroad; Methods and Principles Related to the Combined Transport of Hazardous Substances; Parties in the Transportation of Hazardous Substances and Responsibilities of Parties.

RAY 110 Measurement Technique 2+2 5,0
Measurement Techniques; Measurement Errors and Tolerances; Analog and Digital Measurement Equipment; Current, Voltage, Power and Frequency Measurement; Mechanical, Pneumatic and Hydraulic Measurement; Measuring Speed, Velocity, Heat and Gravity; Quantitative Measurement in Transmission Systems and Determining Failures; Safety Regulations of Electrical Measurement.

RAY 115 Scientific Principles of Technology I 2+0 2,0
Measurement and Unit Systems; Scaler and Vectoral Quantities; Kinematics: Velocity, acceleration; Dynamic: Work, power and energy; Friction Between Surfaces; Momentum and Collision; Stress and Strain Forces; Equilibrium and Center of Gravity; Electric Fields; Electric Potential; Capacitor, Electric Current; Magnetic Field and Sources; Electromagnetic Induction; Chemical Effects of Electric; Characteristics of Light.

RAY 116 Scientific Principles of Technology II 2+0 2,0
Fluid Mechanics; Fluid Characteristics: Types of fluids, Density, Pressure, Monometers, Viscosity, Properties of fluid flow, Continuity principle of flow, Equality of energy and friction losses; Heat: Thermometer and temperature scales; Heat and Thermal Energy; Heat Capacity and Specific Heat; Heat Transfer Concept and Heat Transfer Mechanisms: Conduction, Convexion, Radiation; Heat Transfer Equipments and Principles of Studying; Energy Sources: Fossil sources, Fresh energy sources.

RAY 118 Construction Materials 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.

RAY 120 Train Mechanics 2+2 3,0
Properties of Locomotives and Cars; Determining Speed For Trains with Load Types and Amounts; Determining Trip Time; Introduction of Equipment Used in Cars: Strings; Strength of Power Required for Cars? Strings in Straight and Hooked Areas; Harness Equipment and Location of Rantor Locomotive According to the Earth Surface; Types of Brakes: Electric and pneumatic brakes, Stopping distance; Relation of Locomotive?s Power and Load; Pulling Power and Junction Points.

RAY 148 Railway System Traffic I 3+0 4,0
Enumeration, Denomination and Classification of Trains and Related Plants; Train Speed; Preparation of Trains; Passenger Cars and Cold Locomotives in Trains; The Number, Length, Weight and Testing of Axles of Trains; Locomotives and Supporting Operations in Trains; Number of Personnel Working in Trains and Required Equipments; Brake Types, Need for Braking, Brake Calculation; Brake Testing of Trains.

RAY 201 Urban Railway Transportation Systems I 3+0 4,0
General Definitions and Concepts about Urban Railway Transportation Systems; Importance and Kinds of Urban Railway Transportation Systems and Planning of These Systems; Defining the Vehicles Used in These Systems, Features and Repair of These Vehicles; Data Processing Systems in Urban Railway Transportation; Working Principles; Signs and Signals for the Information Processing System.

RAY 202 Urban Railway Transportation Systems II 3+0 4,0
Type, Class and Speed of Trains Used in Urban Railway Transportation Systems; Planning of Traffic and Rules of the Regulation; Checking Vehicle Navigation; Facilities Providing the Safety of Control Systems; Maintenance and Repair of these Facilities Preparing All Vehicles for Traffic; Rules for Urban Railway Transportation Systems.

RAY 203 Basics of Engine 2+2 4,0
Transformation of Alternating Linear Motion to Circular Motion; Compressing Proportion Concept; Valve Setup Diagrams and Engine Diagrams; Diesel Engines and Gasoline Engine Components; Operating Principles; Compound Proportions; Fuel Systems; Stroking and Reasons; Power and Efficiency; High pressure Pipes and Injectors; Lubrication Systems; Cooling Systems; Supplementary Parts of Engines.

RAY 204 Railway Cars 2+2 4,0
Position of Passenger and Load Cars in National and International Transportation and Regulations; Passenger Cars, Load Cars, Types of Cars; Loading and Unloading

Methods; Measurements and Interpretation; Types of Loading; Conditions of Passenger cars; Teaching Signs and Numbers of Trains and Rolling Stock; Parts of Cars and Their Functions; Containers.

RAY 206 Trains and Roundhouses 2+2 4,0
Calculations About Rolling Stocks and Hauled Vehicles: Calculations for passengers carried on railways, Calculations for passengers on urban railway transportation system, Load calculations on railways; Revision and Maintenance Programs of Rolling Stocks; Calculation Planning of Rolling Stock Drivers; Evaluation of Rolling Stocks; Planning of Periodic Maintenance of Rolling Stock Depots, Round House Plan, Organization and Process of Rolling Stock Maintenance; Economy of Passenger and Load Transportation: Development of passenger and load transportation for GSMH increase and determination of needs, Intervention of round houses to railway accidents and taking steps.

RAY 207 Electric Engines 2+2 4,0
Operation Principles of Direct Current Machines; Structure; Elements; Their Operation As an Engine And A Generator; Maintenance; Driver Circuits; Monophase and Triphase Induction Machines; Synchroneous Machines; Synchronic Induction Machines; Step Machines and Their Operational Principles, Structure, Elements, Operation, Maintenance; Driver Circuits.

RAY 208 Basics of Brake 2+2 4,0
Production and Use of Compressed Air; Brake Types; Brake Influence; Brake Hardware; Perception System; Supplementary Brakes and Elements; Determining Failures in System and Repair; Differences Between Basic Line Railway Engines and Maneuver Railway Engines Brakes Hardware; Testing Brake Hardware in Railway Cars and Engine Line.

RAY 209 Energy Plants 2+2 4,0
Diesel and Electrical Locomotives; Diesel Engines; Operating Principles: Maintenance and operating; Electrical and Engines and Generators: Types, Operating principles, Running and maintenance; DC, AC Current Sources; Accumulators, Structure, Running, Maintenance; Invertors and Converters; Tests and Measurements in Energy Plants.

RAY 211 Electrical Management Plants I 2+2 3,0
Establishing Stationary Electrical Management Plants, Maintenance and Repairs; Necessary Road Plans and Data for Electrical Management Plant Projects; Route and Station Plants Tunnel and Over-Crossing Plants; Speed, Pantograph, Width, Determining and Planning electrical management plant feeding System; Posts and Foundations; Railway Electrification.

RAY 212 Electrical Management Plants II 2+2 3,0
Preperation and Interpretation of Installation Report Cards; Protection and Grounding; Interpretation of Grounding Plan; Transformer; Characteristics of Machines; Energy Determination, Voltage Determination and Equipment Selection; Systems and Equipments of Remote Control; Tranformer Construction; Operation and Maintenance of Electrical Facilities.

RAY 213 Communication Technology 2+2 3,0
Communication Systems and Their Principles; Examining Signals in Time and Frequency Regions; Modulation; Cordless and Cord Communication Systems; Filters; Multiplexing and Demultiplexing; Transmission Errors: Noise, Signal Weakness; Removing Transmission Pipes; Maintenance and Repairing.

RAY 214 Communication Technology II 2+2 3,0
Communication Systems on Railways; Study of Block Diagrams; System Line and Main Center Filters; Telegraph Bands; System Mounting; Grounding System; Feeding Types; Repeaters; Crossing Circuits; Adjustments; Error Determination; Railway Comprator Network; Telegraph Techniques; Telem Centrals; Adjuster Facilities.

RAY 217 Infrastructure and Maintenance 2+2 4,0
Basic Technical Principles Which Must Be Taken into Consideration in Preliminary Study of Railway Route; Recognizing of Road Substructure Installations; Maintenance and Repair; Water of Face of the Earth and Underground in Substructure Installations; Preventive Measures Against the Factors such as Snow Avalanche and Landslide Gabaris Relevant to Railway Substructure; Measures Against the Factors such as Snow Avalanche and Landslide Gabaris Relevant to Railway Infrastructure; Station Installations; Recognizing Signs and Signboards on Road Routes, Comprehending when and how to use.

RAY 218 Telephone Station Technology 2+0 2,0
Concept of Sound; Telephone Apparatus; Telephone Stations and Their Types; Digital Stations; Crossbar Stations; General Station Montage and Taking in to Operation; Roof Signalization; Subscription Roof; Group Selective Roof; Railway Telephony Network; Telecom Network Connections; Direction Selectors; Long Distance Circuit Selectors; Environment Plants.

RAY 220 Superstructure Technique and Maintenance 3+2 4,0
Superstructure and Duties; Superstructure Materials and Connection Types; Rails, Rail Standard and Connection: Crossroads, Ballast, Short Road Materials, Superstructure Technique, Curves and, Influences, Altitude, Connection parabola, Replacement files, Road construction and repair, Superstructure's relation with speed, Switches and types; Basic Techniques of Superstructure Repair and Maintenance.

RAY 221 Road Machines 2+0 2,0
General Information About Road Machines; Classification; Road Repair Machines: Rail welding machines, Road Renovation, Ballast adding, Regulator; Road Work Machines: Work otomobiles, Snow Shoveling, Infrastructure improvement and other work machines; Auxiliary Work Machines: Trifonoz blonoz, Rail profile grinding machines, Rail cutting, Rail milling, Crosstie milling, Rail carrying, Stretching, Grazing, Hand burage

machine, Jacks and the other helper machines; Machine road repair: Basis, Benefits, Preparations before, after and during the repair, Burage machines and basis of road repair with machine; Giving the value for dever and flange; Laws of Nivelman.

RAY 222 Rail Welding 2+2 3,0
General Information and Importance in Rail Welding: Aims, Welding types, Works to be done before, after and while welding on railway; Termit Welding: Team forming, Template, Preparing mold, Dampening, Preparing crucible, Casting, Opening molds and cleaning weld waste materials, Welding control; Preparation and Production of Machine Welding; Welding of material used for filling; Electric Arc Face Welding; Aluminothermy Rail Welding; Long Welded Rail Applications, Definition, Works, Measuring average temperatures; Taking Extension; Attention in Maintenance of Rail with UKR; Forming Systematic and Learned Welding Teams: Determining places where will be welded rail, Welding controls, Works in broken Rails.

RAY 223 Railway System Management 2+2 3,0
Position and Importance of Railways in Transportation; Definition and Classification of Haul and Dragged Vehicles in Railway; Types of Stations; Midways of Stations and Switches; Definition of Signs in Railways; Systems of Train Traffic Operating; Procedures of Carrying Passengers and Loads; Special Loading According to Types of Cars; Loading Gauges; Types of Security on Special Loading.

RAY 224 Railroad Project and Railroad Technique 2+2 4,0
Introduction to Railroads: Railway mechanics, Traffic and trains; Project Standards; Standard Elements of Route: Design and geometry, Grades, Vertical and horizontal curves, Cant, Easement curves; Route Design: Plan and profile, Loading gauge, Cross sections; Earthworks; Superstructure: Rails, Ballast, Sleepers; Design of Superstructure; ORER Diagrams and Economics.

RAY 225 Train and Wagon Planning 3+2 4,0
Transportation; Repartition; Vehicles; Importance of Utilization and Rotation for Railway Systems; General Procedures for Planning Trains and Railway Cars; ORER and Works of Orer; Reading Train Itınerary on Graphs; Calculations of Capacity and Personnel; Information on Statistics and Evaluations.

RAY 226 International Railway Transportation 3+0 3,0
International Organizations Regulating the International Freight and Passenger Transportation; Regulations on International Freight and Passenger Transportation; General Information on International Passenger and Freight Transportation; Tariffs on International Freight and Passenger Transportation; General Trade and Tariff on Freight; Cards and Tolls Used in International Passenger Transportation; General Information about International Freight Transportation; Relationships Between International Passenger and Freight Transportation with Railways; International Tariffs, Application areas; Prices of Freight Transportation on Railways.

RAY 227 Railway Transportation I 3+0 3,0
Passenger Transportation and Carrying Out; Main Line Passenger Transportations; Preparation of whole Tickets and Season Tickets and Season Tickets Used for Railway Transportation; Preparation of Documents Used for Luggage and Cargo Transportation; Preparation of Necessary Models at Transportation Disorders; Filling in Transportation Disorders Notebook Orderly.

RAY 228 Introduction to Human Resources 2+2 4,0
Structure of Railway Institutions; Concept of Organization; Personnel Working in Railways: Personnel Working Lines, Duties and Responsibilities, Electric-Electronics Personnel, Duties and Responsibilities; Concept of Job Security, Vacation Time, Retirement; Concept of Duty and Responsibility; Evaluating Human Resources; Concepts of Punishment and Discipline.

RAY 229 Introduction to Electric-Electronics 2+2 4,0
Facilities Providing Safety in Railway Operation; Telecommunication Facilities; Signal Facilities; Fixed Electrical Operating Facility; Positive Affects on Environment; Signals Facilities along Railway Related to Electrical Operating; Contribution of Service of Facilities to Economy and Business Administration; Providing the Safety of Train Traffic; Increasing the Capacity of Line and Contributing to Economy of the Country.

RAY 230 Introduction to Railway Networks 2+2 4,0
Basic Concepts of Railways and Classifications; Railway; Radius; Route, Ditch, Application Variant; Switch, Incline, Main Line, Secondary Lines, Division Line, Concepts of Structure and Main Structure; Fissures; Reclaimed Tunnels, Bridges, Passages (Mountain Pass), Fortification Structures and Support Walls, Definition and Kinds of Main Structure; Materials: Definition and kinds of materials connecting rail to rail and rail to travers, Switches, Fixed facilities at stations, Signs and rules; Importance of Railway Maintenance.

RAY 231 Introduction to Railway System Administration 2+2 4,0
Transportation, Modes and Importance, History of Railroading in World and Turkey, Description and Properties of Trains, Classification of Trains, Description and Properties of Stations, National Freight Processing, Pricing and Documentation, International Freight Processing and Documentation, Pricing, General International Freight Transportation Documentation, Trade and Tariffs (CIV), Regulations on Exceptions on International Freight Transportation.

RAY 233 Introduction to Machinery 2+2 4,0
Basic Concepts and Classification of Vehicles Trailing and Being Trailed on Railways; Trailing Vehicles on Railways: Steam locomotives, Diesel locomotives, Electric locomotives; Railway Vehicles Being Trailed: Passenger railway wagons, Cargo railway wagons, Open-air type railway wagons, General Structure of Railway Wagons.

RAY 234 Technical English 3+0 3,0
Railway and Railroad Transportation Terminology in English and Turkish Meanings; Translation of Articles in English about Railway Technology; Education with aduio and visual agents designed for Railway Technology Education; Technical Reports and Technical Report Writing.

RAY 235 Electronics 3+2 4,0
Conductivity, Isolation, Semi-Conductors; Diodes; Transistors: Structure and Types, Characteristics; Amplifiers; Power Supplies; Electro-Optical Circuits; Silicon Controlled Rectifiers; Amplifiers; Differential Amplifiers; Oscillators and Types of Oscillators; Integrated Circuits; Modulation and Demodulation; Senders and Receivers; Transmission Lines.

RAY 236 Signal Technique 2+2 3,0
Development of Signalling Systems; Signalling Concept and Importance; Mechanical Signalling Systems; Level of Mechanical Signaling Systems, Types, and equipment; Design of Electrical Signalling Systems; Remote Controlled Signalling Systems; Direct Remote Signalling Systems; Automated Block Signalling Systems; Equipment Used in Automated Block Signalling Systems, Signals, Switch equipments, Track switch equipments, Grade crossing safety equipments, ATS system equipments, Energy source equipments, Remote center equipments, Conveyance line equipment; Track circuts; Communications Systems.

RAY 237 Historical Development of Railways 2+2 4,0
Global Development Process of Railways; Railway History in Ottoman Period; Ottoman Empire's Railway Politics (Rumelia- Anatolian- Baghdad, Anatolian-Hedjaz Railways); Construction Period; Station, Locomotives, Passenger and Freight Investigation; Railway Uniform; Railways at Republic Period (1920-1950); Development Period in the First Years of Republic Period; Railways Situation After 1950; EU 's Railway politics Turkish Railway's Approach to EU Railway; Cultural and Social Effect of railway to Turkish People.

RAY 238 Railway Systems Cost Analysis 2+0 2,0
Accounting Information Systems for Railway Systems; Cost Concept of Railway Systems; Materials and Labour Costs of Railway Systems; Operating Costs and Properties; Operating Costs and Budgeting; Expenses in Railway Systems, Pricing in Railway Systems; Application of Cost Accounting in Pass a Tool in Planning, Controlling, Appraisal and Decision making.

RAY 239 Towing Vehicles I 2+2 4,0
Fundamental Concepts; Definitions and Classification of Towing Vehicles in Railway Technology: Definition of train sets and motor coaches, Transmission equipments Main and supplementary equipments in towing vehicles; Power supplies, Engines and Transformers; Wheels and Rails: Side and longitudal actions of cars and train sets in general; Lase Movements; Axle run downs and affects.

RAY 240 Towing Vehicles II 2+2 3,0
Diesel Hydraulics Main Line and Maneuvour Locomotives: Transmission systems, Engines and characteristics, Properties of diesel engines; Diesel Hydraulics Trains' and Motor Coaches' Characteristics of Engines and Transmission Systems; Diesel-electric and Electric Locomotives: Properties and Transmision systems; Electric Powered Motor Coaches: Suburban lines, Subways; Lightrail Transportation Systems: Power and transmission systems of lightrail systems; Protection Circuits and Safety Sytems in Cars; Power Schemes; Dynamic Brakes.

RAY 241 Locomotive Failure and Maintenance Techniques 3+0 2,0
Maintenance and Maintenance Types: Preventive Maintenance, Annual Maintenance, Periodic Maintenance, Maintenance of Diesel Locomotive and Detection of Failure: Lubricant control, Fuel control, Water control, Motor cooling system test; Nondestructive Test of Diesel Locomotive Equipment: Brake system control, Transmission test, Bogie test; Maintenance of Electrical Locomotive and Detection of Failure: Lubricant control, Fuel control, Water control, Motor cooling system test; Nondestructive Test of Electrical Locomotive Equipment: Brake system control, Transmission test, Bogie test.

RAY 242 Computer Aid Circuit Analysis 2+2 4,0
Structure of Packet Program; Schematicaly drawing-ISIS: What is ISIS?, Chosing, Locating and Connecting of components, General concepts of ISIS: Graphics, Raporing, Print outputs; Simulation-VSM: Interactive simulation, Graphic based simulation; Types of Analysis: Analog analyse, Digital analyse, Frequency analyse, Noise analyse, Audio analyse, Interactive analyse, Digital conformance analyse; Models of SPICE: Definitrion of SUBCKT, Card of model, Libraries of model.

RAY 243 Electrical Management Plants 3+0 2,0
Establishing Stationary Electrical Management Plants, Maintenance and Repairs; Fundamentals of Catenary Systems; Factors Affecting Catenery Type Selection; Necessary Road Plans and Data for Electrical Management Plant Projects: Route and station plans, Tunnel and over-crossing plants, Speed, Pantograph width; Determining and Planning Electrical Management Plant Feeding System; Determination of Catenary System; Poles and Ground Mountings; Catenary Equipments and Elements; Railway Electrification.

RAY 244 Digital Electronic 2+2 4,0
Basic concept; Number systems: Decimal, Binary, Octal, Hexadecimal number systems; Conversion of number systems; Logic Gates: And, Or, Nand, Nor etc., gates; Truth tables; Boolean Algebra: Rules, De- Morgan theorems, Simplification of logic circuits; Karnaugh Maps, Simplification of Logic Circuits; Adders and Subtractors: Half-Full adders, Half-Full subtractors; Combinational Circuits: Decoder, Encoder, 7 segment display; Flip-Flops: S-R, D, T, J-K flip flops and truth tables; Counters; Registers; Memory Units: RAM, ROM, EPROM, EEPROM and their characteristics.

RAY 245 Telecommunication Technique 2+0 2,0
Communication Systems Used in Railways; Investigation of Block Diagrams; System Line and Main Center Filters; Telegraph Lines; System Installation; System Grounding; Feding Types; Repeaters; Transition Circuits; Calibrations; Failure Detection; Railway Kramportör Network; Telegraph Technique; Telem Stations; Dispatcher Plants.

RAY 246 Train Driving Signal Technique 2+0 2,0
Development of Signalling Systems; Signalling Concept and Importance; Mechanical Signalling Systems; Level of Mechanical Signaling Systems, Types, and Equipment; Design of Electrical Signalling Systems; Remote Controlled Signalling Systems; Direct Remote Signalling Systems; Automated Block Signalling Systems; Equipment Used in Automated Block Signalling Systems: Relays, Signals, Switch equipments, Track switch equipments, Grade crossing safety equipments, ATS system equipments, Energy source equipments, Remote center equipments, Conveyance line equipment; Track Circuts; Communications Systems.

RAY 247 Train Air Conditioning 2+2 4,0
Basic Concepts: Temperature, Heat, Measurement, Specific heat, Change of state, Boiling and melting point, Entalphy curve, Heat transfer, Effective pressure, Absolute pressure; Cooling System: Cooling, Types of cooling systems, Cooling cycle schema, Compressor, Condenser, Evaporator, Heat exchanger; Cooling Electricity: The elements used in electrical circuit and their working principles;Air Conditioner Systems: Air, Cooling, Electrical circuit, Heat pump electrical circuit; Train Air Conditioner Systems.

RAY 248 Train Drive Techniques 2+2 3,0
Straight Line Practice: Upward Light Slope Practice; Upward Perpendicular Slope Practice; Downward Light Slope Practice; Downward Perpendicular Slope Practice; Mixed Practice; RANFOR application; ATS Application; Maneuvers: Regular maneuver, ATMA Maneuver, Manual maneuver, Sliding maneuver, Side maneuver, Control of Maneuver Process: Train formation maneuver, Brakes on maneuver, Switch Services, Maneuver Line Control and Observation.

RAY 249 Railway System Traffic II 3+0 4,0
Train Traffic; Acceptance and Departure of Trains; Disorders in Train Traffic; Models Assigned to Trains; Traffic Scale; Traffic of Service Trains, Railroad Machines and Railway Rotary Snow Plugh; Train Traffic in Muti-Way Lines; Special Regulations of Different Traffic Systems; Signal Colour Notifications; Train Traffic in Special Regions; Railroad Vehicle Traffic; Maneuvers; Signs Used in Railways.

RAY 251 Train Mechanics I 3+0 3,0
Properties of Locomotives and Cars; Determining Speed For Trains with Load Types and Amounts; Determining Trip Time; Introduction of Equipment Used in Cars: Strings; Strength of Power Required for Cars; Strings in Straight and Hooked Areas; Harness Equipment and Location of Rantor Locomotive According to the Earth Surface; Calculations About Rolling Stocks and Hauled Vehicles: Calculations for passengers carried on railways, Calculations for passengers on urban railway transportation system, Load calculations on railways; Revision and Maintenance Programs of Rolling Stocks; Types of Brakes: Electric and pneumatic brakes, Stopping distance; Relation of Locomotive's Power and Load; Pulling Power and Junction Points.

RAY 252 Train Mechanics II 3+0 3,0
Production and Use of Compressed Air; Brake Types; Brake Influence; Brake Hardware; Perception System; Supplementary Brakes and Elements; Determining Failures in System and Repair; Differences Between Basic Line Railway Engines and Maneuver Railway Engines Brakes Hardware; Testing Brake Hardware in Railway Cars and Engine Line; Calculation Planning of Rolling Stock Drivers; Evaluation of Rolling Stocks; Planning of Periodic Maintenance of Rolling Stock Depots, Round House Plan, Organization and Process of Rolling Stock Maintenance; Economy of Passenger and Load Transportation: Development of passenger and load transportation for GSMH increase and determination of needs, Intervention of round houses to railway accidents and taking steps.

RAY 253 Towing Vehicles 2+2 4,0
Fundamental Concepts; Definitions and Classification of Towing Vehicles in Railway Technology: Definition of train sets and motor coaches, Transmission equipments Main and supplementary equipments in towing vehicles; Power supplies, Engines and Transformers; Wheels and Rails: Side and longitudal actions of cars and train sets in general; Lase Movements; Axle run downs and affects; Properties and Transmission Systems of Diesel Hydraulics Main Line and Maneuvour Locomotives, Diesel Hydraulics Trains and Motor Coaches, Diesel-electric and Electric Locomotives; Electric Powered Motor Coaches; Lightrail Transportation Systems; Protection Circuits and Safety Sytems in Railway Cars; Power Schemes; Dynamic Brakes.

RAY 254 European Union Transportation Legislation 2+2 4,0
Railway Legislation: Framework law for rail sector, TCDD law, Foreseen legal arrangements in rail freight due to harmonisation with European Union; Mutual Operability; Railway Infrastructure Access Regulation: Limits for the rail freight; International Rail Freight Organizations; International Rail Freight Pricing; Combined Transport Legislation; United Nations International Combined Transport Convention; Turkish Foreing Trade Legislation: Investment and promotion legislation for international trade, International transportation and logistics legislation, International carriage contracts legislations, rights and responsibilities due to contracts; Transport Associations.

RAY 256 Railway Cars 2+0 3,0
Position of Passenger and Load Cars in National and International Transportation and Regulations; Passenger Cars, Load Cars, Types of Cars; Loading and Unloading Methods; Measurements and Interpretation; Types of Loading; Conditions of Passenger cars; Teaching Signs and

Numbers of Trains and Rolling Stock; Parts of Cars and Their Functions; Containers.

RAY 258 Railway Networks 2+0 2,0

Basic Concepts of Railways and Classifications; Railway; Radius; Route, Ditch, Application Variant; Switch, Incline, Main Line, Secondary Lines, Division Line, Concepts of Structure and Main Structure; Fissures; Reclaimed Tunnels, Bridges, Passages (Mountain Pass), Fortification Structures and Support Walls, Definition and Kinds of Main Structure; Materials: Definition and kinds of materials connecting rail to rail and rail to travers, Switches, Fixed facilities at stations, Signs and rules; Importance of Railway Maintenance.

RAY 260 Transportation Management 2+2 4,0

Transportation and Logistics; Determination of Customer Needs; Passenger-Load Transportation and Main Transportation Classes: Airway Transportation, Highway Transportation, Railway Transportation, Sea Route Transportation; Transportation Management; Transportation Planning; Sender and Receiver Sides; Evaluation of Vehicle-Load-Route; Time-Cost Analyses; Performance Analyses in the Transportation Management; Contract Genres; Pricing; Jural Charge and Legal Frame; The European Union Legislation: Legislations Regarding Highway-Airway-Sea Route and Railway; Arrangements About Transportation; Education of Human Sources; R&D Activities; Quality Management Systems.

RAY 261 Railway System Vehicle Mechatronics I 3+1 4,0

Control Algorithms: Traction motor control algorithms, PWM rectifier control algorithm, Traction based slipping ? skidding control, Dynamical brake system control (via braking resistance); Start Up/Switch Off Procedures: VCB, Main contactors and pre-charge contactors, DC bus discharge contactor, Manual switch off; Monitoring and Protection Procedures: Protection procedures for traction system related error/warning conditions, Traction system related event and error logging, Controlling and monitoring the traction system related cooing circuits/devices; Traction Motor Speed, Thermal, Current and Voltage Monitoring Circuits; Air Brake and Its Interface with Central Control Unit.

RAY 262 Railway System Vehicle Mechatronics II 3+1 4,0

Cruising and System Logging; Monitoring, Protection and Control Procedures related to Auxiliary Systems; Processing Error Scenarios and Error Identification; Sending the Engine Driver?s Requests to Related Subsystems Considering Security Parameters; Manual Control of Pantograph and VCB; Sending Traction and Brake Requests to Related Units; Monitoring Locomotive Parameters; Manual Command and Control Signs Production; Collecting Engine Driver?s Data; Collecting the Data from Units related to Maintenance Monitor; Locomotive Protection and Warning Circuits; Railroad Signal Equipments and Communication Techniques; Control Desk (EUDD standard requirements).

RAY 264 Cultural Values in Railway Transportation 2+2 4,0

Cultural History of Railway Transportation; Railway Transportation Culture; Elements of Railway Transportation Culture; Subcultures in Railway Transportation; Emergence of The Subcultures in Railway Transportation; Historical Development of Turkish Railway Transportation; Historical Development of The Railway Transportation Education; Institutional Structure of Turkish Railway Transportation; Legislation about Turkish Railway Transportation; Institutional Culture in Turkish Railway Transportation; Cultural Values in Turkish Railway Transportation; Professional Ethics in Railway Transportation.

RAY 266 New Approaches in Railroad Traffic Management 2+2 4,0

Historical Development of Railway System Traffic; Centralized Traffic Control (CTC) System; Traffic Control using Signals (TSI); Automatic Train Stop (ATS): Structure, Operation, Units, Railroad signal equipment; Automatic Train Control System (ATB): Structure, Operation, Units, Railroad and on board signal equipment; ATCS System: Structure, Operation, Classification, Railroad and on board signal equipment; The European Train Control System (ETCS): Structure, Operation, Level-1, level-2 and level-3 ETCS Systems, Railroad and on board signal equipment; SCADA System: Structure, Control systems, Planning, Railroad and on board central signal equipment, Communication and programmable electronic control units, Electrical panels; Global Development Process of the High Speed Train Management; High Speed Train Management Traffic Control in Turkey: Ankara-Eskişehir and Ankara-Konya examples.

RAY 268 Scientific Principles in Railway Engineering 2+2 4,0

Physics Concepts in Railway Applications; Implementation of Physics Concepts; Application of Newton's Laws, Forces Affecting Trains in Motion; Work-Power-Energy Calculations of Trains; Electric and Magnetic Fields; Grounding Railway Tracks, Information Transmission Lines and of Information Transmission, Electromagnetic Waves, Light and Optics.

RUS 255 Russian I 3+0 4,0

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

RUS 256 Russian II 3+0 4,0

Plural Nouns; Construction of Plural Nouns: Plural-only and Singular-only Nouns; Adjectives: Types of adjectives, Forms of Adjectives; Numbers: Different Types of

Numbers; Verbs: Types of verbs; Infinitives; Tenses: Present Continuous Tense, Past Tense, Future Tenses; Action Verbs.

RUS 357 Russian III 3+0 4,0
Modal Verbs; Imperatives; Conditionals; Reflexive Verbs, Their Construction and Use; Adverbials, Their Construction and Use; Prepositions: Prepositions of Place and Purpose; Conjunctions and Words Used as Conjunctions; Prepositions Used in Complex Sentences; Days; Months; Seasons; Introducing Russian Culture: Regime in Russia, Time-Zone Differences in Russia.

RUS 358 Russian IV 3+0 4,0
Adverbs: Adverbs of direction; Adverbs of manner, Adverbs derived from adjectives, Time Adverbials, Adverbs used as verbs: Adverbs with negative meaning; Adverbs of quantity; Short Adjectives; Comparative and Superlative Forms of Adjectives; Pronouns: Personal and Demonstrative Pronouns; Possessive Pronouns; Reflexive Pronouns; Reciprocal Pronouns; Interrogative Pronouns; Negative Pronouns; Neutral Pronouns; Different Uses of Pronouns.

SAĞ 102 First Aid 2+0 2,5
Social Importance of First Aid; Aims of First Aid; Precautions To Be Considered by The One Who Will Apply First Aid; Human Body; First Aid Materials; Strangulations and Supplying Respiration; Stopping Bleedings and Supplying The Blood Circulation: External and internal bleeding signs and first aid, Recognition of blackout of consciousness and first aid, Shock causes and recognition of shock related to bleeding and first aid, Coma degrees and first aid, First aid in heartbeat stopping, Applying cardiopulmonary resuscitation (CPR) and artificial respiration together; Injury Types and First Aid; Burn and Boils; Fractures, Dislocations and Spraining; Poisonings, Freezing, Hot and Electric Shocks; Communication; Preparation of Injured Person for Carrying and Carrying Types.

SAĞ 116 Health Information and First Aid in the Cabin 1+2 3,0
Knowledge of Basic Anatomy; Infectious Diseases and Prevention; Flight Hygiene; Physiological Effects of Flight; Basic Concepts of First Aid and Responsibilities of Cabin Attendants; First Aid Materials and Applications; Patient Consultation and Three Vital Situations; Respiration Halt and Opening of Airway: Artificial respiration, Heimlich method; Shock; Bleeding and Ways to Stop Bleeding; Wounds and Tetanus; Heart Attack and Cardiac Arrest; Revival of Heart and Lungs and Revival Table; Burns; Fractures; Sprains; Loss of Conscious; Stroke; Food Poisonings; Psychological First Aid; Delivery and Reporting; Death on Board and Reporting.

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.

SEK 107 Commercial Documents 2+0 3,0
Accounting and Balance Sheet; Presentation of Periodic Financial Statements; Classifications of Accounts; Information of Processing Cycle; Recording Chronologically; Accounting Documents for Banking; Chamber of Trade and Industry.

SHK 101 Knowledge of Basic Flight and Aircraft 1+1 2,0
Theory of flight, Aerostatics Aerodynamics, Basic Airodynamics, Physical characteristics of air, Standard atmosphere, airflow, components of aerodynamic force, wing configurations, flaps, Fuselage, Types of aircraft, Flight control surfaces.

SHK 102 Meteorology 2+0 3,0
History of Meteorology, The Atmosphere, Pressure, Density, Synoptic Charts, Pressure Systems, Altimetry, Temperatura, Humidity, Stability, Turbulence, Wind, Local winds, Upper winds, Air masses, Global circulation, Jet Stream, Cloud formation and precipition, Thunderstroms, Meteorological Visibility, İcing, Meteorological documentation, Weather Charts, Weather Report (METAR, TAF..)

SHK 103 Professional English I 2+1 3,0
Aviation Alphabet; Terms/ Aviation terminology, Historical Development of Civil Aviaiton, National and International Civil Aviation Organizations, Legal Statements: Nine Air Trafic Statements; general view to Air transport Industry; Airline Services, Airport Services, Ground Services. Reading and examining articles about aviation sector/field based on the curriculum; Case studies.

SHK 104 Professional English II 2+1 4,0
Announcements: announcements for normal conditions/situations, announcements for emergency conditions/situations. Human Sources in Aviation Industry: the importance of human sources in the process of industry, The importance and position of cabin attendants in this process, human psychology, English communication skills; Reading and examining articles about responsibilites for cabin attendants; case studies.

SHK 106 Introduction to Cabin Attendant 1+2 3,0
Cabin Attendant Duties and Responsibilities: Safety of cabin, Safety of passenger, Catering, Documentation, Duty-free; Cabin Attendant Lifestyle: Cabin Attendant Healthy Living, Considering the time and climate differences in cabin attendant health, Relocation; Diction; Personal Hygiene, Make-up; Etiquette and grace.

SHK 107 English in Real Life I 3+0 4,0
Oral Communication Functions: Meeting, Greeting, Saying goodbye, Shopping, Asking for/Giving Permission, Stating opinion about any topics and issues; Making Reservations; Offering and Suggesting and/or Refusing; Phrases and Vocabulary: Phrasal verbs and meanings; Adjectives and Phrases Used to Define and Describe People, Events and Social Contexts; Structures: Comparisons; Modal Verbs Used to Express Possibility, Obligation, Permission, Ability.

SHK 108 English in Real Life II 3+0 4,0
Samples of Various Written Text Types: Short story, Newspaper article, Advertisement, Curruculum Vitae/Resume, Diary, Critic, Anecdote; Reading Comprehension Strategies: Guessing unknown words in the context, Finding main and specific ideas, Scanning, Skimming; Parts of Speech: Nouns, Adjectives, Verbs, Adverbs; Effective Dictionary Use.

SHK 201 Normal Safety Procedures 1+3 3,5
Cabin description: Electronic communication systems, Lavatories, Galleys, Water systems, Passenger oxygen systems, Passenger overhead lockers, Doors, Practical education, Passenger management: Knowing the passengers under medication or alcohol and methods, Controlling the crowd, Settlement of disabled passengers, Carrying pets in the cabin, Hand luggage on bags, Practical education; General methods during turbulence and methods during turbulence, Methods before flight and during take off, Methods during flight; methods of landing and after flight; fuel-loading on the ground when passengers on board; carrying dangerous materials by air; practical education.

SHK 202 Emergency Procedures 1+3 3,5
Emergency Equipment: Oxygen and oxygen systems, Survival equipment, Aircraft evacuation equipment, Lifejacket, Practical training; Basic Principles; Decompration; Emergency Oxygen Applications; Types of Fire and Fire-related Procedures: Fire Extinction Training; Emergency Procedures During Takeoff, Flight and Landing; Evacuation Procedures: Survival techniques, Practical training; Passenger and Crowd Control in Emergency; Emergency Procedures Related with Dangerous Goods; Practical Training.

SHK 203 Basic Service Knowledge 1+1 2,0
Basic concepts of catering and hospitality; Presentation of service material and storage; Hijyene and Sanitation; Service Procedures: Standard service, Preparation; Food Knowledge: Hot foods, Cold foods; Drink information: Bar management, Beverage types, Spirits, Kocktail, Wine varieties, Beer varieties, Soft drink, Drink service, Aperitives, Drinks served at dinner, Digestion, Practical Training

SHK 204 In-Flight Services 1+1 2,0
In-Flight Service and Its Importance; Main Factors in In-Flight Service Planning; Financial Benefits of Food-Drink Finance Control on Airlines and Role of Flight Attendants in Finance Control; Materials Served in Cabin: Storage of food and drinks, Use of seals, Newspaper service, Headphone service, Amenity service, Hot towel service; Types of Services According to Various Hours of a Day; Types of Service According to Passengers; Service to Cockpit; Service of Duty-Free; Service Procedures; Galley, Food heating procedures, Procedures to follow during service, Rules for beverage service; Standard Ways of Service; Reports and Forms; Practical Training.

SHK 205 In-Flight Customer Services 1+2 3,0
The importance and role of front-line attendant in airlines. Communication with passengers and using body language; Welcoming and saying goodbye to passengers; Passenger types and meeting their expectations: Passenger types in different classes on board, Businessmen, frequent flyers, loyal flyers, very important passengers, workers, unaccompanied miners, ill and disabled passengers, pregnant passengers and passengers with babies, passengers who required special menu, tourist groups, free flyers, dissatisfied passenger management, in-flight entertaintment.

SHK 206 CRS Application 1+3 3,5
Concepts; Global Indicators; Fare Calculation for One-Way and Return Tickets and Ticket Issuance; PTA, MPD Issuance; Special Fares; Mixed Class; Fares for Children and Infants; Coding; Encoding; Timetable Entries; Flight Display; Sale from Flight Display; Waitlist; ARNK Segment; Name, Telephone, Ticketing and Booking Entries; OSI, SSR Entries; Division of a Reservation File; Fare Screen: Pricing procedure; Various Entries; Ticket Printing.

SHK 207 Passenger Service 1+1 2,0
Definition of Passenger; Handling of Valuable Documents; Baggage Handling; Intermediate Points During Journey: Stopover, Transfer, Transit; Points to Consider Regarding Passenger Tickets; Tickets Subject to Special Fare; Baggage Subject to Special Fare; Peace Rate System Transportation; Excess Baggage Handling Procedures; Procedures for Traveling with Pets; Rules Related with Cabin Baggage; Endorsement; Reissue.

SHK 208 Dangerous Goods 1+1 2,0
The Concept of Dangerous Goods and Classification of Dangerous Goods; Dangerous Goods Not Transported by Air; Units and Documents Used; Responsible Parties in Air Transportation of Dangerous Goods: Shippers, Cargo agencies, Airline companies, Load planners and flight crew, Loading and storing personnel; Use of Dangerous Goods Table; Use of Packaging Instructions and Tables; Packaging Procedures and Performance Tests; Package Marking and Labeling; Responsibilities of Shipper and Transporter with Regard to Dangerous Goods; Making a Bill of Loading; Reception, Storage, Loading and Control of Dangerous Goods.

SHK 210 In-Flight Resource Management 1+2 3,0
Basic Concepts Concerning Flight Safety; Human Factors; Aircraft Flight Attendant and Resource Management; Human Performance and Its Limitations; Human Error and Its Management; Stress Management; Fatigue and

Attention; Self-confidence and Persistence; Situational Awareness; Workload Management; Communication and Coordination between Cabin Attendant and Cockpit Crew; Communication and Coordination with Other Personnel; Leadership in Aircraft Cabin Attendant; Management of Human Factors Among Passengers: Crowd control, Passenger stress, Crowd conflict management, Factors Concerning Flight Types; Cases Related with In-Flight Safety.

SHK 212 Ground Handling and Operation 1+1 2,0
Weights Concerning Load and Balance: Importance of Balance: Center of gravity and balance, moment, imaginary starting line, ground number for aircraft fuselage center of gravity, center of gravity of an empty plane. Aerodynamic Blade Section: Blade section, the distance of frontend of blade section to starting line, the distance of backend of blade section to starting line, main wing cross-section calculations, stabilizer trim graph, limits of gravity center, failure to hover. Effects of Overloading on Aircraft Performance: During takeoff, flight and landing, and failure to hover. Effects of Loading at Front and Back Limits of Gravity Center on Aircraft Performance: During takeoff, flight and landing. Passenger and Cargo Transportation by Air: Passenger, cargo, luggage regulations and limitations Loading Limitations: Load limitations, loading limitations, aircraft limitations. Preparation of Load and Balance Forms: Preparation of load and balance forms for Boeing 737 airplanes, Preparation of load and balance forms for Airbus A-340, Preparation of load and balance forms for Airbus A-319-320-321.

SHU 426 Transportation Policies 2+0 3,5
Definition and Importance of Transportation; Transportation Industry; Transportation Policy and Inter-systems Coordination; Transportation Modes; Intermodal Transportation; Changes Affecting Transportation Industry; European Union Transportation Strategies and Policies; Analysis of Turkey’s Transportation Policies; Air Transportation Industry Analysis; Impacts of Changes on Air Transportation Industry; Strategic Management in Air Transportation Industry; Analysis of internal and external environment; Investment strategies and planning; Strategic management case studies.

SHU 428 Logistics Management 2+0 3,0
The Concept of Logistic; Development of Logistic Management; Logistic and Services; Consumer Services; Supply Chains; Production/Service Activity Process; Integration of Logistic Activities; Integrated Logistic; Global Logistic; Elements of Logistic; Network Design; Information Systems; Transportation; Stock Procedures; Package and Distribution; Tools and Supplies; Logistic Sources; Logistic Management Applications; Organization; Planning; Costs; Pricing; Performance Measurement and Reporting; Examples; Applications of Logistic Management in Airlines.

SNT 155 History of Art 2+0 2,0
History of Civilization and Evolution of Art: Prehistory to Present; Concepts and Terminology in Art with Samples; Interrelation among Art-Religion and Society; Effects of Religion on Artistic Development; Reflections and Interpretations of Judaism, Christianity and Islam on Art; Renaissance: Emergence, Effects, Artists, Works of Art; Architecture and Plastic Arts; Art in the 19th and 20th Centuries: Relevanceof the main historical events of the period.

SOS 155 Folkdance 2+0 2,0
Dance in Primitive Cultures; Dance in Earlier Civilizations; Dance in the Middle Age and Renaissance; Dance in the 18th and 19th Centuries; Dances of the 20th Century; Ballet; Turkish Dances; Emergence of Folkdance; Anatolian Folkdance: Classification, Accompanying instruments; Methods and Techniques of Collecting Folkdance; Problems in Collecting Folkdance; Teaching of Folkdance; Adapting Folkdance for Stage: Stage, Stage aesthetics and Choreography, Orientation and choreography.

TAR 165 Atatürk's Principles and History of Turkish Revolution I 0+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 0+0 2,0
The Restructuring Period; The Emergence of the fundamental policies in the Republic of Turkey (1923-1938 Period); Atatürk's Principles, and Studies on Language, History and Culture in the period of Atatürk; Turkish Foreign Policy and Application Principles in the period of Atatürk; Economic Developments from 1938 to 2002; 1938-2002 Period in Turkish Foreign Policy; Turkey after Atatürk's period; Social, Cultural and Artistic Changes and Developments from 1938 to Present.

TEK 107 Scientific Principles of Technology 3+1 4,0
Material Properties: Chemical operations in burning and oxidation, Prevention from oxidation, Elasticity of material and Hook's Law; Static: Static balance state, Vctorial and scalar quantities, Moment, Center of gravity; Dynamics: Path, time, velocity and acceleration; Mechanic and Electromagnetic Wave Movement: Wave length, Frequency; Fluid Pressure: Pressure and its units, Absolute presuure, Relative Pressure; Electric and Magnetism: Simple circuits with serial and parallel connected resistants, Current, voltage difference and resistant problems.

THU 201 Community Services 0+2 2,0
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.

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.

TİC 106 International Trade Theory 3+0 4,0
Classical Theory of International Trade: Absolute advantage theory, Comparative advantage theory; Internetional Trade Theory based on Supply and Demand, Formation of International relative prices, Analysis with Social Unconcern Curve, General equilibrium in economy; Factor Equipment Theory, Basic result from theory, Theorems from Heckscher-Ohlin Model, Testing theory; New theorems for explaining International Trade; International Trade Theory and Economic Growth Analysis; Increase in factor supply, Technological development, Growth, Trade boundaries and welfare relation, Becoming destitution growth, Improvement and Comparative advantage.

TİC 214 E-Trade 1+1 2,0
Electronic Trade; Chronological Development of Electronic Trade; Basic Concepts Related to the Internet and Electronic Trade; Importance of Electronic Trade; Explaining Logistic Services Given via Internet; Conducting Marketing Activities on Internet; Management of Marketing Activities on Internet; Sample E-Trade Practices

TİY 308 Republic Era Turkish Theatre 2+0 3,0
Republic Era Turkish Theatre: Political, Social, Cultural Art Life; Theatre Concepts; Western Theatre; Theatre Perception; Effects of Western Theatre on Turkish Theatre; Dramatic Types; Acting Methods, Directing, Playwriting, Dramatic Styles; Theatre Buildings; Directing Techniques; Analyzing Developments of Theatre; Theatre Education; State Theatres; Private Theatre Companies.

TKY 204 Total Quality Management 2+0 2,0
Quality Concept; Historical Evolution; Strategic Quality Concept; Quality Dimensions; Factors Effecting Product and Service Quality; Quality Management and Evolution of Management; Characteristics of TQM as a Management System; Preparing TQM; Tools Using TQM; TQM in Turkey; TQM, ISO 9000 Quality Assurance Systems and Quality Circle Applications for Problem Solving.

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 101 Introduction to Transportation and Traffic Technique 3+0 5,0
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; Studies and Measurements in Traffic; Human as a Traffic Element; Vehicle; Roads and Crossroads; Traffic Lights, Traffic Signs.

TRA 104 Traffic Regulations and Law 2+0 2,5
Definitions; Organizations; Traffic Signs; Signals; Signaling Regulations and Road Information; Using the Road; Speed Regulations, Distance to be kept between the vehicles during traffic flow, Overtaking; To Let the Others Overtake, Passing priority, Rail road cross, Zebra crossings; Stopping, Waiting and Parking Regulations; Service Vehicles, Legal responsibility and insurance; Highway Regulations; Regulations for Responsibility in Accidents; Major Fault; Experts; Traffic Documents.

TRA 106 Transportation Politics and Planning 3+0 4,0
Transportation Politics, Basic Concepts in Planning and Introduction Long Term Planning; Determination of Research Areas in Transportation Planning; Data Types and Methods of Data Collecting; Travel Distribution; Long Term Planning: Transportation creation, Assignment; Short Term Planning: Short term planning application, Preventions and observations, Urban transportation systems, Sample planning and cautions.

TRA 201 Traffic Planning and Application I 2+2 4,5
Traffic Technique and Scientific Fundamentals of Traffic Technique; Relations between Elements of Traffic; Analysis of Relation and Alternation Between Traffic Elements; Study Concept in Traffic, Importance and Performation; Traffic Load Concept; Road Design With Respect to Load, Examination of Urban and Intercity Crossroads with Respect to Load and Obtain of Project Information.

TRA 202 Traffic Planning and Application II 2+2 3,0
Light Signals Theory and Practice; Traffic Signs; Car Parks; Study on Effects of Traffic Elements such as Roads and Crossroads on Accidents; National and International Projects and Their Results; Long Term Planning in Transportation and Planning: Landscape usage, Traffic; Short Term Planning: Effective usage of existing establishment; Public Transportation.

TRA 203 Bridges and Tunnels 3+0 4,0
Bridges: Definition of bridges, Parts, Types; Bridge Standarts; Types of Bridges: Choosing, Factors effect on choosing; Road Bearing by Bridge and Complementary Parts; Computations and Solution Methods about Bridges; Bridge Project; Definitions about Tunnels; Aims of Tunnel Construction; Classification of Tunnels; Standarts of Tunnels; Transportation Tunnels; Strength Effect on Tunnels; Behavior of Tunnels under Effect; Technics of Opening Tunnels, Effect of factors on selection of tunnels; Machines Using on Construction of Tunnels; Tunnel Project.

TRA 204 Road Superstructure 2+0 2,0
Elastic Pavements: Elastic pavements with low standart, Elastic pavements with high standart; Bituminous hot emulsions: BSK emulsion compozision, Bituminous hot emulsion construction, Defects of elastic pavements, Restoration and design of elastic pavements; Rigid Pavements: Concrete and concrete components, Properties of early concrete, Concrete hardening properties, Concrete pavement design, Concrete pavement construction, Defects and restoration of concrete pavements, Construction and design of concrete cobblestone pavement.

TRA 206 International Traffic Law Enforcement 3+0 4,0
Road Concept; Urban Roads and their Characteristic; Urban Pass of Main Distribution Road; Regional Distribution Roads; Local Distribution Roads; Pedestrian and Bicycle Roads; Standards and Projects of Pedestrian and Bicycle Roads; Inter city Roads, Standards and Projects; Urban Roads, Standards and Projects

TRA 209 Traffic Documentation Operations 3+0 4,0
Basic Operations in Traffic Documentation Operations; The Necessity of Vehicle Registration; Authorized Institutions in Registration Operations and Vehicles to be Registered; Conditions Where Registration Is Not Necessary; Registration Periods; Traffic Fines; Traffic Documents and Validity; New Registration and New Registration Procedures; Procedure for Sales and Transferring of Vehicles; Work Machines; Non-Motorized vehicles.

TRA 210 Accident Location, Investigation and Consultative Authority 2+2 3,0
Accidents on Roads; Experts; Working Principles; Studying Effects of Weather Conditions and Road Elements on Accidents; Handling the Traffic without Accident by Educational Side; Infrastructure Arrangement: Signs, Traffic lights, Road elements; Studying Effects of Infrastructure Arrangement on Accidents; Deaths and Injuries; Social-Economical Costs; Effects of Accidents on Injured Parties.

TRA 211 Traffic Education 3+0 4,0
Importance of Traffic Education; Arrangement of Educational Activities; Co-operation Between Associations; Educational Activity: Using suitable materials in education; Choosing the Right Place for Educational Activity; Evaluation of Education Activities; Examination of Traffic Education and Traffic Safety.

TRA 212 Technical English 3+0 3,0
Description and Usage of the Frequently used Words and Expressions about Highway Transportation and Traffic; Equivalents of these Words and Expressions in Turkish; Translation of Sections of Highway Transportation and Traffic in Turkish; Studying on this Subject with Computer Programs and Films at Class; Writing Technical Report.

TRA 213 Highway Services and Maintenance 3+0 4,0
Perpendicular and Horizontal Marking on Highways: Determination and application of locations; Vehicle Examination: Properties of vehicles required for entering highway traffic, Reasons and controling; Weight Controling Methods and Applications: Contribution to Economy; Keeping Highway Open to Traffic: Prevents of keeping highway open to traffic under all environmental and climate conditions, To project, Preparing scenario, To make a decision against sudden events and applications.

TRA 214 Computer Applications in Traffic Planning 2+2 3,0
Basic Arithmetical Methods on Computers in solving Complex Problems; Program Writing; Basic Principles of Using Computers; Matrix Operations and Definition of Linear Equations: Their solutions, Solutions of non-linear equations; Interpolation and Regression; Derivation and Integral; Solutions of Differential Equations; Optimization.

TRA 215 Motorized Vehicle Technology 3+0 4,0
Definition of Motorized Vehicle: Internal combustion engines; Parts and Materials of Engines; Systems of Forming Vehicles; Fuel Systems; Cooling Systems; Ignition Systems; Lubrication Systems; Concepts; Gearboxes, Shafts, Differential wheels; Brake System; Front Mechanic Geometry; Tires; Tire Materials; Measurement Standarts.

TRA 216 Highway Traffic Safety Control 3+0 4,0
General Look at Highway Safety; Safety and Highway Design: Human factors affecting highway traffic accidents, Road factors affecting highway traffic accidents, Vehicle factors affecting highway design accidents, Determination of points and sections having highway safety problems (Methods and Selection of Method), Relations between design elements concerning highway safety (Horizontal-Vertical Geometry and Safety); Sight Distance and Safety; Traffic Condition; Design Speed and Safety-Platform Characteristics and Safety; Roadside and Safety; Traffic Control Elements (Signing, lighting etc.) and Safety; Other Highway Design Elements and Safety; Cost Effectiveness

of Safety Development; Modeling Highway Safety; Worldwide Highway Safety.

TRA 217 Road Projects and Highway Techniques 2+2 4,0
Road Concept; Characteristics of Road Users; Vehicle Movements and General Properties of Highway Traffic; Capacity of Roads: Counting traffic mass of the year of project; Choosing Geometrical Standarts: Planing urban roads and characteristics, Standarts of highways and projects, Distributor roads, Pedestrian and bicycle roads, Planning crossroads; Route Examination: Horizontal curves and crossing curves, Cross section and perpendicular curves; Measurement of Surveying: Substructure formation, Drainage of roads, Economical research.

TRA 219 Traffic Audits and Regulations 3+0 4,0
Types of Audits: On motion, Informing, stable, Selector controls; Types of Advanced Controls: Hidden, Open, Camouflaged audits; General Audit Components: transportation of dangerous materials on highway, speed, alcohol, load and passenger, Parking limits, Lighting of vehicles, Following distance, Documents of vehicles and drivers, Lane and Light violations, Motorless vehicles and Pedestrians audits, Audits of safety belt; Works of Traffic Regulation: Prohibition of vehicles and drivers from traffic, how to open a congested road, warning of drivers about road conditions and giving information, education of commercial vehicle drivers.

TRA 221 Geographic Information Systems and Road Modeling 3+0 4,0
What is Geographic Information Systems (GIS)?; How GIS can be apply to the Transportation Sector ; Flow Chart of an General GIS Application Project; Data Collection, Digitization, Vector Data Editing; Data Structure Desing in the Transportation Sector; Relationships of the Graphic Data and Database; Preparation of Vector Graphic Features of Railroad Definitions: Point, Line and Poligon; Line and Node Logic in the Transportation Analysis; Topology Logic in the GIS; General Overview of the Railroad Transportation and GIS; Linear Segmentation (AM/FM); General Definitions and Concepts; Some Linear Segmentation Concepts; Some Linear Segmentation Concepts in Turkey; Some Linear Segmentation Softwares.

TRA 223 Geotechnics for Roads 2+2 4,0
Geotechnical Investigation for Road Construction; Soil Borings; Soil Compaction and Stabilization for Pavements; Fundamental of Drainage and Consolidation; Slope Stability and Retaining Structure Practices; Geosynthetics Design for Road Construction; Ground Anchors Practices for Road Construction; Road Earth Structures; Rock Mechanics for Road Construction.

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 123 Technical Drawing 2+2 4,0
Drawing and Tools: Drawing tools, introduction, usage and care; Engineering 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 151 Turkish Language I 2+0 2,0
Language: Theories on the Origin of Language; Language, Culture and Society; Language-reform: Turkish Language Association; Languages of the World; Language Families; Turkic Languages; Characteristics of Modern Turkish: Phonetics, Morphology, Syntax, Spelling, and Punctuation; Rules of Composition: Punctuation; Correspondence: Writing a CV, Writing petitions, Business and personal letters

TÜR 152 Turkish Language II 2+0 2,0
Features and Rules of Spoken Turkish: Effective Speech; Effective Listening: Rules of Listening; Reading: Reading comprehension, Critical reading; Text Types: Short story, Novel, Articles, Essays, Poetry, Drama.

TÜR 215 Sign Language 1+1 3,0
Sign Language and Environment: Features, Letters, Definitions and usage, Signs related to the signer, Signs related to the environment, Building sentence; Signs of School and Education: Educational materials, Numbers and math signs, Measurement signs: Sign of Food and Clothes: Names of meals-fruit-vegetable and legumes, clothes; Grammar in Turkish Sign Language: Nouns, Verbs, Adjectives, Antonyms: Feelings and Properties: Feelings, Colors, Home and domestic appliances; Time and Periods of Time: Calendar, Hour, Adverbs of time; Traffic and Living Creatures: Traffic and traffic signs, Plants, Animals; Professions; Terms of Sports and Geography; Terms of sports, Meteorological events, Geographical terms: states, cities of Turkey, local settlements; Dialogue: Sentence construction, Meaningful sentences, Tenses, Dialogues using Turkish Sign Language.

UÇT 101 Airplane Knowledge I 2+0 2,0
Atmosphere: Physical properties of the air, International Standard Atmosphere, ; Aerodynamics: Airflows, Boundary layer, Types of airflow, Vortices, Stagnation; Wings and related terms, Aerodynamic forces, Thrust, Weight, Lift and

Drag, Lift and Drag Coefficients, Angle of Attack, Stall, L/D Ratio; Flight Theory: Lift, Drag, Thrust and Weight relations, Glide ratio, Steady flight, Turning flight, Load factor, Structural limitations.

UÇT 102 Airplane Knowledge II 2+1 4,0
Aircraft Stability and Dynamics: Longitudinal Stability, Lateral stability and Directional Stability; Aircraft Controls: Ailerons and Spoilers, Roll control, Elevator systems and Pitch attitude control, Rudder and Directional control; Lift augmentation systems: Slots, Slats, Flaps; Drag generation systems: Spoilers, Lift dumpers, Air Brakes, Wing fences, Sawtooth leading edges; Boundary layer control systems; Trimming Surfaces; High Speed Flight: Speed of sound, Subsonic, Transonic and Supersonic Flights, Mach number, Shock waves, Critical Mach number, Aerodynamic heating.

UÇT 104 Aircraft Materials 2+1 4,0
Ferrous Materials: Properties and identification of common alloy steels used in aircraft; Heat treatment of alloy steels; Non-Ferrous Metals: Characteristics, properties of common non-ferrous materials used in aircraft; Heat treatment of non-ferrous materials; non-metallic materials other than wood and fabric, Properties of composite materials, production methods and repair of composite materials. Other materials such as Plastic, Rubber; Wooden structures: Properties of wooden structures and adhesives used in aircrafts, Types of defect in wood structure and detection of defect, wood production and repair of Wood Structures; Fabric Coverings, Fabric coverings and repair of damages; Corrosion: Corrosion Occurrence and Types of Corrosion, Corrosion Protection Measures.

UÇT 106 Aircraft Hardware 3+2 6,0
Fasteners: Screws, Bolts, Studs, Nuts, Locking Devices, Rivets, Specification, Identification and Use of Fasteners, Aircraft Practices; Pipes and Unions: Rigid and Flexible Pipes, Pipe Connectors, Standard Unions for Aircraft Hydraulic, Fuel, Oil, Pneumatic and Air Systems; Bearings; Transmissions: Gears, Belts and Pulleys, Chains and Sprockets; Control Cables: Pulleys and Cable System Components; Electrical Cables and Connectors.

UÇT 201 Aircraft Maintenance, Repair and Manufacturing I 3+3 7,0
Occupational Safety: Occupational Safety Equipment, Pre-Safety Measures, First Aid in fire or accidents; Tools and Kits: Hand Tools and Kits, Motor driven tools and kits, Precision Measuring Instruments, Test Equipment, Lubrication Sets; workshop Study: Care and usage of tools and kits Dimensions, tolerances, calibration of tools and instruments, Fits and Tolerances: Dimensions of Bolt Holes, Aircraft and Engine Fit Tolerances, Limits of Wear and Torsion, Wire Safety Method; Electric Cables and Connectors: Insulation and Connecting Techniques, Use of compression Instruments, Testing of compressed links, Removing and Replacing the connection pins, Laying and Test of coaxial cables and Protection Techniques.

UÇT 202 Aircraft Maintenance, Repair and Manufacturing II 3+4 8,5
Riveting: Riveting Connections, Rivet Ranges, Rivet Connection Inspection, Pipes: Pipes Bending Aircraft, Testing, Compression and Connecting; Springs Inspection; Bearings: Bearings test, Clearance, Inspection, Lubrication, Bearings Claims; Transmissions: Inspection of gears, belts, pulleys, Inspection and Maintenance of the chain and sprockets, worm screws, Link Bars Repair; Control Cables: Inspection, Maintenance and Repair; Technical publications: Aircraft Equipment Maintenance, Repair, Service and Controls; Hydraulic Units: Overhaul of the units, such as Pumps, Actuator, Valve and Testing of them.

UÇT 203 Aircraft Structures 2+3 6,0
General Terms: Airworthiness requirements for structural strength, Structural classification, Fail safe, safe life, damage tolerance concepts; Zonal and station identification systems; Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue; Lightning strike protection provision, Aircraft bonding; Structural Construction Methods; Structure assembly techniques: riveting, bolting, bonding; Surface Processes and Surface Cleaning; Airframe Structures: Pressurized cabin, Attachments with other aircraft elements; Seat installation; Doors and emergency exits; Windows; Construction of wings: Fuel storage; Attachments to other aircraft elements; Flight Control Surfaces; Nacelles and Pylons.

UÇT 204 Aircraft Propellers 2+1 4,0
Propeller Theory: Blade Element Theory, Forces Acting on the Propeller; Structure of Propellers: Wooden, Composite and Metal Propellers, Hub and Blades, Fixed Pitch Propellers; Ground-Adjustable Propellers; Controllable Pitch Propellers; Control of the Pitch of the Propeller: Mechanical, Electrical and Electronical Methods, Feathering, Reverse Pitch, Overspeed Governor; Propeller Synchronization; Anti-ice and De-icer Systems; Propeller Maintenance and Repair: Propeller Damages, Repair of Propeller Damages, Operation of Propellers; Storage of Propellers.

UÇT 205 Aviation Legislation and Regulations 2+0 3,0
Role of International Civil Aviation Organization (ICAO); Role of Turkish Directorate General of Civil Aviation; Role of European Aviation Safety Agency (EASA) and EASA Regulations; Relationship Among EU-OPS, Part-145, Part-, Part-66, Part-147 Regulations; General Description of Part-66 Certifying Staff Maintenance Regulation; Detailed Understanding of Part-145 Approved Maintenance Organizations Regulation; General Description of EU-OPS Commercial Air Transportation Regulation; Aircraft Certification; National and International Civil Aviation Requirements.

UÇT 207 Human Factors 2+0 3,0
Fundamentals of Aviation Safety: Risk and safety concept, Accidents and incidents, Safety measurement; Factors Affecting Aviation Safety; Human Performance and Limitations; Social Psychology; Factors Affecting Performance; Physical Environment; Tasks; Communication; Human Error and Error Management Models; Hazards in the Workplace; Maintenance Resource Management; Case Studies on Aircraft Maintenance.

UÇT 209 Aircraft Engines I 2+1 4,0
Fundamentals of Engines, Engine cycles; Piston Displacement and Compression Ratio; Mechanic, Thermal and Volumetric Efficiencies; Power calculation; Factors Affecting Performance; Engine Classification; Engine Construction: Crankcase, Crankshaft, Cylinder, piston, Bearings, Gears; Engine Fuel Systems; Float Type Carburetors; Fuel Injection Systems; Start and Ignition systems; Lubricants and Fuels; Lubrication System; Engine Indications; Supercharger/ Turbocharger Systems; Induction, Exhaust and Cooling Systems; Engine Installation; Engine Starting; Engine Storing and Preservation.

UÇT 210 Aircraft Engines II 2+2 5,0
Basic concepts; Potential and kinetic energy; Newton's laws of motions; Brayton cycle; Turbojet, turbofan, turboshaft and turboprop engines; Engine performance; Propulsion, specific fuel consumption, efficiencies; Air inlet nozzle; Compressor: Axial and centrifugal compressor; Compressor stall and surge; Airflow control methods; Pressure ratio; Combustion chamber; Type and principles of combustion chamber; Turbine: Axial and centrifugal flow turbines, turbine guide vane and type of turbine connections; Exhaust: Principles and construction features of exhaust; Convergent and divergent nozzle, Noise and thrust reverser.

UÇT 211 Aircraft Systems I 2+3 5,0
Hydraulic Systems: Basic principles, Hydraulic fluids, Basic hydraulic systems, Hydraulic system components and operating principles, some examples of types of aircraft hydraulic systems, Pneumatic systems: Pneumatic system components and operating principles, some examples of types of aircraft pneumatic system; Flight Controls and Work Systems, Landing Gear: Structure, Operation Systems, Wheels, Brakes, Tires, the steering wheel.

UÇT 212 Aircraft Systems II 3+3 8,0
Cabin Pressurization and Air Conditioning (Air Conditioning): The air supply, air distribution, pressurization systems, air conditioning systems, safety and warning devices; Oxygen Systems, Ice and Rain Protection: Ice, ice prevention and removal systems, rain protection; Fuel Systems: used in aviation fuel types and properties, contamination of the fuel system, fuel system components, types of fuel systems, fuel supply and drainage, Indicators, Fire Protection Systems: Fire alarm and extinguishing systems, Water and Waste Water Systems, Equipment and Furnishings.