

VOCATIONAL SCHOOL

Director: KURŞUN, Türker, B.A., Istanbul Atatürk Education Institute.

Assistant to the Director: MÜLAYİM, Ahmet, B.A., Marmara University, M.A., Istanbul University

GENERAL INFORMATION: In the 21st century professional qualifications required in business are completely different comparing to past's. In this context, it shows that labor force producing more efficient qualified goods and service is more required nowadays. Therefore Vocational and Technical education has an essential priority to train qualified and sufficient number of intermediate members.

In Private and state institutions the need of intermediate members is increased continuously. In vocational school, trainees ought to be multi-linguist and get multi-abilities during their training period.

Taking those needs into consideration, Vocational School of Bahçeşehir University has following departments:

- Technical Programs
- Programs of Administrative Science and Economics
- Distance Education Programs

Technical Programs:

- Computer Technology and Programming
- Mechatronics
- Automotive
- Industrial Electronic
- Computer Assisted Technical Drawing
- Electronic Communication
- Electric

Programs of Administrative Science and Economics:

- Business Administration
- Marketing
- International Logistics
- Import and Export
- Banking and Insurance
- Office Management and Manager Assistant

Maritime Programs:

- Deck
- Engine Department
- Sea and Port Management

Distance Education Programs:

E-International Logistics: We have protocols pertaining to transfer of innovations, technologies, exchanges between academicians, professors and internships of our graduates and trainees with in USA:

1. Fort Hays State University
2. Kansas State University
3. Kent State University
4. California University of Pennsylvania

PROFESSORS

ALNIAK, Mustafa Oktay: B.S., Ege University, M.S. Boğaziçi University, Ph.D., Gazi University.

ASSISTANT PROFESSORS

KELEŞ, Hatice Necla: B.A., M.A., Ph.D., Selçuk University.

ULUCAN ÖZKUL, Fatma (*Chairperson*): B.A., M.A., Ph.D., Marmara University.

INSTRUCTORS

ARSLAN, Münir: B.A., Ankara Commerce and Tourism Academy.

AVŞAR, Ali Sina: B.A., University of Lund.

AYDIN, Necati: B.A., Anadolu University, M.A., Marmara University.

BAYRAMOĞLU, Mehmet Fatih: B.A., Pamukkale University, M.A., Karaelmas University.

CANER, Candan: B.A., Marmara University.

ÇUBUKÇU, Feryal: B.A., Boğaziçi University.

DEMİRALİ, Arhan: B.S., Hacettepe University, M.S., California State University.

ERDOĞAN, Ali: B.S., Istanbul Technical University, M.A., Galatasaray University.

ERDOĞDU, Betül: B.S., M.S., Bahçeşehir University.

FINDIK, Elif: B.S., M.A., Istanbul University.

GİRAY, Caner: B.A., Istanbul University, M.A., Yeditepe University, Ph.D., Gebze Technology University.

GÖKSU, Serap: B.A., M.A., Istanbul University.

GÜDEN, Yalçın: B.A., Gazi University, M.A., Beykent University.

GÜMÜŞELİ, Saniye: B.A., Middle East Technical University, M.A., Hacettepe University.

GÜRSOY SİĞAR, Sabahat Seda: B.A., Istanbul University.

İPER, Zeynep Çiğdem: B.A., Uludağ University.

MÜLAYİM, Ahmet (*Assistant to the Director*): B.A., Marmara University, M.A., Istanbul University.

PAMUK, Muazzez Gizem: B.A., Istanbul University.

ÖZKAN, Tuğba Kiral: B.A., Uludağ University, M.A., Marmara University.

ÖZTÜRK, İlkey: B.S., Kocaeli University, M.S., Bahçeşehir University.

PELVANOĞLU, Nilay Özer: B.A., Marmara University, M.A., Bilkent University.

ŞAHİN, Özgür Erkut: B.A., Dokuz Eylül University, M.A., Charles Stuart University.

TAPŞIN, Gülçin: B.A., M.A., Istanbul University.

ULUÇAY, Seda: B.A., M.A., Boğaziçi University.

UZUN, Selma: B.A., Beykent University, M.A., Istanbul University.

YILDIRIM, Kemal: B.S., Yıldız Technical University, M.A., Bahçeşehir University.

TEACHING ASSISTANTS

ALMALI, Zehra: B.A., Marmara University.

AYDIN, Doğan: B.A., Marmara University.

BOLCAN, Aybike Elif: B.A., M.A., Istanbul University.

KARTAL, Cemalettin: B.S., Kocaeli University, M.A., Marmara University.

PEKTEKİN, Pınar: B.S., M.S., Bahçeşehir University.

SAYGILI, Mehmet Sitki: B.A., Selçuk University, M.A., Marmara University.

TÜRKBEN, Emre: B.S., Yıldız Technical University.

UZUN, Aslı: B.A., Marmara University.

ADJUNCT PROFESSORS

- ALTAY, Rıfıkı: B.A., Gazi University.
- ARICAN, Eriřah: B.A., M.A., Ph.D. Marmara University.
- BEKTAŐ, Gunjul: B.S., Skopje Technical University, M.S., Middle East Technical University, Ph.D., Istanbul Technical University.
- ÇETİN, Münevver: B.A., M.A., Ankara University, Ph.D., Istanbul University.
- ÇINAR, Hande Didem: B.A., Marmara University.
- DİRİ, Cüneyt: B.S., M.S., Ph.D., Mimar Sinan University.
- ELBEYLİ, Mehmet Ünsal: B.A., Marmara University, M.A., Istanbul University.
- EMRE, Mesut: B.S., M.S., Istanbul University.
- ERDAL, Murat: B.S., Yıldız Technical University, M.A., Ph.D., Istanbul University.
- ERGEN, Ahu: B.A., Marmara University, M.A., Maltepe University.
- ERKAYA, Halil: B.S., M.S., Ph.D., Yıldız Technical University.
- ERSOY, Melda : B.A., Marmara University, M.A., Yeditepe University, Ph.D., Marmara University.
- GÜLER, Ercüment: B.A., Ankara University, M.A., Istanbul University, Ph.D., Marmara University.
- HAZIR, Hüseyin : B.S., Yıldız Technical University.
- KARSAN, Sertaç: B.S., Karadeniz Technical University.
- KETENCİ, Feyza: B.S., M.S., Istanbul Technical University.
- OŐKAN, Zehra: B.A., Mimar Sinan University.
- PAMUKÇU, Ayőe: B.A., M.A., Ph.D., Marmara University.
- PAMUKÇU, Fatma: B.A., M.A., Ph.D., Marmara University.
- SÜNBUÖÖLU, Sevda: B.S., Mersin University.
- ŐAHİN, Mustafa: B.A., Cumhuriyet University, M.A., Kocaeli University.
- TANDOÖAN, İsmail: B.S., M.S., Mimar Sinan University.
- TÜKEL, Ayça: B.A., Istanbul University, M.A., Ph.D., Marmara University.
- YALÇINKAYA, Nezir: B.S., Istanbul Technical University, M.A., Yeditepe University.
- YILDIRIM, Mehmet: B.A., Ankara University, M.A., New Hampshire College, Ph.D., Ankara University.

DESCRIPTION OF COMMON COURSES

BDC 1001 Basic Technical Drawing I (3-0)3

The content of this lesson aims to prepare the students for engineering drawing. The subjects of this lesson: Using the tools and materials used in drawing the technical pictures. Lines and the techniques of drawing. Writing and measuring. Geometric drawings. Design in the drawing of technical pictures. Application of geometry methods and the general rules.

BDC 1002 Basic Technical Drawing II (3-0)3

The content of this lesson aims to prepare the students for the engineering drawing. The subjects of this lesson: Using the tools and materials used in drawing the technical pictures. Lines and the techniques of drawing. Writing and measuring. Geometric drawings. Design in the drawing of technical pictures. Application of geometry methods and the general rules.

BIL 1000 Introduction to Computer (3-0)3

In this lesson; students are trained about computer structure and gained the ability to use Microsoft Office (Microsoft Word, Microsoft Excel, Microsoft Power Point).

BIL 1002 Computer Programming (2-0)2

Basic classes, cyber classes, protected members. I/O in the files, random Access, cyber functions, derived classes, polyformism, error control, new source errors, recognizing types, dynamic memory usage, notices, transformation functions, standard template file, vectors, lists, algorithms.

BIL 2001 Computer Applications I (2-0)2

In this lesson; students are taught the subject of basics of electronic presentation design, introduction to electronic presentation programs, introduction to electronic presentation tools, preparing electronic presentation and to make an electronic presentation.

BIL 2002 Computer Applications II (2-0)2

The content and use of process packaged programs, electronic packaged programs, mechatronics packaged programs.

CEV 1003 Physics (3-0)3

Standard units, vectors and coordinate systems, kinematics, dynamics, concepts of work, energy and power, the preservation of energy, the dynamics of the particle system, the kinematics and dynamics of the movements of collision and circulation, the balance of rigid bodies; oscillation are the subjects of the lesson.

CEV 1005 General Chemistry (3-0)3

Basic concepts, chemical reactions, the concept of element and composites, the periodic properties elements, the structure of the atom, chemical bonds, solids, liquids, gases, solutions, chemical balance, chemical kinetics, balance in liquid solutions, diluted solutions, thermo chemistry, thermodynamics, electrochemistry, combustibles make up the content of the course.

GTI 1000 General and Technical Communication (2-0)2

The topics in the course are: The definition of the concept of communication, how to communicate, obstacles and problems in communication, communication types and models, the meaning of organizational communication, oral and written communication, communication in business life.

HUK 1000 Basics of Law (2-0)2

Introduction, general information on legal norm, sources of law, civil-public law, liability, responsibility, legal act and contracts, business enterprise, inheritance.

HUK 2000 Commercial Law (2-0)2

Components of natural and legal persons, trader's rights and liabilities, trade name, commercial book, head office and branch concepts, franchise, brokerage, hawker, law of torts, projected changes in the Bill of Business Law.

HUK 2001 Banking and Insurance Law I (2-0)2

Banking law, obligation, legal and conventional interest, attorney agreements, effects assurance, personal guarantee, real guarantee, real estate mortgage, chattel mortgage, loans under legal proceedings, distraint notice, bank bills, bankrupt's certificate of commercial failure, evidence of insolvency, the basis of insurance law, contract of insurance and law, restrictions in agreements, parties in agreements, debts and liabilities of parties, turnovers of agreement.

IKT 1000 Introduction to Economics (2-0)2

Main concepts about economy and economic systems, price theory and price formation, supply and demand concepts and the affect of their changes on prices are studied. Consumption and production theories, market variety, analysis of company balance, factor prices and general balance subjects are in the content of this course.

IKT 1002 Macroeconomics (3-0)3

Macro economic structure and its operation, economic development, economic fluctuation and income distribution, national income and employment, total supply, total demand, unemployment and inflation, money and interest rates, financial and economic policies are in the content of this course.

ING 1001 English for Freshmen I (3-0)3

The aim of this course is to use the structures that are taught and to speak with the correct pronunciation in the appropriate occasion, to be able to understand the related field information by listening, to be able to use the structures and vocabulary correctly and according to the purpose, reading and understanding the foreign language.

ING 1002 English for Freshmen II (3-0)3

The aim of this course is to provide the speaking, reading and comprehension, and writing skill with the correct the grammar and punctuation rules.

ING 2001 Professional English I (3-0)3

The aim of this course is to speak the foreign language in business life using the appropriate vocabulary and expressions, to be able to understand the conversations about the related

job, to be able to exchange correspondence according to the related business field and teaching the business terminology.

ING 2002 Professional English II (3-0)3

The aim of this course is to speak the foreign language in the business life using the appropriate vocabulary and expressions, to be able to understand the conversations about the related job, to be able to make writings according to the related job field and teaching the business terminology.

MAT 1001 Mathematics I (3-0)3

Numbers, algebra, algebraic operations, equations, inequalities, one unknown variable and two unknown variables, functions, dependent and independent variables, types of functions, graphic with functions, logarithm, exponential functions, graphic drawing, exponential and logarithmic equations, trigonometry, limit and continuity.

MAT 1002 Mathematics II (3-0)3

Derivative, concept of derivative, rules of taking derivative, high degree derivations, practicing derivations, indistinctness situations, integrals, concept of known integral, concept of unknown integral, rules of taking integral, simple and compound functions of integrals, parts of integral method, area calculation with the known integral, linear equation systems and matrix, determinant and its expansion.

MAT 1004 Statistics (3-0)3

The basic concepts of statistics, usage and presentation of the collected data, central bias measurement and practicing it, various estimations and teaching the skills of how to estimate correctly, statistical distributions, exemplification, hypothesis tests, variance analysis and solution of the regression concepts with the current examples.

MAT 1101 Financial Mathematics (3-0)3

Percentage rates, buying, cost, selling and profit rates, proportional division, mixing, compound and compound problems, interest rates, discount, basic concepts in statistics.

MUH 1000 Financial Accounting I (3-0)3

This course includes the financial reporting and its processing with basic concepts. The course presents the financial data of an

organization, and analyzes it. Basically the lesson is focused on teaching the basics of the accounting systems, recording the commercial procedures on the files, showing the t-rates and preparation of the financial charts (balance sheet, income table, etc.).

MUH 1001 Financial Accounting II (3-0)3
Explanation of the basic concepts of an inventory procedure and the reasons of arranging an inventory in a business. There would be similar practices on evaluation measurement according to the accounting literature. Arrangement of financial charts with practicing inventory studies at in and out accounting. Profit and loss rate in the management's active period.

MUH 1003 Foreign Trade Accounting (3-0)3
The development and some basic concepts of foreign trade, forms of sale in foreign trade, management's rate plan and procedures about foreign trade, safe, checks and accounts about the banks, accounts about VAT, expense rates, abroad selling and traveling expenses, export expenses, exchange expenses and loss with the recorded accounting samples.

MUH 2002 Management Accounting (3-0)3
This lesson includes the financial reporting and its processing with basic concepts. The lesson is presenting the financial data of an organization, and analyzing it. Basically the lesson is focused on teaching the basics of the accounting systems, recording the commercial procedures to the files, showing the t-rates and preparation of the financial charts (balance sheet, income chart, etc.).

TAR 1001 History of Turkish Revolution I (2-0)2
The reasons for foundation of the Turkish Republic from the Ottoman Empire, the revolutions which were made with the new Republic of Turkey and its reasons, studying the important stages in Turkish War of Independence, basis of the Republic of Turkey and scientific comments on basic principles which take place in Constitution.

TAR 1002 History of Turkish Revolution II (2-0)2
Political, legal, social, economical and cultural revolutions following the foundation of the Republic of Turkey, endeavors towards the transition from a single-party system into multi-party system, determining the new economic policy, foreign policy during Atatürk era, domestic and foreign developments in 1938-1945 and 1945-1950.

TBI 1001 Scientific Principles of Technology (2-0)2
This course consists of features of equipment, statics, dynamics, energy, act and power, mechanic and electromagnetic waves, electromagnetic spectrum and radioactivity, electrostatics, magnetism and chemical generators.

TUR 1001 Turkish Language and Literature I (2-0)2
The course's aim is to teach Turkish language grammar, linguistic structure and its basic character. It presents the Turkish language with using some of the Turkish writers' story and literary work.

TUR 1002 Turkish Language and Literature II (2-0)2
Written and oral exposition, creative writing (short story-novel), didactic writing (article, research, autobiography, petition statement writing), oral expression, explaining the types of prepared speech, (seminar, conference, debate), understanding the use of punctuation marks, defining the mistakes which are made while speaking and understanding the importance of paying attention to the use of language.

TVS 2002 Turkish Taxation System (2-0)2
The income and theories which are applied on taxes that take place in the Turkish Tax Regulation. Income tax, corporation tax, real estate tax, inheritance and transmission tax, motor vehicle tax and value added tax extent, and its specification.

YON 2001 Financial Management (3-0)3
The course consists of basic concepts of funding, rates that are used to analyze financial graphs, entity management for a company,

ways of finding resources and techniques used in investment.

YON 2003 Production Management

(3-0)3

This course consists of basic concepts of production management, product systems and product design, the factors that are taken account in the process of choosing a work

place and the scale of the business. Analysis of business and planning of the workplace adjustment, stock control and maintenance planning are also included to the course syllabus. Total quality management processes and techniques are also exploited by various applications.

TECHNICAL PROGRAMS

AUTOMOTIVE

GENERAL INFORMATION: Automotive Program is a two-year education program which gives vocational education and training for qualified intermediate work force in accordance with the current technical knowledge and high level quality and service philosophy to be employed in production and after sales services in Automotive sector. Graduate students who have completed and got the title of Automotive Technician can work as a qualified intermediate member between the manager and the engineer in production and after sales services. They can also run their own business. The program enables students to communicate with the others and to have efficient manual skills and be aware of the new trends in advanced technology and information technology.

This program trains the technical staff who can:

- Use technical language, draw and read graphics, charts, pictures and be able to analyze them.
- Use computer and be able to run a computer program which is related to their area of interest.
- Use the equipment that is utilized in all production levels of montage and quality control.
- Use the measuring and control equipment.
- Use the main repair outfits
- Use the special apparatus and equipment
- Know and apply the standards about their occupation.
- Communicate with customers in all steps after sale.
- Use computer, exchange correspondence, store information and use it.
- Take the responsibility of management at all levels.
- Audit people who work under their management.
- Use the means of communication about their fields.
- Get used to working in an organized and systematic way.
- Know their inadequacies and search the way to make up these inadequacies.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|-------------------------------------|--------|
| OTM | 1001 | Gas Engine Technology | (2-2)3 |
| OTM | 1003 | Automotive Electrics | (2-2)3 |
| OTM | 1005 | Motor Thermodynamics | (2-2)3 |
| OTM | 1007 | Scientific Principles of Technology | (3-0)3 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (3-0)3 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|-------------------------------------|--------|
| OTM | 1002 | Diesel Engine Technology | (2-2)3 |
| OTM | 1004 | Automotive Electronics | (2-2)3 |
| OTM | 1006 | Material Technology | (2-0)2 |
| OTM | 1008 | Technical Drawing | (1-2)2 |
| MAT | 1002 | Mathematics II | (3-0)3 |
| BIL | 2001 | Computer Applications I | (2-0)2 |
| GTI | 1000 | General and Technical Communication | (2-0)2 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----------|------|------------------------------|--------|
| OTM | 2001 | Motion Control Systems | (2-2)3 |
| OTM | 2003 | Power Train | (2-2)3 |
| OTM | 2005 | Motor Testing and Adjustment | (2-2)3 |
| OTM | 2007 | Machine Elements | (2-2)3 |
| OTM | 2990 | Summer Training | Non-Cr |
| Elective* | | | (3-0)3 |

Fourth Semester

| | | | |
|------------|------|---|--------|
| OTM | 2002 | Mechanics of Motorized Vehicles | (2-2)3 |
| OTM | 2004 | New Technologies in Automotive Industry | (2-2)3 |
| OTM | 2006 | Alternative Motors and Combustions | (2-2)3 |
| OTM | 2008 | System Analysis and Design | (2-2)3 |
| OTM | 2010 | Quality Assurance and Standards | (2-0)2 |
| EHA | 1008 | Quality Assurance and Standards | (2-0)2 |
| Elective** | | | (3-0)3 |

* Any one of the following: ING 2001, OTM 2009, OTM 2011, OTM 2013

** Any one of the following: ING 2002, ISL 2003, OTM 2012, OTM 2014, OTM 2016

COURSE DESCRIPTIONS

OTM 1001 Gas Engine Technology (2-2)3

The aim is to teach students new skills by expanding their basic knowledge on internal combustion fuel engines to make them have the ability to solve problems by depending on theoretical knowledge and skills to teach them to combine their knowledge of fuel engine technology with other technologies.

OTM 1002 Diesel Engine Technology (2-2)3

Diesel engine cycles, two-stroke and four-stroke engine, P-V Diagram, timing diagram, Scaveng air systems, turbochargers, low, medium and high speed engines, structure of tank engines, valve movement mechanism, beds, fuel injection systems, governors, combustion, fuel, combustion rooms.

OTM 1003 Automotive Electrics (1-2)2

The ability of comprehending the main principles of electricity, the scientific substructure and electrical systems on the engines and the vehicles, detecting and fixing the defects of the electrical systems on the engines and vehicles.

OTM 1004 Automotive Electronics (1-2)2

Introduction to automotive electronics, automotive microprocessor systems, other electronic systems, electronic systems on the vehicles and engines and troubleshooting and the ways to solve the problems.

OTM 1005 Motor Thermodynamics (1-2)2

Terms of thermodynamics, basic principles of thermodynamics, terms of engine thermodynamics, efficiency calculations, analyzing combustion in engines and the fuel according to thermodynamics.

OTM 1006 Material Technology (2-0)2

It includes the bases of the material information, alloys of iron and carbon, thermal processing and metals except iron. The comprehension of material production methods that supplies the needs of the people and industry or the quality of fabricated materials could be changed is ensured in the department.

OTM 1007 Scientific Principles of Technology (2-2)3

The aim is to teach the students basic physics rules, the equipment, principles of statics, mechanics, liquids, wave propagation, electric, magnetism, being able to draw the graphics, determine the parameters in lab studies and skills of analysis.

OTM 1008 Technical Drawing (1-2)2

It includes technical drawing and standards, vocational drawing, machine drawing, the manufactured drawings of the components of motor and vehicles, the standards of general machine drawing and techniques of manufacturing drawing.

OTM 2001 Motion Control Systems (2-2)3

This course consists of subjects such as chassis and body technology, steering wheel systems, suspension systems, brake systems, the systems controlling the vehicles dynamic behaviors, motion control terminology.

OTM 2002 Mechanics of Motorized Vehicles (3-0)3

It includes the physical details about the statistics and dynamics of the vehicles and the parameters about the panel of the vehicles, resistance force that the moving vehicles has been exposed to and performance criteria to renew that force and the physical analysis of the vehicles during the acceleration and braking.

OTM 2003 Power Train (2-2)3

The power train terminology of the vehicles, the parts of power train, the basics of power train, the new technology of power train and the basic information about power train on the vehicles.

OTM 2004 New Technologies in Automotive Industry (2-2)3

It includes the developments in manufacturing, motor and fuel systems, body of vehicle and drive line organs, the new technologies in automotive and their applications.

OTM 2005 Motor Testing and Adjustment (2-2)3

Gaining the ability of reading graphics, calculation methods, the parameters affecting engine performance terminology and engine performance characteristics, the importance of testing the engines both in production and use, the types and ways of experiments.

OTM 2006 Alternative Motors and Combustions (2-2)3

This course includes the socio-economic dimensions of the reasons of searching the alternative motor and fuel, alternative motors, alternative fuel, the present situation of the alternative motor and fuel search, and future planning.

OTM 2007 Machine Elements (2-2)3

Durability calculations in the construction of machines, terms of machine elements, the importance of machine elements in machine system, functions of machine elements, classification of machine elements regarding their functions.

OTM 2008 System Analysis and Design (2-2)3

In that course feasibility study project period and presentation subjects are taught. Objectives are: being able of making the preliminary arrangements for the foreseen project, being able of applying the foreseen project, being able of presenting the foreseen project.

OTM 2009 Service Behavior and Quality (3-0)3

General evaluation of service sector, the importance of service after sale, personality and types of behavior, customer relations, service quality, customer satisfaction, performance and profitability.

OTM 2010 Quality Assurance and Standards (2-0)2

Standardization: Definition, objectives and principles, TSE and its duties, regional and international standardization organizations; quality and concepts of quality, definition of quality and related concepts, quality manner, the costs and risks of quality, concept of quality control; quality assurance; principles of quality management, TS-EN-ISO 9000, TS-EN-ISO 9001, TS-EN-ISO 9004, ISO 9011

standards and instructions; vocational standards.

OTM 2011 Emission Control Systems (3-0)3

Fuel, burning and burning reactions, vehicle based pollutants and their effects on air pollution, the effects of engine constructive features and calibration and care values on emissions, various vehicles operating conditions on emissions, precautions for vehicle based pollutants, restrictions for pollutants and techniques of emission.

OTM 2012 Car Air-Conditioning Systems (3-0)3

The course includes the theoretical analysis of vehicle air conditioning systems, the components and new technologies in vehicle air conditioning systems.

OTM 2013 Service Equipment (3-0)3

Physical organization and management of service, technical equipment and formation of process, knowledge and skills dynamism, new technology on service equipment, structure of necessary equipment and their operation mechanism in service equipment formation and the due process which is vital for healthy and effective service works.

OTM 2014 Car Painting Technology (3-0)3

It is aimed to acknowledge general hood stain technology. It includes the process and methods on the hood, developments of the hood stain technology, different techniques and their applications.

OTM 2016 Motor Rectification (2-0)2

Subject covered: measurement tools and rules, basics of the modernization of engine parts, basics of the exercise of engine parts, reasons of the modernization of engines, cylinder and smooth surfaces of engines, valves, bearings, and crankcases; process of modernization.

OTM 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

COMPUTER AIDED TECHNICAL DRAWING

GENERAL INFORMATION: Department of Computer Aided Technical Drawing aims to meet the increasing demand for computer based architectural drafting and other construction industry related technical services. The program is designed to equip students with the necessary theoretical and practical skills, with efficient knowledge on information technologies as well as foreign language skills so that they become highly motivated, enterprising and creative specialists who are able to analyze technological problems and turn solutions into products.

Graduates of the program are encouraged to start their own offices of building technical drawing since they successfully complete a program offering courses that cover a wide range of areas such as drawing architectural projects using AutoCAD software, construction of 3D architectural models, how to measure quantities in building works, making scaled models of architectural projects, field surveying on construction sites, and preparation of site maps. Moreover, they will have the opportunity of being employed as qualified technical staff in construction sector.

Our academic faculty and facilities are the pillars of success. One of the fundamentals of our educational program is to offer all students a hands-on-training opportunity as it plays a crucial role in the education of highly-specialized staff that the information age demands. Besides the wide spectrum of technological equipment serving the students, our computer laboratories provide them with the best, highest level of education with the latest technology and contribute to their success.

Job opportunities for graduates are in a variety of areas such as working as technical staff at plants and industrial centers designing goods and products or as software instructors at private educational institutions as well as starting their own businesses.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|-----------------------------------|--------|
| BDC | 1001 | Basic Technical Drawing I | (3-0)3 |
| BDC | 1003 | Construction Materials | (3-0)3 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (3-0)3 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| BDC | 1000 | Computer Aided Design and Modeling | (3-0)3 |
| BDC | 1002 | Basic Technical Drawing II | (3-0)3 |
| BDC | 1004 | Structure I | (3-0)3 |
| BDC | 1006 | Topography I | (3-0)3 |
| MAT | 1004 | Statistics | (3-0)3 |
| IKT | 1000 | Introduction to Economics | (3-0)3 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|---|--------|
| BDC | 2001 | Structure II | (3-0)3 |
| BDC | 2003 | Computer Aided Technical Drawing I | (3-0)3 |
| BDC | 2005 | Engineering Drawing I | (3-0)3 |
| BDC | 2007 | Topography II | (3-0)3 |
| BDC | 2990 | Summer Training | Non-Cr |
| ISL | 2003 | Entrepreneurship and Management of SME's | (2-0)2 |
| ING | 2001 | Professional English I | (3-0)3 |

Fourth Semester

| | | | |
|-----|------|--|--------|
| BDC | 2002 | Three-Dimensional Metric | (3-0)3 |
| BDC | 2004 | Computer Aided Technical Drawing II | (3-0)3 |
| BDC | 2006 | Engineering Drawing II | (3-0)3 |
| BDC | 2008 | Model Making | (3-0)3 |
| BDC | 2010 | Building Codes and Standards | (3-0)3 |
| ING | 2002 | Professional English II | (3-0)3 |

COURSE DESCRIPTIONS

BDC 1000 Computer Aided Design and Modeling (3-0)3

The course aims at teaching students construction and architectural drawing performed in computer environment by using Auto-CAD program; supplying them with an introduction to AutoCAD program; arrangement of drawing environment; drawing and making change commands; use of symbol and layer; scanning lines and measuring commands.

BDC 1001 Basic Technical Drawing I (3-0)3

This course aims at preparing the students to engineering drawing. The subjects of this course are using the tools and materials used in drawing technical pictures, lines and the techniques of drawing, writing and measuring, geometric drawings, design in the drawing of technical pictures, and application of geometry methods and general rules.

BDC 1002 Basic Technical Drawing II (3-0)3

This course aims at preparing the students to engineering drawing. The subjects of this course are using the tools and materials used in drawing technical pictures, lines and the techniques of drawing, writing and measuring, geometric drawings, design in the drawing of technical pictures, and application of geometry methods and general rules.

BDC 1003 Construction Materials (3-0)3

The course aims at giving general information on natural stone construction materials, aggregate construction materials, binding construction materials (plaster, lime, cement), artificial stone construction materials (grout, cement), cooked ground construction materials, glass construction materials, metal construction materials, bitumen construction materials, plastic and paint construction materials.

BDC 1004 Structure I (3-0)3

The purpose of this course is to help the students gain the expression skills by drawing in their professional branch. The main subjects of the course are Architectural plans, intersection appearances, measuring; obtaining

the auxiliary appearances; expressing the construction elements by drawing, for example, doors, windows, chimneys, stairs, cinctures and plan drawings.

BDC 1006 Topography I (3-0)3

It has been considered as two consecutive lessons for the purpose of helping the various measuring and application works that the technical staff will meet while working in the civil engineering field. The topography course includes the following subjects: Topography principles, map and plan perceptions, field calculation, volume calculations, height measuring, intersection leveling, contour lines.

BDC 2001 Structure II (3-0)3

The course aims at teaching the students preparing the concrete material, measuring and mixing, the placement and the maintenance of concrete, foundations, columns, beams, curtain walls, floorings, stairs, roofs, concrete and reinforced concrete casts, coatings, natural stone elements, doors and windows, steel structures, installation works, electrical installation, and working machines and tools used in structural works.

BDC 2002 Three-Dimensional Metric (3-0)3

The purpose of this course is to give the students basic information on the following subjects: What is yardage? General explanations, the measuring units of construction works, excavation works, concrete works, foundation walls, brick wall works, reinforced irons works, cast works, door and window joineries.

BDC 2003 Computer Aided Technical Drawing I (3-0)3

The course offers general information on construction and architectural drawing performed in computer environment by using Auto-CAD program; introduction to AutoCAD program; arrangement of drawing environment; drawing and making change commands; use of symbol and layer; scanning lines and measuring commands.

BDC 2004 Computer Aided Technical Drawing II (3-0)3

The course offers general knowledge on drawing the architectural projects in computer environment by using Auto-CAD as 3 dimensional; preparation of line, surface and solid models, obtaining the perspective, isometric, intersection and front appearances; project presentation techniques, computer slides and preparing views in photograph quality.

BDC 2005 Engineering Drawing I (3-0)3

The purpose of this course is to help the students gain the expressional skills by drawing in their professional branch. The main subjects are: architectural plans, intersection appearances, measuring; obtaining the auxiliary appearances, expressing the construction elements by drawing, for example, doors, windows, chimneys, stairs, cinctures and plan drawings.

BDC 2006 Engineering Drawing II (3-0)3

The purpose of this course is to help the students gain the expressional skills by drawing in their professional branch. The main subjects are: architectural plans, intersection appearances, measuring; obtaining the auxiliary appearances, expressing the construction elements by drawing, for example, doors, windows, chimneys, stairs, cinctures and plan drawings.

BDC 2007 Topography II (3-0)3

The core skills offered at this course are as follows; theodolite and angle measuring, theodolite structure and the parts, coordinate

systems, polygon and the calculations, triangulation, tachometry, electronic length measuring, application, computer programs and the projects.

BDC 2008 Model Making (3-0)3

The samples to be given in this lesson will be in reinforcing branch. The recognition and the selection of the materials and the special tools to be able to be used in make up construction; the subjects of the lighting, coloring of the make ups and the add-ons to be able to be made when necessary will constitute the basics of this course.

BDC 2010 Building Codes and Standards (3-0)3

Some preliminary preparations are made before constructing structure. When these preparations are incomplete and/or incorrect, it may cause great problems in technical, economical and legal terms in the future. For this reason, information about preparation of the structure (land selection, project preparation, and obtaining construction license from municipality building code, work health and security) constitute the basic subjects of this course.

BDC 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

COMPUTER TECHNOLOGIES AND PROGRAMMING

GENERAL INFORMATION: There has always been a need in the Turkish industrial complex for personnel to work at an intermediary level. The Vocational School offers a two-year program founded with the aim of training students to be fully equipped with computer skills and information about the latest developments in technology. The design of the syllabus also allows students to transfer to a four-year degree program. The University of Bahcesehir offers two different campus programs which are Business Administration and Computer Technologies and Programming. For both degrees the University of Bahcesehir provides highly-advanced up-to-date technologies and research-based education systems. Our primary aim is to prepare our students for the competitive business environment in the market place.

Computer Technologies and Programming department syllabus involves using computers and related computer software, software development, hardware, setting up networks and network management. After graduation, students will be able to work for constitutions such as software companies, computer technical support companies, banks, insurance companies, internet service providers, web-casting companies, radio-TV companies, research companies, and stock exchange companies, logistic companies, in education and services sectors.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|--|--------|
| BIL | 1000 | Introduction to Computer | (2-0)2 |
| BTP | 1001 | Visual Programming I | (3-0)3 |
| BTP | 1003 | Introduction to Programming and Algorithms | (3-0)3 |
| BTP | 1005 | Basic Electronics | (3-0)3 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| GTI | 1000 | General and Technical Communication | (2-0)2 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| BTP | 1002 | Database Systems | (3-0)3 |
| BTP | 1004 | Visual Programming II | (3-0)3 |
| BTP | 1006 | Web Design | (3-0)3 |
| MAT | 1002 | Mathematics II | (3-0)3 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|--|--------|
| BTP | 2001 | Web Programming | (3-0)0 |
| BTP | 2003 | Computer Networks | (2-0)2 |
| BTP | 2005 | Multimedia Applications | (3-0)3 |
| BTP | 2007 | C Programming I | (3-0)3 |
| BTP | 2009 | Information Management Systems | (3-0)3 |
| BTP | 2990 | Summer Training | Non-Cr |
| BDC | 1000 | Computer Aided Design and Professional English II Modeling | (3-0)3 |
| ING | 2001 | Professional English I | (3-0)3 |

Fourth Semester

| | | | |
|-----|------|--------------------------------------|--------|
| BTP | 2002 | Computer Applications (.NET) | (3-0)3 |
| BTP | 2004 | E-Commerce Programming | (3-0)3 |
| BTP | 2006 | C Programming II | (3-0)3 |
| BTP | 2008 | Microcomputer Systems and Assemblers | (3-0)3 |
| BTP | 2010 | Operating Systems | (3-0)3 |
| ING | 2002 | | (3-0)3 |

COURSE DESCRIPTIONS

BTP 1001 Visual Programming I (3-0)3

Subjects such as installation, programming environment, basic components and design stage, component features and events, control idioms and cycles, object-oriented programming and the usage of Microsoft Visual Basic and Windows Packages are exploited throughout this course.

BTP 1002 Database Systems (3-0)3

The course, on the main lines, is about related databases, data base design and data modeling, ER-Diagrams entities, qualifications and relations, normalization, related data base concepts, tables, SQL. MySQL and/or MsSQL server will be used as problem.

BTP 1003 Introduction to Programming and Algorithms (3-0)3

In this course, problem solving techniques and the steps to construct a successful algorithm will be discussed. Problems that are selected from a wide range of daily life experiences will be modeled by an algorithmic approach. Programming language concept will be discussed. Programming steps, code generation and the basics of Visual Basic programming will be given. Some application programs will be written by using pre-developed algorithms.

BTP 1004 Visual Programming II (3-0)3

In this course; advanced programming and applications such as advanced visual programs

software, filling procedures, graphics, and database are performed in addition to basic visual programming information.

BTP 1005 Basic Electronics (3-0)3

This course aims to help students gain general knowledge on load, current, voltage and energy, circuit elements, passive sign transformation, Ohm's law, waveforms and conversions, Kirchoff's laws, series and parallel connected resistances, node analysis, mesh analysis, superposition, source transformations, Thévenin and Norton theorems.

BTP 1006 Web Design (3-0)3

In this lesson the basic internet concepts, HTTP, Browser and web concepts are explained and the students get the skills for creating, managing and designing web pages with HTML, Frontpage and Dreamweaver application programs.

BTP 2001 Web Programming (3-0)3

This course has been designed to develop the Internet and Web programming skills of students. Advanced web design and internet technology operations are taught in this course, along with technical developments relevant to the internet industry. PHP coding and dynamic coding via MySQL database will be taught, and various Web applications will be developed. Students will also be given

extensive information on Java Script, CSS, DHTML coding.

BTP 2002 Computer Applications (.NET) (3-0)3

This course covers the Microsoft .NET platform and the basis of its components. Advanced level programming will be taught via Visual Basic .NET; selected projects and applications in various business sectors will be carried out; tasks will be assigned.

BTP 2003 Computer Networks (2-0)2

This course serves as a foundation for the understanding of the Internet and the Ground area Webs and Wide area Webs that constitute the basis of computer webs. A wide range of subjects including LAN protocols hardware, software, terminology, components, design and attachments are typical characteristics of the course.

BTP 2004 E-Commerce Programming (3-0)3

Historical development of electronic commerce, introduction of basic terms related to the internet and e-commerce, characteristics of commerce in the electronic medium, terms of payment, problems, marketing activities realized on the internet and their applications in the electronic medium, the place of consumer protection within the framework of Turkish Law constitute the core skills offered in this course. The course aims to teach students how to build e-commerce websites via PHP/MySQL and related applications.

BTP 2005 Multimedia Applications (3-0)3

This course offers students visual design for the printed medium and Web applications. Adobe Photoshop and Adobe Flash programs are used for these applications.

BTP 2006 C Programming II (3-0)3

Program design is dealt with in more detail around Abstract Data Types and their implementations. The course also covers compilers, analysis tools, editors and program tool. The course provides a comprehensive implementation of C- as is the case in course BTP2007.

BTP 2007 C Programming I (3-0)3

The course covers high-level programming language and basic design principles for software developers. The students learn software programming and simple program development techniques. C language is used and the course provides a comprehensive implementation of C. As basis for programming; definitions, markers, operators and basic control forms; functions, and formal storage, file input/output is studied.

BTP 2008 Microcomputer Systems and Assemblers (3-0)3

Introduction to the historical development of microcontrollers, components of microcontrollers, number systems (hexadecimal, octal, binary and decimal), operation of logic gates AND, OR, NAND and NOR and their truth tables, addition, subtraction, multiplication and division operations in the binary system, presentation of simple circuit elements (resistors, capacitors, etc), basic computer organization and microcontroller programming and interface applications.

BTP 2009 Information Management Systems (3-0)3

System, information systems, operational information systems, management information systems, decision supporting systems, management support systems, the structure and function of information systems in organizations, the functional areas of information systems, the security of information systems constitute the core skills offered in this course.

BTP 2010 Operating Systems (3-0)3

In this course students are exposed to the latest versions of multi-operating systems that are currently used. These operating systems include Windows NT, Linux, Unix, and Novel or BSD.

BTP 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

ELECTRIC

GENERAL INFORMATION: Nowadays, the field of energy and its sub-divisions, as they present vital significance for the future and what the world needs the most, are electric based, and are still professions of high demand as far as their level of validity.

One of the most fundamental elements of industrialization, and economical and social life is utilizing the electrical power further. Electrical power is a kind of energy that we need to use daily in a variety of purposes, such as for lighting, for heating, in entertainment, in kitchen, at workshop, and in the industry, briefly, in almost every major area of our contemporary life.

The graduates of this department, while holding a degree of a “qualified technician”, are extremely crucial for the sector to take part as to setting up all kinds of facilities & plants, ensuring that the businesses are continuously in operation, controlling/maintaining/repairing electric-powered devices and instruments, in factories, in continuity of production, in energy production, transmission and distribution.

It is undisputed that electrical energy plays a vital role in every sector in the industry. The need for intermediate work-force, to carry out the very imperative task of communication among engineers, technicians and workers, is increasing every single day. The Electric program graduates are qualified candidates to meet the demands and developments of the sector. There is a need for skilled manpower for setting up all kinds of facilities, ensuring uninterrupted production in factories, and transmission and distribution of energy.

In addition, currently, the fields such as Electric, Electronics, and Computers are integrated and they support each other. There is a need for people who possess foreign language skills. Our Electric program educates this kind of qualified manpower. Our laboratories, equipped to provide the sort of training that tackles the shortage of workers, are the indicators of our potential for high success in meeting the latest developments in the field of Electric.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|--------------------------------------|--------|
| ELE | 1001 | Electric and Electronic Measurements | (3-2)4 |
| EHA | 1005 | DC Network Analysis | (3-2)4 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (3-0)3 |
| TBI | 1001 | Scientific Principles of Technology | (2-0)2 |
| GTI | 1000 | General and Technical Communication | (2-0)2 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| ELE | 1002 | Foundations of Electric Networks | (3-2)4 |
| EHA | 1004 | AC Network Analysis | (3-2)4 |
| EHA | 1002 | Analog Electronics | (3-2)4 |
| MEK | 2008 | Electrical Machines | (2-2)3 |
| MAT | 1002 | Mathematics II | (3-0)3 |
| BDC | 2003 | Computer Aided Technical Drawing I | (3-0)3 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

(2-0)2
SECOND YEAR

Third Semester

| | | | |
|-----------|------|--|--------|
| ELE | 2001 | Electrical Machines II | (2-2)3 |
| ELE | 2003 | Electric Maintenance and Fault Detection | (2-0)2 |
| ELE | 2005 | Electrical Energy Generation, Transmission and Distribution | (3-2)4 |
| EHA | 1007 | Digital Electronics | (3-2)4 |
| EHA | 2009 | System Analysis and Design I | (1-2)2 |
| ELE | 2990 | Summer Training | Non-Cr |
| BDC | 2004 | Computer Aided Technical Drawing II | (3-0)3 |
| ISL | 1001 | General Management | (3-0)3 |
| Elective* | | | (3-0)3 |

Fourth Semester

| | | | |
|------------|------|--|--------|
| ELE | 2002 | Electric Installation Layouts | (3-0)3 |
| ELE | 2004 | Related Electric Services and Systems | (2-0)2 |
| ELE | 2006 | Electrical Machines III | (2-2)3 |
| ELE | 2008 | Plant Manufacturing Techniques | (3-0)3 |
| ENE | 2002 | Quality Control and Standards | (2-2)3 |
| EHA | 1008 | Quality Assurance and Standards | (2-2)3 |
| EHA | 2012 | System Analysis and Design II | (1-2)2 |
| ENE | 2009 | Instrumentation | (2-0)2 |
| Elective** | | | (3-0)3 |

* Any one of the following: EHA 2001, ELE 2007, ELE 2009, MEK 2004, ING 2001

* Any one of the following: ELE 2010, ELE 2012, ELE 2014, ELE 2016, ELE 2018, ISL 2003,
 ING 2002

COURSE DESCRIPTIONS

ELE 1001 Electric and Electronic Measurements (3-2)4

This course offers general information on measurement and device principles, direct current measurement, alternative current measurement, energy measurement, elements of circuit and parameter measurement, measurement by oscilloscope, industrial measurement, and subjects of transducers.

ELE 1002 Foundations of Electric Networks (2-0)2

This subject aims to help students recognize the main concepts related to electric network facilities, to explain the precautions to avoid the dangers of electric energy, to name the equipment used for electric network facilities, to understand main hand skills.

ELE 2001 Electrical Machines II (2-2)3

This course aims at giving specific information on DC machines, their parts and their working principles, moment and voltage induction measurements of these devices, suspension and armature reaction in DC machines, basic characteristics of DC generators, accelerating and braking systems in DC motors, structures and working principles of single-phase and three-phase transformers.

ELE 2002 Electric Installation Layouts (2-2)3

Preliminary study of installation plan, preparation of installation plan, completing and presenting the installation plan constitute the main aim of this course. The course also provides specific knowledge on how to carry out feasibility studies about lighting, power and energy transmission, distribution project, and how to arrange the details about the projects. Techniques of being able to give a presentation about the subject are also covered.

ELE 2003 Electric Maintenance and Fault Detection (2-0)2

This course aims at teaching students the principles of maintenance and trouble-shooting, systems of error signals and sensors, trouble-shooting flow diagrams preparation, electric-electronic circuit elements, electrical devices and maintenance service systems.

ELE 2004 Related Electric Services and Systems (2-0)2

Introduction to and application of the water supply systems in buildings, heating systems in buildings, air-conditioning systems, lighting systems, fire alarm systems, lightning rod systems, bypass feed systems constitute the major aims of this course.

ELE 2005 Electrical Energy Generation, Transmission and Distribution (3-2)4

This course offers general information on systems used to obtain electrical power, types of electrical power plants, their principles and analysis of managements. The application of transmission of electricity from plant to users and basic principles of the process and transmission and distribution circuit and underground networks constitute the major aims of this course.

ELE 2006 Electrical Machines III (2-2)3

The aim of this course is to help students get canalized to investigate the functions of universal, servo and step motors in industry.

ELE 2007 Electromechanical Control Systems (3-0)3

This course aims at supplying students with general knowledge on control input elements, control output elements, electrical protection relays, electrical motor controls, lift controls and use of PLC in control systems.

ELE 2008 Plant Manufacturing Techniques (3-0)3

The objective of this course is to help students get exposed to the topics of generally manufacturing industry and particularly electricity industry processes. The subjects exploited in this course are as follows: Manufacturing processes, transformer production, panel production, electric motors, generators, electronic components and quality control.

ELE 2009 Winding Technology (3-0)3

This course aims at supplying students with specific knowledge in industrial motors and their maintenance, winding and rewinding motors.

ELE 2010 Industrial Control and Its Elements (3-0)3

Introduction to and application of sensors and transducers, heating sensors, pressure transducers, position transducers, current transducers, level measurement, optoelectronics techniques, speed vibration and acceleration constitute the major aims of this course.

ELE 2012 Computer Hardware (3-0)3

This course aims at supplying students with the general information on basic units that form a PC, basic system elements, set up of a standard PC, hard disks, floppy disks, CD ROM's and communication ports, modems, printers, ethernet and SSCI, cards, voice cards and TV cards. Construction of a PC by combining all necessary hardware.

ELE 2014 Advanced Digital Applications (3-0)3

Topics include sequential logic devices, correct usage of counters and registers, A/D and D/A converters, advanced digital elements.

ELE 2016 Automatic Control (3-0)3

Control principles, elements used in servo mechanisms, speed control of open and closed-loop DC and AC motors will be explored.

ELE 2018 Energy Management (3-0)3

This course focuses on topics such as present energy situation of Turkey, the structure of Turkish industry and its energy consumption, energy saving in lighting, economic analysis procedures, environmental issues, alternative energy sources, and compound heat-power production systems.

ELE 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

INDUSTRIAL ELECTRONICS

GENERAL INFORMATION: Advances in industry not only enhance the importance of industrial electronics but also increase the need for well-educated technical workforce in this area. Industrial Electronics Program is a field of study that explains the principles of the use of electronics in industry.

Industrial Electronics Program aims to train intermediate technical staff who knows about the electronic systems and hardware used to install, maintain and repair electronic devices utilized in industry; who is familiar with all aspects of such systems and hardware; and who can apply their technical knowledge to industrial systems and hardware.

This program is designed to teach students how to arrange their work environment by utilizing the education received, experience and the knowledge acquired. Students are provided with an education environment conducive to developing their practical skills and open for developments in the field of advanced information technology.

In order to increase the productivity of organizations that provide goods and services, workforce management and techniques to use machinery and equipment sufficiently must be developed. Industrial Electronics Program is designed to teach students production technologies used in industry, and to train qualified workforce to be recruited for the assembly, maintenance and repair of electronic devices.

Industrial Electronics Program offers courses, designed according to the applications in traditional and contemporary technology, to provide students with the fundamental theoretical knowledge, practical application and an opportunity to develop professional skills. All laboratories are equipped with the latest research devices and hardware to facilitate scientific support. At the successful completion of this program, students will be able to improve their professional skills; to recognize defects quickly and accurately; to make quick decisions and realize them; to plan transactions and functions; to follow and welcome latest technological and scientific developments; to take part in and contribute to team work; to prepare reports; to communicate sufficiently; and to use, repair, and maintain machinery and equipment necessary for their profession.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|--|--------|
| EHA | 1003 | Electronic Measurement Techniques and Safety | (2-2)3 |
| EHA | 1005 | DC Circuit Analysis | (3-2)4 |
| EHA | 1007 | Digital Electronics | (3-2)4 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| TBI | 1001 | Scientific Principles of Technology | (2-0)2 |
| BIL | 1000 | Introduction to Computer | (3-0)3 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|-------------------------------------|--------|
| EHA | 1002 | Analog Electronics I | (3-2)4 |
| EHA | 1004 | AC Circuit Analysis | (3-2)4 |
| EHA | 1006 | Digital Design | (2-2)3 |
| BDC | 2003 | Computer Aided Technical Drawing I | (3-0)3 |
| MAT | 1002 | Mathematics II | (3-0)3 |
| GTI | 1000 | General and Technical Communication | (2-0)2 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|------------|------|---------------------------------|--------|
| ENE | 2001 | Computer Aided Drawing | (2-0)2 |
| ENE | 2007 | Operational Amplifiers | (3-2)4 |
| ENE | 2009 | Measurement and Instrumentation | (2-0)2 |
| ENE | 2990 | Summer Training | Non-Cr |
| EHA | 2003 | Analog Electronics II | (3-2)4 |
| EHA | 2009 | System Analysis and Design I | (2-0)2 |
| EHA | 2001 | Microcontrollers I | (3-2)4 |
| ISL | 1001 | General Management | (3-0)3 |
| Elective** | | | (3-0)3 |

Fourth Semester

| | | | |
|-----------|------|-------------------------------------|--------|
| ENE | 2002 | Quality Control and Standards | (2-2)3 |
| ENE | 2008 | Programmable Controllers | (3-2)4 |
| EHA | 2002 | Microcontrollers II | (3-2)4 |
| EHA | 2012 | System Analysis and Design II | (2-0)2 |
| EHA | 1008 | Quality Assurance and Standards | (2-2)3 |
| BDC | 2004 | Computer Aided Technical Drawing II | (2-2)3 |
| Elective* | | | (3-0)3 |

* Any one of the following: BTP 1006, ING 2001, ISL 2003, ENE 2011, ENE 2013, ENE 201

** Any one of the following: EHA 2020, EHA 2022, ENE 2010, ENE 2012, ENE 2014, ENE 2016

COURSE DESCRIPTIONS

ENE 2001 Computer Aided Drawing (2-0)2

Operational regulators are among the devices that Industrial Electronic Program students use frequently in all areas of their profession. Understanding the subject is related to understanding of Analog Electronic course.

ENE 2002 Quality Control and Standards (2-0)2

Among the topics to be explored are fundamental principles of PLC, input-output systems, programming methods, and parts of PLC. Programming, logic processes, and instructions of fundamental logic processes will be covered as well.

ENE 2007 Operational Amplifiers (3-2)4

This course covers the operational amplifiers, their electrical features, application of analysis principles, operation principles of main operational amplifier circuits, deciphering the operational amplifier applications, multivibrators, their electrical features, cognition of undulation molders, interpreting

and constructing the undulation inflow-outflow shapes for an undulation molder are covered.

ENE 2008 Programmable Controllers (3-2)4

In this course students will focus on the developments in automation systems as they explore various subjects such as recognition of the structures of the programmable logic controllers, comprehension of its working principle, application of programming basis of the programmable logic controllers, programming and application samples.

ENE 2009 Measurement and Instrumentation (2-0)2

Students will be introduced to P-N junction power elements, electrical characteristics of thyristors, elements of inducement, thyristor applications and protection of the P-N junction power elements.

ENE 2010 Fault Detection (3-0)3

This course will familiarize students with test of discrettes, recognizing ends and sleeves, test techniques, signal monitoring, determining the defective sector and elements. Other topics

such as localizing the defect, functional block diagrams, trouble-shooting by intersecting, error algorithm, error output chart, advanced error diagnostics appliance, advanced testing and error diagnostics appliance will also be covered.

ENE 2011 Synchronous and Servo Systems (2-0)2

Students will master power supplies used in servo mechanisms, potentiometers and amplifiers, DC servo motors, open-loop and closed-loop control, AC servo motors, open-loop and closed-loop control, torque, synchronous motor main structure, operation and control of synchronous position control systems, operation principles of torque transducer and receiver; control codes.

ENE 2012 Power Supplies (3-0)3

This course enables students to recognize power supplies for electronic devices, understanding its electrical characteristics, designing a power supply, linear and switching power supplies.

ENE 2013 Amplifiers and Oscillators (3-2)4

This course presents coupling and decoupling (Bypass), capacitors, coupling species, BJT and JFET's equivalent models, Small Signal Elevators with BJT (Voltage) Big Signal Elevators (Power), oscillators: positive feedback, oscillators which are not sinusoidal are covered.

ENE 2014 Electric Motors and Drives (3-2)4

Students will explore structures of electric motors, their working principles, their

fundamental equation and characteristic features with their place of use, controllable quantities in electric motors and controlling principles, techniques for adapting semiconductor power elements to motor driver circuit, basic controlling principles that are used in motor controls.

ENE 2015 Power Electronics (3-2)4

This course will explore a variety of topics such as main principles and power electronics principal elements, snubber circuit design, drive circuit, AC chopper circuits, single-phase and three-phase controlled/uncontrolled electronic rectifier circuits working under different loading circumstances, DC chopper circuits, single-phase inverters, inverter analysis and frequency/voltage control methods, harmonic analysis of inverters, modulation index and frequency rates.

ENE 2016 Air-Conditioning Systems (3-0)3

This course will cover topics such as understanding the basic principles of cooling and air conditioning, and the principle of refrigeration cycle, cooling system electrical circuit components and their duties, and the basic principle of air conditioner and its way of processing.

ENE 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

MECHATRONICS

GENERAL INFORMATION: Mechatronics, accepted as a popular and new science today, is an interdisciplinary field, which not only incorporates mechanical, electrical-electronic, and computer engineering but also brings together software and control engineering fields under the same roof.

Recent years have witnessed ever increasing developments in electronics, computers and control systems. As a result, mechanical systems have almost disappeared completely necessitating the use of mechanical, electrical/electronic, hydraulic, pneumatic systems and computer technologies together. Inevitably, mechatronics has appeared as a brand-new discipline. Mechatronics covers a wide range of areas, from home technology to modern medical apparatus, from computer controlled workbench to robotic. Mechatronics has become indispensable for technology as robotic technology systems are used in all areas extensively.

Mechatronics is vital for Turkey as well in terms of international competitiveness and integration into the global economy.

Mechatronics Program is designed to train intermediate technical staff that is competent in manufacturing a wide array of equipment including all kinds of mechanical, hydraulic-pneumatic, electrical or electronic, and/or computer-driven automated devices, utilities and hardware used in industrial areas. Graduates will have all professional skills, problem solving abilities and knowledge required to demonstrate, design, install, operate, maintain, repair, and develop such devices.

Mechatronics Program facilitates laboratories equipped with the latest technology, providing students with hands-on experience in computer controlled manufacturing system (FMS-CIM), computer aided technical drawing and design, quick prototyping, welding robot, material analysis (SEM X-Ray diffractometer and spectrometer), pneumatic, electropneumatic (MPS), hydraulic, electrohydraulic, process control, acoustic and vibration, and automotive electronics.

Within the framework of university-industry cooperation, we have been working on an integrated education program in collaboration with industrial companies that manufacture mechatronic systems.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|-------------------------------------|--------|
| MEK | 1001 | Mechatronics Measurement Techniques | (2-2)3 |
| MEK | 1003 | Materials Science | (3-0)3 |
| MEK | 1005 | Mechatronics Construction Elements | (3-0)3 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (3-0)3 |
| BDC | 2003 | Computer Aided Technical Drawing I | (3-0)3 |
| EHA | 1005 | DC Circuit Analysis | (3-2)4 |
| TBI | 1001 | Scientific Principles of Technology | |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| MEK | 1002 | Electronics I | (3-2)4 |
| MEK | 1004 | Logic Circuits | (4-0)4 |
| MEK | 1006 | Mechanics | (3-2)4 |
| MAT | 1002 | Mathematics II | (3-0)3 |
| BIL | 1002 | Computer Programming I | (2-0)2 |
| EHA | 1004 | AC Circuit Analysis | (3-2)4 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|---------------------------------|--------|
| MEK | 2001 | Electronics II | (3-2)4 |
| MEK | 2003 | Sensor Techniques | (2-0)2 |
| MEK | 2005 | Thermodynamics | (3-0)3 |
| MEK | 2007 | Mechatronics Applications | (2-0)2 |
| MEK | 2009 | Automation Systems | (2-0)2 |
| MEK | 2011 | Control Systems | (2-0)2 |
| MEK | 2990 | Summer Training | Non-Cr |
| EHA | 2001 | Microcontrollers I | (3-2)4 |
| ENE | 2009 | Measurement and Instrumentation | (2-0)2 |
| BIL | 2001 | Computer Applications I | (2-0)2 |
| ING | 2001 | Professional English I | (3-0)3 |

Fourth Semester

| | | | |
|-----|------|--|--------|
| MEK | 2002 | Mechatronics System Analysis | (2-0)2 |
| MEK | 2004 | Hydraulic and Pneumatic Systems | (3-2)4 |
| MEK | 2006 | Computer Based Data Collection and Control | (2-0)2 |
| MEK | 2008 | Electrical Machines | (3-0)3 |
| MEK | 2010 | Robot Technology | (3-2)4 |
| EHA | 1008 | Quality Assurance and Standards | (2-0)2 |
| BIL | 2002 | Computer Applications II | (2-0)2 |
| ING | 2002 | Professional English II | (3-0)3 |

COURSE DESCRIPTIONS

MEK 1001 Mechatronics Measurement Techniques (2-0)2

This course covers topics including electricity security, basic electrical measurements, oscilloscope and signal generator applications, components susceptible to electrostatics.

MEK 1002 Electronics I (3-0)3

Students are introduced to a knowledge on atomic structure, diodes and diode types, BJTS, transistors, electric circuit elements, DC-circuits and their solutions, transient events, AC-circuits and their solutions, measurement equipments, semi-conductor circuit elements, circuit design by using integrated circuit.

MEK 1003 Materials Science (3-0)3

This course explores features and applications of construction and restoration materials, operations, basic metallurgy, metals and metal processing, nonmetal materials, materials on load and vibration are covered within the course.

MEK 1004 Logic Circuits (3-2)4

Students will focus on numerical concepts, number systems, logic circuits, simplifying logic terms, flip-flops, counters, recorder and holders, memory units, A/D and D/A converters, circuit design by logic doors, circuit design by flip-flop, circuit design by integrated circuit.

MEK 1005 Mechatronics Construction Elements (3-2)4

This course introduces students to the parts of mechatronic construction elements, mechanical systems, mechanical system design, electronic systems, automation systems, informatic systems, processing systems, mechatronic systems and mechatronic design are covered within the course.

MEK 1006 Mechanics (3-2)4

This course covers a variety of topics such as vector algebra and vector systems. Force systems, centroid, static of substantial point, balance, momentum, friction and friction principles, speed and acceleration, linear movement, curvilinear motion, Newton's second law, dynamics of the substantial point, work and energy, hydrostatics, hydraulics.

MEK 2001 Electronics II (3-2)4

Differential amplifiers, electrical features of operational amplifiers, feedback, frequency reaction of operational amplifiers, basic stages of operational amplifiers, applications of operational amplifiers, multivibrators and band amplifiers, definitions, low frequency amplifiers with BJT (Bipolar Junction Transistor), low frequency amplifiers with FET (Field Effect Transistor), high frequency amplifiers and oscillators are covered within the course.

MEK 2002 Mechatronics System Analysis (2-0)2

This course is designed to teach students mechatronic system design and projects, realizing the mechatronic system by using mechatronic equipment.

MEK 2003 Sensor Techniques (2-0)2

This course will teach students position finding, temperature measurements, pressure measurements, flow measurements, level measurements, velocity vibration and momentum measurements, and potentiometers.

MEK 2004 Hydraulic and Pneumatic Systems (3-2)4

This course focuses on basic concepts and standards of hydraulics, elements and circuits of hydraulics, basis concepts and standards of pneumatic, pneumatic elements and circuits, open and closed circuit control systems, electronically valves, proportional, derivative and integral (PDI) control and applications.

MEK 2005 Thermodynamics (3-0)3

Students are introduced to definitions and basic terms, the first law of thermodynamics, thermodynamic systems, heat and operation, and the second law of thermodynamics. Among other topics to be explored are entropy and heat energy, Carnot Principle and conversion, positioning of gases, heat machine conversions, constant volume, constant pressure and combined conversions, and actual output conversions.

MEK 2006 Computer Based Data Collection and Control (2-0)2

Students will explore measurement principles, sensors, signal conditions, sampling and holding circuits, multiplexers, DAC, ADC, samples data systems, bus systems, data evaluation software, applications on industrial applications.

MEK 2007 Mechatronics Applications (2-0)2

This course will explore mechanical systems, processing mechanical parts, designing mechanical parts, designing and manufacturing mechatronic parts are covered within the course.

MEK 2008 Electrical Machines (3-0)3

Students will discover and master the structure of electric engines, their operation principles, main equivalence and characteristic curves, the control system on electric engines, the techniques of DC motor drives and currents, AC motor drives and currents, step and engine currents.

MEK 2009 Automation Systems (2-0)2

This course covers basic controlling principles, open circuit and closed circuit control, controlling system operation, controlling systems and types, proportional control, differential control, derivative control, PID control, control with fuzzy logic and artificial neural networks are covered within the course. EK Students are taught the history of robots,

robot basic principles, varieties of robotic system, the application areas of robot technology, the design and application of robots.

MEK 2011 Control Systems (2-0)2

Students are introduced to the principles of automatic steering symbols, automatic steering elements, automatic steering circuits, automatic steering control and steering and the structure of main elements(relay, contactor, thermal and magnetic, battery master switch, sensor, limit switch, etc.),first movement systems, awing the power and steering charts, the symbols of steering elements, sample drawings of regarding industrial applications.

MEK 2010 Robot Technology (3-2)4

Students will be familiarized with the history of robots, robot basic principles, varieties of robotic systems, the application areas of robotic technology, the design and application of robots.

MEK 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

TELECOMMUNICATIONS

GENERAL INFORMATION: Among all sectors, the communications sector, particularly its most important part electro-communications, has become increasingly crucial as a result of the high speed of developments in communications technologies. The electronics sector, which exports half of its production, has been growing and developing thanks to substantial investments in technology. This has led to a greater demand for qualified staff.

There is a genuine and urgent need to train technicians, who are sufficient and skillful enough to be in charge of electrical, computer-driven automated land and space communication systems; to design, implement, operate, maintain and repair digital electronic systems, and to bridge the gap between administrators and engineers.

Day by day the need of qualified employers are increasing with the development of GSM technology, video conference systems and the installation of the base stations which will provide this communication and its management, broadcasting, preparation of the switch off of terrestrial analog broadcasting, and terrestrial numerical broadcasting and subject of transmitter of these as well as frequency of use of cellular phones and acceleration of the infrastructure work of internet and network use. The aim of the telecommunications program is to train technicians who have the necessary information and skills about communication technology, the strength of planning and project and who are open to development and who assimilate the principle of lifelong learning. The available laboratories which are ready to provide the highest quality of education with the employers who assimilate the developments in electronic communication are the index of our success. The students who completed their education in the area of telecommunications can work in voice, display and production on data transfer, service supplier and operator service sectors.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|--|--------|
| EHA | 1003 | Electronic Measurement Techniques and Safety | (2-2)3 |
| EHA | 1005 | DC Network Analysis | (3-2)4 |
| EHA | 1007 | Digital Electronics | (3-2)4 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (3-0)3 |
| TBI | 1001 | Scientific Principles of Technology | (2-0)2 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| EHA | 1002 | Analog Electronics I | (3-2)4 |
| EHA | 1004 | AC Network Analysis | (3-2)4 |
| EHA | 1006 | Digital Design | (3-2)4 |
| EHA | 1008 | Quality Assurance and Standards | (2-0)2 |
| BDC | 2003 | Computer Aided Technical Drawing I | (3-0)3 |
| MAT | 1002 | Mathematics II | (3-0)3 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----------|------|--|--------|
| EHA | 2001 | Microcontrollers I | (3-2)4 |
| EHA | 2003 | Analog Electronics II | (3-2)4 |
| EHA | 2005 | Digital Communications | (3-2)4 |
| EHA | 2007 | Analog Communications | (3-2)4 |
| EHA | 2009 | System Analysis and Design I | (1-2)2 |
| EHA | 2990 | Summer Training | Non-Cr |
| BDC | 2004 | Computer Aided Technical Drawing II | (3-0)3 |
| GTI | 1000 | General and Technical Communication | (2-0)2 |
| Elective* | | | (3-0)3 |

Fourth Semester

| | | | |
|------------|------|--|--------|
| EHA | 2002 | Microcontrollers II | (3-2)4 |
| EHA | 2004 | Modern Communication Technologies | (2-0)2 |
| EHA | 2006 | Fiber Optic Communications | (2-2)3 |
| EHA | 2008 | Telephone Communication and Switching Systems | (3-0)3 |
| EHA | 2010 | RF Techniques | (3-0)3 |
| EHA | 2012 | System Analysis and Design II | (2-0)2 |
| ISL | 1001 | General Management | (3-0)3 |
| Elective** | | | (3-0)3 |

* Any one of the following: EHA 2011, EHA 2013, EHA 2015, EHA 2017, ING 2001

* Any one of the following: EHA 2014, EHA 2016, EHA 2018, EHA 2022, ING 2002, ISL 2003

COURSE DESCRIPTIONS

EHA 1002 Analog Electronics I (3-2)4

This course consists of definition of small-signal amplifiers with BJT, oscillators, difference amplifiers, electrical characteristic of operational amplifiers, main operational amplifiers, multi-vibrators and wave forming.

EHA 1003 Electronic Measurement Techniques and Safety (2-2)3

This course consists of electrical safety, basic electrical measurement, oscilloscope, signal generators, elements that are sensitive to electrostatics. The course objectives are as follows: Awareness of the dangers of electricity use in workplaces; steam, voltage and resistance and measurement; structure of oscilloscope, its performance principles and measurement using the oscilloscope.

EHA 1004 AC Network Analysis (3-2)4

This subject covers; the phase relation of R,L and C and their size in time line. Series, parallel and series-parallel alternative current lines, the solution methods of alternative current lines, theory of currents, resonance, three-phase currents.

EHA 1005 DC Network Analysis (3-2)4

This course consists of resistance, Ohm's law, efficiency, Kirchoff's laws, sources of electricity, techniques of circuit solution, circuit theories, capacitors, electromagnetism, electromagnetic induction.

EHA 1006 Digital Design (3-2)4

Within this course, electronic circuit designs by using the logic ports, the flip-flop and integrated circuits are covered. The objectives are: establishing circuit design by using various logic ports; establishing circuit design by using various flip-flops; establishing circuit design by using various integrated circuit elements.

EHA 1007 Digital Electronics (3-2)4

This course consists of numeric terms, number systems, logic stages, reducing logical statements, compositional circuits, flip-flop counters, recorders, memory slots, algorithm devices, converters and numerical modulations.

EHA 1008 Quality Assurance and Standards (2-0)2

Standardization: definition, aims and principles, TSE and its duties, local and international standardization institutions, quality and quality definitions; definition of quality and related concepts, quality approach, quality expenses and risks, quality control concepts, quality assurance, quality management principles, TS-EN-ISO 9000 ,TS-EN-ISO 9001,TS-EN-ISO 9004, ISO 9011 standards and explanations, professional standards and perception of professional standards.

EHA 2001 Microcontrollers I (3-2)4

This course consists of structures of microcomputer systems, comparison with micro controller, establishment of micro-controller systems, introduction to programming and subjects of programming.

EHA 2002 Microcontrollers II (3-2)4

Within this course, the basic notions of input-output transactions, programming the input-output devices, cutoff (interrupt), enumerators /timer, EADC/DAC applications are being covered.

EHA 2003 Analog Electronics II (3-2)4

This course consists of BJT small signal voltage regulators, oscillator, diversity regulators, electrical characteristics of operational regulators, feedback, frequency response of operational regulators, basic operational regulator circuits, operational regulator applications, multi-vibrators and oscillation formations.

EHA 2004 Modern Communication Technologies (2-0)2

Within this course, Fax, ISDN Systems, XDSL Systems, GSM, GPRS, UMTS, MVNO, TETRA, SDH, next-generation Internet solutions, new systems in developing technology are being covered. It is aimed to teach the topics like the standards of Integrated Services Digital Network (ISDN) systems.

EHA 2005 Digital Communications (3-2)4

This course consists of description of digital communication, basic concepts and theorems of sampling, stroke amplitude, width and

position modulations (PAM, PWM, PPM) and demodulation principles, time sharing multiplexing, PCM and Delta modulations and demodulations, line codes, techniques and standards of digital communication.

EHA 2006 Fiber Optic Communications (2-2)3

Within this course, fiber optic communication principles, fiber optic cable features in terms of light transporter and transmission characteristics of fiber optics, the materials and their qualities which are used in fiber optic communication are being covered.

EHA 2007 Analog Communications(3-2)4
This lesson consists of recognizing the principles of communication, features of voice and telephone sets, the systems between the subscriber and the operator from the local telephone network and the basic principles of switching in telephone switchboard.

EHA 2008 Telephone Communication and Switching Systems (3-0)3

Within this course, principles of communication, features of television and voice sets, local telephone network, switching principles, theory of telephone traffic and plants will be covered. To recognize the principles of communication, features of voice and telephone sets, the systems between the subscriber and the operator from the local telephone network and the basic principles of switching in telephone switchboard are the main objectives of the course.

EHA 2009 System Analysis and Design I (1-2)2

This course consists of feasibility studies, process of preparing and presentation of the project objectives of which are: Making preparations for foreseen project, application of the foreseen project, presenting the foreseen project.

EHA 2010 RF Techniques (3-0)3

The following subjects should be covered in this lesson: Oscillators, filters, mixers, RF and IF amplifiers, PLL and frequency synthesizer, modulator and demodulator circuits, and when and how to carry out the oscillation, filtering, and mixing processes.

EHA 2011 Industrial Electronic Applications (3-0)3

This course consists of semi-conductive control and induction units, converters, DC electrical motors, sensors and transducers, DAC/ADC converters, low power RF applications.

EHA 2012 System Analysis and Design II (1-2)2

In this course, the following subjects are covered: the feasibility study, project process, and the presentation of it.

EHA 2013 Computer Hardware (3-0)3

This course consists of basic units that constitute Personal Computers, basic system elements, hard discs, floppy discs, CDROM's, modem, printers, soundcards and TV cards, the course aims to help students to identify and to mount these units.

EHA 2014 Antennas and Microwave Technologies (3-0)3

Within this course radio waves, transmission principles of radio waves, antenna, microwave elements, microwave systems, R/L (Radio Link) systems, high frequency lines are to be covered.

EHA 2015 Programming (3-0)3

Problem solution principles and stages, algorithm and flow diagrams, application of programming context and code scripting rules, variables, controlling terms and loops, sequences, subprograms and graphic are covered within the course.

EHA 2016 Satellite and Cellular Communication (3-0)3

Basic principles of satellite communication, satellite frequency bands and the constructions of satellite dish, the TURKSAT Project, cellular communication system, analog and digital mobile communication system features are taught.

EHA 2017 Informatics (3-0)3

Basic internet terms, introduction to web design, presentation program and the application of data base program are covered within the course. The aim of the course is to make students apprehend the fact that computer technology can be applied to various purposes at office work, make a presentation

with the help of computer technology and learn basic notions and terms regarding internet use and programming.

EHA 2018 Information Networks and Data Communications (3-0)3

Data communication access, basics of data communication, access to informatics network, ISO application model, local area network (LAN), wide area network (WAN), network architectures, protocols, layers are covered within this course.

EHA 2022 Radio Television Technology (3-0)3

In this course, radio transmitters and receivers, super heterodyne receivers, television

transmitters and receivers, color television, TV and radio standards are covered. This course consists of clatter resources in communication system, signal level units, analyzing the frequency domain, constant wave modulation principles and GM and FM applications are covered.

EHA 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

ECONOMICS AND ADMINISTRATIVE PROGRAMS

BANKING AND INSURANCE

GENERAL INFORMATION: Nowadays, the rate of rapid change in correspondence and communication sector will definitely be felt more by banking and insurance sectors, which are the basic dynamics of financial markets than any others. This change and development has not only enhanced product and services supplied by the related sectors, but also increased the need for qualified labor force and today's competitive business world has made it compulsory to satisfy this growing need.

It is only possible for the companies in banking and insurance sector to sustain the constant development in this competitive and innovative world with the help of flexible and productive managers and staff with high adaptation ability, vocational information and vision, who are open to change and development and also aware of the sector needs.

Considering that, Bahçeşehir University School of Advanced Vocational Studies- Banking and Insurance Program aims to train qualified staff equipped with the basic, sectoral and legal knowledge for banks, insurance companies, mediator institutions acting in the capital market, international auditing companies, public finance corporations and so on.

This program, targeted at training qualified staff to international banking and insurance companies, adopts that graduates have sufficient foreign language knowledge in the first place towards this aim.

The courses in the program, especially the ones including professional knowledge will be given by instructors who also work at the top managerial status of the related sectors. This, not only offer students a chance of getting to know the sectors of interest, but also increases the opportunity of apprenticeship and employment through the close relationships within the sector.

The students in the program are required to fulfill an obligatory 30-day apprenticeship both to apply information and skills acquired during the program and to know about the professional business atmosphere before graduation.

In order to contribute to banking and insurance sectors as qualified potential labor force, it is aimed that graduates of the program will be able to serve as initiative and innovative professionals with high self-esteem and communication ability, keeping up with the up-to-date developments in the national and international platform.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|------------------------------------|--------|
| BAS | 1001 | Introduction to Banking | (2-0)2 |
| ISL | 1001 | Principles of Management | (3-0)3 |
| ISL | 2001 | Financial Institutions and Markets | (3-0)3 |
| IKT | 1000 | Introduction to Economics | (3-0)3 |
| MUH | 1000 | Financial Accounting I | (3-0)3 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| BAS | 1002 | Introduction to Insurance | (2-0)2 |
| IKT | 1002 | Macroeconomics | (2-0)2 |
| BIL | 1000 | Introduction to Computer | (1-2)2 |
| MUH | 1001 | Financial Accounting II | (3-0)3 |
| HUK | 2000 | Commercial Law | (2-0)2 |
| MAT | 1004 | Statistics | (3-0)3 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|---|--------|
| BAS | 2001 | Financial Statements Analysis | (2-0)2 |
| BAS | 2003 | Banking Operations I | (3-0)3 |
| BAS | 2005 | Insurance Operations I | (3-0)3 |
| BAS | 2007 | Banking Accounting | (2-0)2 |
| BAS | 2009 | Introduction to Foreign Trade and Exchange Management | (3-0)3 |
| BAS | 2990 | Summer Training | Non-Cr |
| HUK | 2001 | Banking and Insurance Law I | (2-0)2 |
| YON | 2001 | Financial Management | (3-0)3 |
| ING | 2001 | Professional English I | (3-0)3 |

Fourth Semester

| | | | |
|-----|------|----------------------------------|--------|
| BAS | 2002 | Marketing of Financial Services | (2-0)2 |
| BAS | 2004 | Banking Operations II | (3-0)3 |
| BAS | 2006 | Insurance Operations II | (3-0)3 |
| BAS | 2008 | Risk Management | (3-0)3 |
| BAS | 2010 | Investment | (2-0)2 |
| BAS | 2012 | Electronic Banking and Insurance | (2-0)2 |
| BAS | 2014 | Insurance Mathematics | (2-0)2 |
| ING | 2002 | Professional English II | (3-0)3 |

COURSE DESCRIPTIONS

BAS 1001 Introduction to Banking (2-0)2

This course consists of basic concepts and principles in banking; the development of banking in Turkey and the world, bank types, organization structures and functions, introduction of the concepts used in banking (interest calculation techniques, the financial statements used). It aims to teach the banking crisis which are faced in the world and in our country, the reasons, the results and the regulations performance. This lesson covers bank mergers, daily developments in banking and Basel II regulations.

BAS 1002 Introduction to Insurance

(2-0)2

Risk and insurance concepts, the history of insurance and the introduction of the basic concepts which are used in insurance. The general principles and structure of insurance, insurance types, insurance agreements. The current structure and the status in Turkish and world insurance. The methods of production, marketing, damage, indemnity and compensation, reinsurance and alternative risk transfer in insurance. The importance of insurance, the new trends around the world and Turkey and the problems faced today.

BAS 2001 Financial Statements Analysis

(2-0)2

General information about the financial analysis, the reasoning of the analysis of financial statement, financial analysis techniques, balance income statement; comparative analysis, Rate analysis, the analysis and the interpretation of the statements with percentage method.

BAS 2002 Marketing of Financial Services

(2-0)2

Developing the customer relations: Customer Relations Concept, features and the new dimensions; total quality management in sales and marketing, value creating for the customer; communication with the customers; customer services: customer service quality and system; customer gaining and retaining; measuring the customer relations; organizational culture and change; creating customer focused culture; obstacles in culture change, customer focused change management.

BAS 2003 Banking Operations I (3-0)3

Deposit description, types and the basic information about deposit, transaction, EFT, check transactions, bill clearing transactions, safety-deposit, payment transaction, taxes, credits, basic elements of credit and credit facility process. Cash credits, accreditation process, Eximbank. Consumer credits, letters of credit, accreditation, acceptance and credit by way of guarantee, ATM, telephone banking, credit cards, parties, payment cards.

BAS 2004 Banking Operations II (3-0)3

Banks law and legal regulations regarding the credits, credit types, import-export credits, foreign money credits, evaluation of credit demands and allocation, effective foreign exchange buying-purchasing and arbitrage transactions, by-products, forward, future, swap, option. Capital marker process; government bond, treasury bond, repo, share, investment funds and Eurobond.

BAS 2005 Insurance Operations I (3-0)3

In this course the subjects of life insurances, accident insurances, fire insurances, compulsory earthquake insurances and damage, forwarding insurances; engineering insurances, policy applications according to the insurance types are covered.

BAS 2006 Insurance Operations II (3-0)3

This course covers the subjects of life insurances, private retirement insurances, private health insurances, insurances based on death. Students are shown filling applications policy according to insurance types.

BAS 2007 Banking Accounting (2-0)2

Bank and bank accounting; current assets, credits, bonded values, deposit, shareholder's equity, interest incomes and expenses, non-interest incomes and expenses, memorandum accounts, foreign exchange accounting, year-end transactions, daily-weekly position, monthly balance, balance and income statement, bank financial statements analysis.

BAS 2008 Risk Management (3-0)3

Risk concept, importance, types and calculation; risk relations with interest rates; risk management and by-products;

management in risk management techniques; risks occurring in international operations and the methods of protection; risk management in respect of financial capability; Basel and Solvency Regulations; Risk measuring by using the internal risk grading methods; New Approaches in Risk Management; Developments regarding the Risk Management Systems in Turkish Banking System; risk management and insurance.

BAS 2009 Introduction to Foreign Trade and Exchange Management (3-0)3

Concepts regarding the Foreign trade customs foreign exchange market and foreign exchange regimes; foreign trade theories; the documents used in foreign trade operations; payment terms in foreign trade; customs; foreign exchange regulations.

BAS 2010 Investment (2-0)2

Comprehensive introduction to security analysis and portfolio management, security portfolios. Introduction to academic and quantitative decision making methods which are arranged based on interest analysis frame, modern portfolio theories, the relation between

the risk and the profit, efficient markets, bonds, options and other concepts.

BAS 2012 Electronic Banking and Insurance (2-0)2

Banking performed in electronic environment and insurance activities, electronic money, electronic trade, the risk subjects met in electronic banking and insurance activities are taught to the students within the scope of this.

BAS 2014 Insurance Mathematics (2-0)2

This course consists of ordinary interest, ordinary discount, effective rate, fractional periods, equivalent values, composite discount, deposit rents, deferred rents, general rents, constant rents, life insurance, instantaneous death rates, net premium and reduced insurance and their mathematical counterparts.

BAS 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

BUSINESS ADMINISTRATION

GENERAL INFORMATION: The department of Business Administration aims to prepare students to meet the challenges of both the Turkish and international market place. It promotes an excellent education, particularly among the administrative sciences, economics and social sciences. The program is geared to motivate students to develop as leaders and researchers that private and public sectors seek for. The department provides high quality education in which students can transfer their theoretical knowledge into a lifetime experience with some projects and training programs which are carried out by industrial organizations in the city within 30 days.

The advantages of the program are:

- Understanding basic principles of business administration
- Understanding importance of contemporary technology with business administration
- Explaining characteristics of the firms which run in commercial field.
- Knowing legal responsibilities
- Understanding the importance of following occupational regulations.
- Recognizing the documents which are used in commercial field.
- Recognizing the basic terms about economy and stock market.
- Understanding the importance of foreign trade in terms of economy and firms.
- Explaining the importance of ethics in business world.
- Using the computer programs related to their science field.
- Taking responsibility in managerial hierarchy.
- Taking responsibility about supervising his or her subordinates.
- Registering commercial account books in accordance with regulations.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|-----------------------------------|--------|
| ISL | 1001 | Principles of Management | (3-0)3 |
| IKT | 1000 | Introduction to Economics | (2-0)2 |
| MUH | 1000 | Financial Accounting I | (3-0)3 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| HUK | 1000 | Basics of Law | (2-0)2 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| IKT | 1002 | Macroeconomics | (2-0)2 |
| BIL | 1000 | Introduction to Computer | (2-0)2 |
| MAT | 1004 | Statistics | (3-0)3 |
| MUH | 1001 | Financial Accounting II | (3-0)3 |
| YON | 1002 | Management and Organization | (2-0)2 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|-------------------------------------|--------|
| ISL | 2001 | Financial Institutions and Markets | (3-0)3 |
| ISL | 2003 | Entrepreneurship and SME Management | (2-0)2 |
| ISL | 2990 | Summer Training | Non-Cr |
| MUH | 2001 | Cost Accounting | (3-0)3 |
| YON | 2001 | Financial Management | (3-0)3 |
| YON | 2003 | Production Management | (3-0)3 |
| PAZ | 1001 | Marketing Principles | (3-0)3 |
| ING | 2001 | Professional English I | (3-0)3 |

Fourth Semester

| | | | |
|-----|------|------------------------------------|--------|
| ISL | 2002 | Human Resources Management | (3-0)3 |
| MUH | 2002 | Management Accounting | (3-0)3 |
| TVS | 2002 | Turkish Taxation System | (2-0)2 |
| PAZ | 1004 | Integrated Marketing Communication | (3-0)3 |
| PAZ | 2000 | Sales Management | (3-0)3 |
| PAZ | 2008 | E-Commerce | (3-0)3 |
| ING | 2002 | Professional English II | (3-0)3 |

COURSE DESCRIPTIONS

ISL 1001 Principles of Management

(3-0)3

This course will teach the basic principles about the management, their purpose and relation with the environment, their classification according to the special features, how they are established, the stages of how the management is set, and capacity principles. Also management functions (management, production, marketing, accounting, finance, human resources, and human relations) are exploited with the relation of these functions.

ISL 2000 Human Resources Management

(3-0)3

This course will teach the meaning of human resource management, its organization and environment, planning of human resources, finding the resource of a human, choose and guiding it, evaluation and pricing of the human resource, business relations and how to build effective business relations and maintaining it.

ISL 2001 Financial Institutions and Markets

(3-0)3

Content of this course includes the interaction between the financial corporations and markets. The basic subject headings are: financial markets' development, these markets' importance in the present financial system,

operation of the financial markets, these markets' effects on economy and prudential development strategies.

ISL 2003 Entrepreneurship and SME Management

(2-0)2

Concept of entrepreneurship and its formation, small business types, the establishment process of the small businesses, management in the small businesses, marketing and finance, problems of the small businesses and solutions.

ISL 2004 Public Relations

(2-0)2

Contemporary human relations. Human relations and close concepts. Human relation activities. The process of human relations. The job of human relations and its definition. The communication devices used in the human relation activities.

ISL 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

IMPORT EXPORT

GENERAL INFORMATION: The globalization of financial markets and the emergence of integrated international trading zones are affecting exportation and importation fields. Without knowing the structure and facts of these fields, the exportation-importation activities would not be efficient. Therefore, teaching the general understanding of the following terms is necessary; economics, politics, cultural facts, finance etc. This way of thinking and understanding is essential for having a successful exportation/importation business in a world that is getting more and more globalized every day. The latest happenings and the rising importance of foreign trade in our country has caused the need of mid-level employees with the required accomplishments and abilities to increase.

The program aims at providing students with the following abilities: examination of the fundamental principles of foreign trade; comprehending the judicial and technical regulations of Turkey's foreign trade practically; being able to identify and analyze any problems that may occur during the implementation; having a mission of establishing industry-university collaboration within the existing local sector as well as catching the latest updates about exportation/importation fields via the connections with foreign institutions.

Having the fundamental business administration notion, being equipped with the latest required abilities that the exportation/importation sector needs, being aware of the latest updates, having learnt about human relations, being enterprising and innovational are some of the attributes that this program offers. This program brings in students who have control over all subjects that are related to exportation/importation to the economy. These students are also capable of speaking the required foreign languages fluently and professionally.

The education given in the vocational schools provide fundamental knowledge for graduation level. That education also intends to raise expert executives and administrators who can work both in public and private sectors.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|---|--------|
| ISL | 1001 | Principles of Management | (3-0)3 |
| IKT | 1000 | Introduction to Economics | (2-0)2 |
| BAS | 2009 | Introduction to Foreign Trade and Exchange Management | (3-0)3 |
| MUH | 1000 | Financial Accounting I | (3-0)3 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| IIH | 1002 | Import-Export Techniques I | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (1-2)2 |
| MUH | 1003 | Foreign Trade Accounting | (3-0)3 |
| PAZ | 2004 | International Marketing | (3-0)3 |
| HUK | 1000 | Basics of Law | (2-0)2 |
| ULO | 2008 | International Logistics | (2-0)2 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|---|--------|
| IIH | 2001 | Import-Export Techniques II | (3-0)3 |
| IIH | 2005 | Foreign Trade Financing | (3-0)3 |
| IIH | 2007 | Incentives and Applications in Foreign Trade | (2-0)2 |
| IIH | 2015 | Customs Legislation | (3-0)3 |
| IIH | 2990 | Summer Training | Non-Cr |
| IKT | 2001 | International Economics | (2-0)2 |
| ULO | 1000 | International Transportation Customs Regime and Applications Management | (2-0)2 |
| HUK | 2000 | Commercial Law | (2-0)2 |
| ING | 2001 | Professional English I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |

Fourth Semester

| | | | |
|-----|------|--|--------|
| IIH | 2002 | Financial Investment Instruments | (2-0)2 |
| IIH | 2004 | European Union Trade Policies and Subsidies | (2-0)2 |
| IIH | 2006 | International Trade Organizations | (2-0)2 |
| PAZ | 2008 | E-Commerce | (3-0)3 |
| TVS | 2002 | Turkish Taxation System | (2-0)2 |
| ULO | 2002 | | (3-0)3 |
| ING | 2002 | Professional English II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |

COURSE DESCRIPTIONS

IIIH 1002 Import-Export Techniques I (3-0)3

After a theoretical introduction to the need of foreign trade and positive and negative effects, general check out of foreign trade will be covered in this course. Documents which are used in foreign trade allotment and payment types will be given. While teaching importation, the responsibilities of an important dealer will be covered in this course.

IIIH 2001 Import-Export Techniques II (3-0)3

The export methods according to Turkish Foreign Trade Legislation, by giving detailed information on delivery methods in foreign trade, export and about the general conditions of being exporter will be covered in this course. The documents which are used in export process, the contents of agreement and the associations and institutions that are applied during export operations are being taught practically.

IIIH 2002 Financial Investment Instruments (2-0)2

Fund concept, investment and investor, inflation and conserving savings against inflation, market concept and financial markets, relationship between markets, financial instruments, equity securities, trading the equity securities in stock exchange, transaction in stock exchange, stock exchange brokers and transactions, other investment instruments; bonds, gold, foreign exchange, associating the investment instruments with each other subjects are covered in this course.

IIIH 2004 European Union Trade Policies and Subsidies (2-0)2

Import-Export program aims to give academic knowledge about the integration models which are being developed with the studies on liberalization of the world trade and familiarizing the European Union which is the most successful example of these models, representing the purpose and course of EU, EU-Turkey relations, Customs Union, the most significant step of these relationships and its effects, to the students.

IIIH 2005 Foreign Trade Financing (3-0)3

The importance and historical evolution of export finance, the structure of export finance, export encouragement measures and activities, government aid for export, the finance process of export, short-termed export finance, medium and long-termed export finance, the credit policy of export and credit costs, export credit guaranties, export insurances, forfeiting, factoring, leasing, the finance of import, letters of credit, document exchange payment, import credit, endorsement credit.

IIIH 2006 International Trade Organizations (2-0)2

Basic concepts about economy and economic systems, price theory and price formation, supply and demand concepts and the affect of their changes on prices are studied in this course. The content of this course is Consumption and production theories, market variety, firm balance analysis, factor prices and general balance subjects.

IIIH 2007 Incentives and Applications in Foreign Trade (2-0)2

Customs Union, that was started between Turkey and European Union in 1.1.1996 which brought new principles to the policies of foreign trade encouragement. For this purpose, subjects such as legislation of export encouragement that is prepared according to the EU legislation and the characteristics of Turkey and its application, government aid for exportation, inward processing regime, duties, taxes and levies exemption, value added tax exemption are taught.

IIIH 2015 Customs Legislation (3-0)3

This course consists of embodiments of customs procedures in the framework of Law number 4458: After the instruction of basic concepts of the Law, procedure of various taxes (KDV, OTV, import and export) are analyzed and measured according to the Law. In addition, application of fines, process of forensic and administrative denials and legislation of illegal trading are also exploited in the syllabus.

III 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start

building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

INTERNATIONAL LOGISTICS

GENERAL INFORMATION: In today's competitive business environment for companies, it is necessary not to delay in job processes, to be one more step further from rivals. With especially globalization concept, development of international marketing increases the importance of transportation, stocking, planning and control process on goods and services and information flow. Logistics comprises activity of all management and shipping inside the provision chain in terms of both assurance of raw material to production environment and completion of product to distribution lines and customer. The aim of the program is to develop suitable qualified staff who can work in every area of sector and is suitable to Turkey's developing and changing conditions since the graduation.

International Logistic Program which has experienced academic framework and specialist academicians in their subject area gives education to students. The courses prepared due to sectors' needs are made in modern classes and supported with foreign language and computer labs. The Logistic Club which is developed by students who study International Logistic Program is combining the students, activities that they participate and sector institutions under the same frame. There are lessons about all kinds of transportation related to the sector (sea, highway, railway, airway and inner flume transportation). The analysis of trade roads in the world, investigation of logistic sector internationally, national issues about external trade are thought to students.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|--------------------------------------|--------|
| ULO | 1001 | Introduction to Logistics Management | (3-0)3 |
| ISL | 1001 | Principles of Management | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (2-0)2 |
| MUH | 1000 | General Accounting | (3-0)3 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| HUK | 1000 | Basics of Law | (2-0)2 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|---|--------|
| ULO | 1000 | International Transportation Management | (2-0)2 |
| ULO | 1002 | Physical Distribution Channels and Planning | (3-0)3 |
| ULO | 1004 | Logistics and Foreign Trade Legislation | (3-0)3 |
| ULO | 1006 | Storage and Inventory Management | (2-0)2 |
| IKT | 1000 | Introduction to Economics | (2-0)2 |
| MAT | 1004 | Statistics | (3-0)3 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|---|--------|
| ULO | 2001 | Supply Chain Management | (2-0)2 |
| ULO | 2003 | Maritime Transportation and Port Management | (2-0)2 |
| ULO | 2990 | Summer Training | Non-Cr |
| IKT | 2001 | International Economics | (2-0)2 |
| YON | 2001 | Financial Management | (3-0)3 |
| YON | 2003 | Production Management | (3-0)3 |
| ISL | 2000 | Human Resources Management | (3-0)3 |
| ING | 2001 | Professional English I | (3-0)3 |

Fourth Semester

| | | | |
|-----|------|--|--------|
| ULO | 2002 | Customs Regimes and Applications | (3-0)3 |
| ULO | 2004 | Logistics Information Systems | (2-0)2 |
| ULO | 2006 | Road Transportation and Fleet Management | (2-0)2 |
| ULO | 2008 | International Logistics | (2-0)2 |
| PAZ | 2004 | International Marketing | (3-0)3 |
| PAZ | 2008 | E-Commerce | (3-0)3 |
| PAZ | 2010 | Customer Relations Management | (2-0)2 |
| ING | 2002 | Professional English II | (3-0)3 |

COURSE DESCRIPTIONS

ULO 1000 International Transportation Management (2-0)2

International sea, air, road and rail transport organizations, responsibilities of parties, regulatory frameworks, types of commodities and loading, international organizations, pricing and combined transportation and pipeline transportation subjects will be covered.

ULO 1001 Introduction to Logistics Management (3-0)3

In this course, the term “logistics” will be explained and the components of logistics, which are transportation, storing, delivery, customs clearance and insurance, will be introduced. Transport organization and the factors setting the organization, supply chain management and the process, components and quality of logistics service will be covered.

ULO 1002 Physical Distribution Channels and Planning (3-0)3

By using adjudication methods, planning movement of supplies among suppliers, producers and customers. Programming and scheduling handling appliances by considering JIT (Just in Time) programming system.

ULO 1004 Logistics and Foreign Trade Legislation (3-0)3

In this course, the basic concepts of foreign trade and operations system, such as import and export regulations, the conditions of being an import and export dealer, documents which are used in foreign trade, payment variations, types of delivery, foreign-exchange legislation will be covered.

ULO 1006 Storage and Inventory Management (2-0)2

Storage management in a professional manner, appropriate delivery and localization, low-cost use of space, fastest access to the supplies, rotation of appropriate supplies, security and flexibility management of stored supplies. Management of how to store the supplies at the beginning of the supply chain and the products at the end of the supply chain.

ULO 2001 Supply Chain Management (2-0)2

The fundamentals of supply chain management, logistics and supply chain management (inland and international supply, export logistics – import logistics, outsourcing in logistics, third party logistics), planning of supply and demand and strategic planning, competitive advantage, purchasing organization, supplier evaluation techniques, supplier improvement policies, coordination in supply chain, B2B and B2C trade subjects will be covered.

ULO 2002 Customs Regime and Applications (3-0)3

In foreign trade dealings, such customs which are influenced by economy as inward processing, temporary imports, warehouses, outward processing which was put into practice during the adaptation process of Turkey to EU will be covered by examples and the potential benefits will be introduced. In this context, the customs formalities from the entrance of the commodity from the border to the clearance of it to the customs will be explained. Subjects as determination of customs value, charging, and origin of the commodity will be analyzed.

ULO 2003 Maritime Transportation and Port Management (2-0)2

International sea transportation organization, international marine agreements, national and international legislation of sea transportation, customs formalities, IMO (International Maritime Organization) and its effects on sea transportation, sea insurances and P&I clubs, freight transactions, management and organization of seaport area and container shipping will be covered in this course.

ULO 2004 Logistics Information Systems (2-0)2

In this course, the role of information and communication technologies in logistics enterprises, logistics software, electronic data interchange (EDI), business information systems, e-commerce, internet, intranet, extranet, information systems and logistic operations in producer enterprises, vehicle tracking systems, state projects and

applications, customs and information, maritime business will be covered.

ULO 2006 Land Transportation and Fleet Management (2-0)2

The course consists of logistics business and their basic duty procedures, organizational structures, departments and their responsibilities, Organizational structures and basic labor processes of fleet departments, duties and responsibilities of fleet managers, factors effecting planning in fleet management, fleet expedition management and performance management of logistics businesses.

ULO 2008 International Logistics (2-0)2

The course consists of International Transportation markets and investment

expenses, headquarters of logistics firms worldwide, their types, qualities and developments, transportation policies of the European Union, the importance of Turkey in local projects.

ULO 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

MARKETING

GENERAL INFORMATION: With competition getting harsher day by day, businesses are pushed to prioritize their marketing activities. Marketing allows businesses getting an upper hand in a competitive environment. Companies' marketing programs based on the difference principle should at the same time cover advantages requiring having an edge over competitors. Moreover, companies today have to evaluate all strategic decisions they make in order to preserve or increase their comparative competitive advantages in a customer-focused manner. In an environment like that, persons to implement the problem should be highly educated. Therefore, in today's world of fast changing market structure and customer preferences, it is necessary to train intermediate employees that are capable of self renewal and target high efficiency.

The advantages of the program are:

- The whole educational infrastructure for the Marketing Program is ready. Courses are offered by teaching staff with specialization in their respective fields. Students are educated in a dynamic environment and guided towards research. Offering rich contents, our university's library is a center offering productive working environment in any scientific field.
- The main purpose of the program is to meet the demand for highly qualified personnel in the marketing field. Upon completing their studies, our students gain basic marketing skills and qualifications such as determining customers or consumers in need of certain goods or services, providing information on characteristics and quality of a product in demand, awareness of legal responsibilities of a marketing professional, taking responsibility in management circles, undertaking the monitoring and supervision of subordinates, skills in using computer software related with the field and visiting and improving customer relations with current and potential customers.
- The objective is to educate and train students into professionals capable of perceiving applications, requirements and innovations in the service sector efficient in their industry, who are used to thinking and problem solving, are entrepreneurial and capable of analytic thinking.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|-----------------------------------|--------|
| PAZ | 1001 | Marketing Principles | (3-0)3 |
| ISL | 1001 | Principles of Management | (3-0)3 |
| MUH | 1000 | Financial Accounting I | (3-0)3 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| HUK | 1000 | Basics of Law | (2-0)2 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|-------------------------------------|--------|
| PAZ | 1004 | Integrated Marketing Communications | (3-0)3 |
| PAZ | 1006 | Consumer Behavior | (3-0)3 |
| IKT | 1000 | Introduction to Economics | (2-0)2 |
| BIL | 1000 | Introduction to Computer | (1-2)2 |
| MAT | 1004 | Statistics | (3-0)3 |
| MUH | 1001 | Financial Accounting II | (3-0)3 |
| YON | 1002 | Management and Organization | (2-0)2 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|-------------------------------------|--------|
| PAZ | 2001 | Advertising | (3-0)3 |
| PAZ | 2003 | Marketing Research | (3-0)3 |
| PAZ | 2007 | Brand Management | (3-0)3 |
| PAZ | 2009 | Service Marketing | (3-0)3 |
| PAZ | 2011 | Retail Marketing | (2-0)2 |
| PAZ | 2990 | Summer Training | Non-Cr |
| ISL | 2003 | Entrepreneurship and SME Management | (3-0)3 |
| ING | 2001 | Professional English I | (3-0)3 |

Fourth Semester

| | | | |
|-----|------|-------------------------------|--------|
| PAZ | 2000 | Sales Management | (3-0)3 |
| PAZ | 2004 | International Marketing | (3-0)3 |
| PAZ | 2006 | Direct Marketing | (3-0)3 |
| PAZ | 2010 | Consumer Relations Management | (2-0)2 |
| ISL | 2000 | Human Resources Management | (3-0)3 |
| ISL | 2004 | Public Relations | (2-0)2 |
| ING | 2002 | Professional English II | (3-0)3 |

COURSE DESCRIPTIONS

PAZ 1001 Marketing Principles (3-0)3

Marketing subject, its content, development, modern marketing management, marketing environment, strategic planning and role of marketing, marketing information system and marketing research, industrial markets and industrial buyer behaviors with consumer markets and consumers behaviors. Division of the market, choosing the target market and claiming estimations, end product.

PAZ 1004 Integrated Marketing Communications (3-0)3

This course consists of the integrating communication elements of a company, analyzing the reasons why this integrated ness is a key point in marketing. Advertising, public relations, launching, promotions, sponsoring, direct marketing, electronically communication and discharge strategies and their importance on the brand.

PAZ 1006 Consumer Behavior (3-0)3

The issues of psychological, social and cultural factors affecting consumer behavior, customer behavior patterns, market analysis, behavior formation and alternation, brand consistency, innovation adoption, store choice decisions, customer survey methods are included.

PAZ 2000 Sales Management (3-0)3

This course provides basic concepts of selling management, the power of selling organization and selling activities, sellers' choices,

education and pricing, selling talk process, follow up the selling, and controlling the selling.

PAZ 2001 Advertising (3-0)3

The general view of advertising, the social, economical and legal ways of advertising, advertising foundations, planning of advertising campaign, writing of the advert text, creating an advert for the press media, planning of a media and choosing it, the measurement of the advertisement effectiveness, advertising in Turkey and international advertising.

PAZ 2003 Marketing Research (3-0)3

The importance of research of a market, the definition of the problem and determination of the hypothesis, research models, data types, data resources and exemplification, primary and subsidiary data collection methods, measurement and scale in market research, preparation of the data for analyzing, analyzing and research statement, single variable, two variable and multi variable analysis, the inspection and types of the marketing research.

PAZ 2004 International Marketing (3-0)3

International market and international trading, the data that are collected in the market research and research types, product development appropriate to the exportation, international marketing strategies, strategic focus and transition from strategy to the

organization, exportation and insurance procedures, banking procedures and introducing the product to the foreign market, international new markets and visions.

PAZ 2006 Direct Marketing (3-0)3

The definition of direct marketing and its historical development, its content and characteristics, its relation with the marketing and practiced areas. Directly selling, automatic selling, directly selling with the postal, e-tele marketing and its methods, marketing with the television and electronic shopping.

PAZ 2007 Brand Management (3-0)3

Brand balance, consumer psychology, brand balance analysis, brand identity, brand image, brand timing, strategic brand and image management, brand development, brand expansion and issues about international brands.

PAZ 2008 E-Commerce (3-0)3

The historical development of commerce, representing the fundamental conception of internet and commerce, properties of e-commerce, forms of payment and problems, marketing activity and other practices via internet at Law on the Protection of Consumers are represented. E-commerce demonstrations are carried out with the students.

PAZ 2009 Service Marketing (3-0)3

This course consists of development of service marketing, description of service marketing, common properties, categorization, the importance of service marketing in the contemporary world, different karmas of

marketing; traditional, expanded, distribution and charging in service, demand and capacity management, the capacity of service; models, sizes, approving quality.

PAZ 2010 Consumer Relations Management (2-0)2

Developing Customer Relations: The concept, properties and new perspectives of customer relations; creating value for customers; communication with customers; Customer Services: Customer service quality and system; gaining and retaining customers; evaluation of customer relations ; Organizational ethics and change; creating a customer-focused approach; handicaps and difficulties in changing the approaches; customer-focused change management.

PAZ 2011 Retail Marketing (2-0)2

This course consists of customer service and selling points in a mall, interaction with the customers, the importance of presenting product information, getting the customer and the product come together, complaints and solutions, how to send off customers in relation with the department, cashier-customer interaction, supplying information and tips for security officers.

PAZ 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

OFFICE MANAGEMENT AND SECRETARIAT

GENERAL INFORMATION: Recent business organizations fulfill the applications of the new theories and as a result of this, secretariat has become a notion that has to be emphasized. Today, without having enough professional and cultural maturity, it is almost impossible to fulfill the profession of secretariat for it is the right hand of the administrator and consignment and administration mechanism which is the crucial point of the same profession. For this reason, secretariat is not a profession which is gained by coincidences or fulfills limited business, instead of these, besides accomplishing the missions which have been assigned, candidates set a productive working condition, apart from setting certain rules, the profession has aimed to reach certain goals.

Nowadays in the sectors of service, production and marketing are changing and developing rapidly, the need for the qualified intermediate employees who can carry out the duties in widespread office webs is more than ever. The graduates who can work at the public and private sector will be equipped with the knowledge and skills that will meet the needs of constantly developing and changing business world; in addition, these graduates will be office administrators and executive assistants who are equipped with business English as well.

The advantages of the program are:

- Office Management and Secretariat Program trains the students in an environment that is supported with application laboratories which create similar conditions with real life.
- In a natural working environment of Office Management which is inclined to computer platform gradually, this program helps the students and business life about the software that enhances the labor productivity and its application rules.
- This program coaches international-quality executive assistants who have the command of professional English and of all the subjects in the related field.
- With this program, short term education programs which will fulfill the need of updating the existing workers are being developed and at the same time the program trains students who have the features of an office personnel and an executive assistant that the industrial and service sector crave for.
- The program structures the basis of the regulations which will transfer the new era's administration understanding and conformation to companies at a local platform.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|-----------------------------------|--------|
| BYS | 1001 | Keyboard Techniques | (3-0)3 |
| BYS | 1003 | Secretariat Information | (3-0)3 |
| BYS | 1005 | Knowledge of Protocol | (2-0)2 |
| BIL | 1000 | Introduction to Computer | (2-0)2 |
| ISL | 1001 | Principles of Management | (3-0)3 |
| MAT | 1101 | Financial Mathematics | (3-0)3 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| BYS | 1002 | General Communication | (2-0)2 |
| BYS | 1004 | Organizational Behavior | (2-0)2 |
| BYS | 1006 | Professional Correspondence | (3-0)3 |
| IKT | 1000 | Introduction to Economics | (2-0)2 |
| MUH | 1000 | Financial Accounting I | (3-0)3 |
| YON | 1002 | Management and Organization | (2-0)2 |
| ING | 1002 | English for Freshmen II | (3-0)3 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|-----------------------------------|--------|
| BYS | 2001 | Filing and Archiving Techniques | (3-0)3 |
| BYS | 2003 | Rhetoric | (2-0)2 |
| BYS | 2005 | Technology Utilization in Offices | (2-0)2 |
| BYS | 2007 | Presentation Techniques | (2-0)2 |
| BYS | 2009 | Time Management | (3-0)3 |
| BYS | 2011 | Case Study Analysis | (3-0)3 |
| BYS | 2990 | Summer Training | Non-Cr |
| BIL | 2001 | Computer Applications I | (2-0)2 |
| ING | 2001 | Professional English I | (3-0)3 |

Fourth Semester

| | | | |
|-----|------|--|--------|
| BYS | 2002 | Executive Secretary | (3-0)3 |
| BYS | 2004 | Accelerated Reading and Writing Techniques | (3-0)3 |
| BYS | 2006 | Office Management | (3-0)3 |
| BYS | 2008 | Crisis and Stress Management | (2-0)2 |
| ISL | 2000 | Human Resources Management | (3-0)3 |
| ISL | 2004 | Public Relations | (2-0)2 |
| ING | 2002 | Professional English II | (3-0)3 |

COURSE DESCRIPTIONS

BYS 1001 Keyboard Techniques (3-0)3

The rules of document formatting, correction symbols, writing out of draft, making simple tables, in-house and on the field correspondence, preparing written texts in line with Turkish standards, writing in foreign languages, multi-page letters.

BYS 1002 General Communication (2-0)2

Within the content of this course students are presented topics like the definition and meaning of the concept of communication, ways of communicating, communication barriers and problems; kinds and models of communication, the meaning and function of organizational communication.

BYS 1003 Secretariat Information (3-0)3

Within the content of this course students are presented topics like the meaning and the content of the secretarial work, the duties and the responsibilities of the secretary, the personal characteristics of the secretary, rules of courtesy and etiquette in secretariat.

BYS 1004 Organizational Behavior (2-0)2

The management of the concept of behavior. Behavioral platform, social status and role behaviors. The concept of culture, institutional culture. Beliefs and attitudes. Character and the factor of character in the integration of person and organization. Perception and Learning Theories. The concept of motivation.

BYS 1005 Knowledge of Protocol (2-0)2

The place and the importance of protocol in social and business life. Kinds and characteristics of protocol that are performed in organizations and institutions. The rules of protocol to be applied in institutional activities. The Protocol Rules which the secretary is to carry out in her profession and in her duty to represent the institute.

BYS 1006 Professional Correspondence (3-0)3

Communications in general, concepts of written and organizational communication, correspondence techniques, correspondence

types, reports, report writing techniques and the efficiency of report writing.

BYS 2001 Filing and Archiving Techniques (3-0)3

Within the content of this course students are presented with topics like filing systems, documents to be filed and their flow, archiving and its purpose, the process of archiving, reporting techniques, kinds of business reports, preparation of reports.

BYS 2002 Executive Secretary (3-0)3

The historical development, definition and kinds of secretaryship. Secretary's role within the institution. The personal and professional qualities of the administrative secretary. The contribution of the administrative secretary to the administrative functions. The definition of the secretary's role in effective administration and communication. The organization and management of the office services and tools.

BYS 2003 Rhetoric (2-0)2

The definition of language and its development. The sounds of Turkish (phonetics). Knowledge of expression. Understanding and using the pronunciation, stress and sentence stress. Executive assistant's effective use of Turkish within the communication used for inner and outer environment.

BYS 2004 Accelerated Reading and Writing Techniques (3-0)3

Fast writing, its importance and content; fast writing techniques, the importance of fast reading, its content; basic variables of fast reading, speed, comprehension, recalling. Exercises for the eye to improve fast reading, providing rhythm for the eyes, finding the main idea of the reading comprehension text; making out the concepts of the writing; mnemonics; various reading techniques that widen the eye's perspective, getting the whole reading source, advanced reading, selective reading, reading by skipping, techniques for taking dictation.

BYS 2005 Technology Utilization in Offices (2-0)2

Technology, its functions and the changing business life. The concept of information, information processing and information society. The concept of automation in the office, its purpose and benefits and the challenges that are confronted in the automation of the office and suggestions for the solutions. Office machines, how to use them and the things that must be considered when buying them. Computer, software and hardware technologies. Computer networks, internet and Intranet. E-commerce, e-shopping and e-government.

BYS 2006 Office Management (3-0)3

The concepts of management and office management, manager, office manager and the duties and the responsibilities of the office employees, kinds of offices, areas of operation, the organizational structure of the offices, planning, organizing, staffing, coordination, orientation and supervision.

BYS 2007 Presentation Techniques (2-0)2

Students are taught correct presentation techniques. Effective presentation techniques are taught. The utility devices used during the presentation are introduced. Students are made to use them. Students present a topic that was predetermined to their classmates by using the techniques that they have learnt.

BYS 2008 Crisis and Stress Management (2-0)2

Management at times of crisis, the organizational and non-organizational factors

that cause the crisis, the stages of the crisis period in the organizations and the crisis management, stress and the factors that cause stress, the outcomes of stress within the organization, the problems that stress inflict on people, methods for overcoming stress.

BYS 2009 Time Management (3-0)3

The concept of time management, the reasons for time loss in the organizations, the techniques for using the time efficiently in the organizations, time management in the office, the concept of individual time, preparing time flow chart, the time management of the administrator, the reasons for the time loss of the secretary, administration meetings, the cost of time in the meetings, duty dissociations and the benefits of using time efficiently are explained.

BYS 2011 Case Study Analysis (3-0)3

Case studies on maintaining the communication within the office, the main duties and responsibilities of the office manager, turning over authority, office layout, the placement of the office machines, the designing of the office forms, setting the priorities of business, cancellation of a meeting, the scheduling of the appointments and problem solving are done.

BYS 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

MARINE PROGRAMS

DECK

GENERAL INFORMATION: The Department of Deck was established to meet the need of deck staff in the maritime sector. Students are accepted into this program based on their scores of the numerical section in line with the program of the Ministry of Education and the Turkish Council of Higher Education. The course content has been designed in accordance with Seamen Education and Examination Guidelines and the criteria of the Turkish Council of Higher Education. The program comprises one year of English preparation and two years of deck education. A two-month training (in-school training) is compulsory to graduate from the department of deck.. This training is done in the places determined by the school. Students who graduate are awarded the diploma of “Deck Technician”.

Our graduate students get the following certificates from the port authority as a reward for their education; Techniques of Personal Lifesaving at Sea, Basic First Aid, Medical Care, Fire Prevention and Fighting, Advanced Fire Fighting, proficiency of Using Lifesaving Devices, Safety of Staff and Social Responsibility, Radar Observation and Plotting (ARPA).Having completed their open sea-ship training of twelve months and having their training authorized by the training commission of the school, they take the examination of “Deck Officer” held by Seamen Examination Center. Students passing the exam get the certificate of proficiency to become Deck Officers. They work as deck officers on ships weighing between 500-3000 gross tons that belong to various maritime companies.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|-----------------------------------|--------|
| MRP | 1001 | Shipping I | (2-0)2 |
| MRP | 1003 | Navigation I | (2-0)2 |
| MRP | 1005 | Maritime Safety I | (2-0)2 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (2-0)2 |
| CEV | 1003 | Physics | (3-0)3 |
| CEV | 1005 | General Chemistry | (3-0)3 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|------|------|------------------------------------|--------|
| MRP | 1002 | Shipping II | (2-0)2 |
| MRP | 1004 | Navigation II | (2-0)2 |
| MRP | 1006 | Medical First Aid | (2-0)2 |
| MRP | 1008 | Maritime Safety II | (2-0)2 |
| MRP | 1012 | Marine English I | (3-0)3 |
| MRT | 2009 | Ship Building | (3-0)3 |
| BIL | 1002 | Computer Programming II | (2-0)2 |
| MAT | 1002 | Mathematics II | (3-0)3 |
| DECK | 1002 | Electricity | (2-0)2 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|------|------|------------------------------|--------|
| DECK | 2001 | Watch keeping Standards I | (3-0)3 |
| DECK | 2003 | Electronic Navigation I | (2-0)2 |
| DECK | 2005 | Meteorology | (3-0)3 |
| DECK | 2990 | Summer Training | Non-Cr |
| MRP | 2005 | Loading and Ship Stability I | (2-0)2 |
| MRP | 2013 | Maritime Communication | (3-0)3 |
| MRP | 2015 | Maritime English II | (3-0)3 |
| MRP | 2017 | Navigation III | (4-0)4 |
| MRT | 2013 | Maritime Safety III | (2-0)2 |
| BIL | 2001 | Computers II | (2-0)2 |

Fourth Semester

| | | | |
|------|------|--|--------|
| DECK | 2002 | Watch keeping Standards II | (4-0)4 |
| DECK | 2004 | Ship Maneuvering | (2-0)2 |
| DECK | 2006 | Electronic Navigation II | (3-0)3 |
| DECK | 2008 | Ship Management | (2-0)2 |
| MRP | 2001 | International Maritime Agreements | (2-0)2 |
| MRP | 2012 | Project | (2-0)2 |
| MRP | 2018 | Cargo Stowage and Ship Stability II | (2-0)2 |
| MRP | 2020 | Marine English III | (3-0)3 |
| MRP | 2022 | Navigation IV | (4-0)4 |
| MRT | 2022 | Maritime Safety IV | (2-0)2 |

DESCRIPTION OF COURSES

DECK 1002 Electricity (2-0)2
Magnetism and electricity, security of electricity, regulations of electricity, electric circuits, function, power and electromagnetic induction of an electric circuit, capacitors, electric generators and engines, alternative currents and voltage, preservative and protective devices, electrochemistry, devices.

DECK 2001 Watch keeping Standards I (3-0)3
Duty and responsibilities of the officer and personnel on cruising shift. The content, function and practice of COLREG 72, rules to obey on cruising shifts, shifts for harbor.

DECK 2002 Watch keeping Standards II (4-0)4
Bridge teamwork methods. Marine meteorology and routing. Ship route planning and its appropriate use. MARPOL 73/78. Prevention of pollution and topics related to supplementary equipments.

DECK 2003 Electronic Navigation I (2-0)2
Using electronic systems to locate and navigate. Basic principles of hyperbolic navigation systems. Loran-C systems. Satellite navigation systems. GPS and DGPS. Over bridge control systems. Humbug and humbug gear. Auto-pilot and emergency humbug gear.

DECK 2004 Ship Maneuvering (2-0)2
Turning and pivot point. Anchoring, mooring and distances. The effects of wind and current on steering the ship. Maneuvers to rescue the man in sea. Shallow water effect and similar

effects. Anchoring and mooring maneuvers and methods.

DECK 2005 Meteorology (3-0)3
Meteorology equipment used on the boat. Structure and physical features of atmosphere. Atmospheric pressure. Wind. Clouds and precipitation. Sight distance. Pressure and wind systems on oceans. Roaring forties cyclones. Anticyclones and other pressure systems. Meteorological support services for mariners. Recording and reporting weather observations. Weather forecast.

DECK 2006 Electronic Navigation II (2-0)2
Radar, ARPA Radar systems, Setting up, Operation and Maintenance of ARPA. Radar Observation and plotting. Automatic plotting. Proficiency in Manual Radar Plotting on the maneuver plate or the radar. Safe navigation methods by using radar and the ARPA radar.

DECK 2008 Ship Management (2-0)2
Transportation conditions. Navigation instructions. Load and unload timing. Timetables. Preparation notice. Ship, ship-owner, hirer, agency, broker, freight. Types of contracts, statement of fact, demurrage.

DECK 2990 Summer Training Non-Cr
The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

MARITIME AND HARBOR MANAGEMENT

GENERAL INFORMATION: The Program of Maritime and Harbor Management provides not only theoretical knowledge about maritime but also technological training by performing application. This department unveils technical researcher, administrative and leadership-oriented aspects of students and develops their decision-making abilities.

The students are trained within the fields of sailing, maritime, meteorology, computer, electronic communication, maritime security, sea chemistry in our technical simulator centers and first-aid labs. Intermediate level executive need for maritime industry is considered and graduated students may work at ports, agencies, maritime companies, secretariat of maritime. Graduates may enter into related departments at the maritime school and be awarded bachelor's degree by entering vertical transfer exam.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|-----------------------------------|--------|
| MRP | 1001 | Shipping I | (2-0)2 |
| MRP | 1003 | Navigation I | (2-0)2 |
| MRP | 1005 | Maritime Safety I | (2-0)2 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (2-0)2 |
| CEV | 1003 | Physics | (3-0)3 |
| HUK | 1000 | Basics of Law | (2-0)2 |
| IKT | 1000 | Introduction to Economics | (2-0)2 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| MRP | 1002 | Navigation II | (2-0)2 |
| MRP | 1004 | Principles of Watch keeping | (2-0)2 |
| MRP | 1006 | Medical First Aid | (2-0)2 |
| MRP | 1010 | Maritime Law | (3-0)3 |
| MRP | 1012 | Maritime English I | (3-0)3 |
| ISL | 1001 | Principles of Management | (3-0)3 |
| BIL | 1002 | Computer Programming II | (2-0)2 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|---|--------|
| MRP | 2001 | International Maritime Agreements | (2-0)2 |
| MRP | 2003 | Maritime Management I | (3-0)3 |
| MRP | 2005 | Cargo Stowage and Ship Stability I | (2-0)2 |
| MRP | 2007 | Maritime Legislation and Customs Management | (3-0)3 |
| MRP | 2009 | Ports and Terminals | (2-0)2 |
| MRP | 2011 | Sea Meteorology | (2-0)2 |
| MRP | 2013 | Maritime Communication | (3-0)3 |
| MRP | 2015 | Maritime English II | (2-0)2 |
| MRP | 2990 | Summer Training | Non-Cr |
| MAT | 1004 | Statistics | (3-0)3 |
| MUH | 1000 | General Accounting | (3-0)3 |

Fourth Semester

| | | | |
|-----|------|-------------------------------------|--------|
| MRP | 2002 | Chartering and Brokering | (2-0)2 |
| MRP | 2004 | Maritime Management II | (3-0)3 |
| MRP | 2006 | Container Systems and Management | (3-0)3 |
| MRP | 2010 | Maritime Agency Management | (2-0)2 |
| MRP | 2012 | Project | (2-0)2 |
| MRP | 2014 | Maritime Transportation Economics | (3-0)3 |
| MRP | 2016 | Port Management and Organization | (3-0)3 |
| MRP | 2018 | Cargo Stowage and Ship Stability II | (2-0)2 |
| MRP | 2020 | Maritime English III | (2-0)2 |
| ISL | 2000 | Human Resources Management | (3-0)3 |
| PAZ | 1001 | Marketing Principles I | (3-0)3 |

COURSE DESCRIPTIONS

MRP 1001 Shipping I (3-0)3

The definition and the history of seafaring, terminology of seafaring, auxiliary structures made use in seafaring, measurement units and translations related to seafaring, types and general classifications of ships, structure and parts of ships, tanks, water proof curtains, storehouses, bilge and circuits, on bridge cruising devices, magnetic and gyro compasses; compass errors and corrections, equipment and utilization of deck, factors affecting ship maneuver, rotation, anchorage, boarding and departure.

MRP 1002 Navigation II (3-0)3

Information of gyro compass, the application of gyro compass error to the route, knowledge of magnetic compass, deviation and variation, capacity lines, types of private navigation, platform, fouling of a cable, latitude, longitude, log chip navigation, approximate navigation, coastal navigation. The usage of radar during the coastal navigation, usage of map and chart. Work of map, efflux navigation, figuring the time of ebb and flow.

MRP 1003 Navigation I (3-0)3

The definition and the history of navigation, the development of navigation tools and procedures; the form, coordinate and distance systems of the Earth; maps of cruising, projection systems, map cataloguing systems; characteristics of Mercator map, symbols and abbreviations; the concept of direction, rhomb line, route, drawings of distance and angles; the concept of direction with magnetic and gyro compass; compass correction, detection of routes according to compass rulers; lighthouses and buoying systems.

MRP 1004 Principles of Watch keeping (3-0)3

Content, objective and application of COLREG 72. Principles of safe navigation book-keeping. Principles of watch keeping on ships with hazardous cargo under normal circumstances Content, objective and application of MARPOL 73/78. Technical appendix, precautions against pollution.

MRP 1005 Maritime Safety I (2-0)2

Plans for emergency, rescue of personnel from a ship in danger or sunk, procedures to be followed in case of emergency at harbor, first damage inspections and damage controls, procedures to be followed after conflict, measures to take if a ship runs or is run aground, types of fire, methods of extinguishing, equipments of fire, fire and extinguishing at trade ships, use of spare rudder and the equipment.

MRP 1006 Medical First Aid (2-0)2

Subjects covered in detail: Infections and diseases, first aid on board, bleedings, fractured and dislocated bones, burns, lose of conscious, poisoning, balanced nutrition, hygiene, family planning. Precautions to take in case of emergency.

MRP 1008 Maritime Safety II (3-0)3

Emergency action plans, rescuing the crew of a ship in danger, port emergency procedures. First check for damage and damage control, fire prevention and firefighting, classes of fire, organization, firefighting equipments, fire defense, classes of fire and firefighting on merchant ships. How to use spare steer and its equipment?

MRP 1010 Maritime Law (2-0)2

Basic concepts of maritime law. Maritime Administration Department, duties and functions. IMO treaties regarding marine safety and protection and their application. Legal obligations to protect people and cargo. Ports law. The needs of act of fees. Marine labor law. Marine accidents and collision. Averages. Rescue and help. Documents required for the ship. Marine insurance.

MRP 1012 Maritime English I (3-0)3

Basic maritime English concepts, standard maritime English, parts of a Ship, marine communication phrases, maritime English. This course aims at enabling students to use English efficiently and accurately in all four language skills based on the terminology of their profession.

MRP 2001 International Maritime Agreements (2-0)2

General information about International Maritime Organization (IMO) and its structure. IMO and IMO sub-conventions. The conventions to which Turkey accedes. The place of international maritime conventions in Turkish Trade Law. Lloyd organizations, their structure and duties. Giving a ship sea license, classifying the ships, the procedure followed during classifying, outcomes that ships will face after drop-ship classification.

MRP 2002 Chartering and Brokering (2-0)2

Items of freight contract, methods of ship leasing, Cargo and ship circulation, preparation notice, timetables. Captain, ship-owner, flag, state responsibilities in transportation.

MRP 2003 Maritime Management I(3-0)3

General definition and components of naval management, transportation systems and its components, naval transportation and its management, transformation demand management (TDM) and its branches, ways of maritime transport, types of ship management, documents belonging to ship and cargo.

MRP 2004 Maritime Management II (3-0)3

How to organize, managing the crew and secure optimum productivity. Loading, stowage, safety and discharge of cargo. Navigation numbers and the possibilities of completing the route spending the minimum fuel. Maritime management, ship management, dockyard operation, port and terminal operation, agencies, broker operation. Marine insurance management. Source and capital management, planning techniques in source and capital management.

MRP 2005 Cargo Stowage and Ship Stability I (2-0)2

Boat craft and its features. Deck gear. Load line and buoys, plimsoll brand and draft numbers. Displacement calculation, draft survey, flotation force, the effect of brine intensity, the movement of center of gravity, free surface effect, trims calculation and upturn.

MRP 2006 Container Systems and Management (3-0)3

Containerization, joining the cargo. Container structure and elements. Container types according to their construction and use. The phases that containers pass through from sellers' storehouse to buyers' storehouse. Legally required documents. Stowage of cargo in containers. Loading containers on the ship. Container ships.

MRP 2007 Sea Legislation and Customs Management (3-0)3

The definition of sea legislation and customs legislation; legal questions resulting from integration of land road, canal, sea route, railway, airline or resulting from binary or more combinations, the documents of harbor entering and exiting, staff lists, leaving and arriving to the ship, loading and unloading the cargo from the ship. Customs administration, letters of confirmation, affixing the seal, customs inspection and documents.

MRP 2009 Ports and Terminals (2-0)2

The management and the system, Port, pier platform and terminal systems, The incoming and outgoing traffic on port terminal, service systems, control; Inspecting systems, Storage places, service in service system and expectancy time. Components of investment and management on ports, costs, fixed and running costs. Optimum service tools and their structures at the port.

MRP 2010 Sea Agency Management (2-0)2

Embarkment of ships. Definition, history and present situation of agencies. Agency procedures on Turkish and foreign ships. Agency regulations. Maritime coastal institutions. Leasing contracts, functions and responsibilities. What is leasing? Cost estimation for freight operations.

MRP 2011 Sea Meteorology (2-0)2

Barometer, thermometer and usage of other meteorological tools and commenting on the information. Features of different air systems, accounting procedure, recording system. General meteorological conditions of ports, the evaluation of weather reports, the signals of notice of.

MRP 2012 Project (2-0)2

It will be an undergraduate level research based on factual data covering topics such as maritime and port management (national and international).

MRP 2013 Maritime Communication (3-0)3

Audio and visual communication methods, The use of standard marine communication phrases (SMCP), The use of International Sign Code book, VHF communication. Radio and television communication. To provide safe sea network and its importance. Security and call messages, Emergency call messages, dangerous call and messages, wireless alarm signs, Radio, Telex Communication, Facsimile, Navtex, alarm and warning circuit and messages, tools and systems used in sea communication.

MRP 2014 Maritime Transportation Economics (3-0)3

Navigation fuel calculations, freight calculations: different cargo calculations, single type cargo calculations, packaged cargo calculations, liquid cargo calculations, LPG, LNG cargo calculation. Standard ship expenditure calculations and crew salary calculations and its effects on standard expenditure.

MRP 2015 Maritime English II (2-0)2

General Business English. Concepts used in international trade. Idioms and expressions related to International Maritime Business. Documents related to the boat and the load. To be able to use the foreign language communicatively with appropriate words and expressions in business life, comprehend the natural speech related to the job and handle correspondence related to job requirements. Knowledge of professional terminology.

MRP 2016 Port Management and Organization (3-0)3

Management and operation of ports. Communication methods at ports, maintenance repair and general safety organization and management of ports. Loading-unloading and storage operations at ports.

MRP 2020 Maritime English III (2-0)2

Phrases and terminology of International Maritime Management. Correspondence used in Maritime companies and published document. Enabling students to be able to speak a foreign language in business environment using correct terminology and phrases fluently and understand speeches about the profession, correspond on necessary issues required by the profession and professional terminology is given.

MRP 2018 Cargo Stowage and Ship Stability II (2-0)2

Ship and cargo types. Features of cargo and ships. Ship container and its structure. Cargo plans and storage, preparing stores for loading, special cargos. Packaging and securing the cargo. Cargo handling equipment and safety, deck equipment, holds, tankers and circuits. Dangerous and harmful cargo, casting cargo, the carriage of grain. Tank operation. Tensions on ships. Static balance, free liquid effect. Storage and stability calculations, GM and trim calculations.

MRP 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

SHIP MACHINERY

GENERAL INFORMATION: The objective of the Ship Machinery Department is to coach specialized staff members who will work in the production of ship machines and ships between engineers and foremen and workers. "Sea machinery technicians" work in naval yards collateral to the marine engineers and are responsible for the production, maintenance and troubleshooting. Bahçeşehir University has been working on establishing a four-year program of Marine Engineering and in the shortest time, the new establishment will come in.

Graduates have a degree of "Sea Machinery Technician." Sea machinery technicians work in naval yards collateral to the marine engineers and are responsible for the production, maintenance and troubleshooting. The objective of the program is to coach device division staff members who are needed in naval sector. Sea Machinery Technicians are recruited in private and governmental naval foundations, as well as in yacht tourism foundations that have diesel and turbine-powered devices.

CURRICULUM

FIRST YEAR

First Semester

| | | | |
|-----|------|-----------------------------------|--------|
| MRT | 1001 | Marine Chemistry | (2-0)2 |
| MRT | 1003 | Mechanics | (3-0)3 |
| MRT | 1007 | Introduction to Ship Machinery | (4-0)4 |
| MRP | 1005 | Maritime Safety I | (2-0)2 |
| CEV | 1003 | Physics | (3-0)3 |
| BIL | 1000 | Introduction to Computer | (2-0)2 |
| MAT | 1001 | Mathematics I | (3-0)3 |
| BDC | 1001 | Basic Technical Drawing I | (3-0)3 |
| ING | 1001 | English for Freshmen I | (3-0)3 |
| TAR | 1001 | History of Turkish Revolution I | (2-0)2 |
| TUR | 1001 | Turkish Language and Literature I | (2-0)2 |

Second Semester

| | | | |
|-----|------|------------------------------------|--------|
| MRT | 1004 | Material Planning | (3-0)3 |
| MRT | 1006 | Workshop I | (3-0)3 |
| MRP | 1006 | Medical First Aid | (2-0)2 |
| MRP | 1008 | Maritime Safety II | (3-0)3 |
| MRP | 1012 | Maritime English I | (3-0)3 |
| MAT | 1002 | Mathematics II | (3-0)3 |
| BIL | 2002 | Computer Applications I | (2-0)2 |
| BDC | 1002 | Basic Technical Drawing II | (3-0)3 |
| OTM | 1002 | Diesel Engine Technology I | (3-0)3 |
| | | | (2-0)2 |
| TAR | 1002 | History of Turkish Revolution II | (2-0)2 |
| TUR | 1002 | Turkish Language and Literature II | (2-0)2 |

SECOND YEAR

Third Semester

| | | | |
|-----|------|--|--------|
| MRT | 2001 | Workshop II | (3-0)3 |
| MRT | 2003 | Diesel Engine Technology II | (2-0)2 |
| MRT | 2005 | Auxiliary Ship Machines I | (3-0)3 |
| MRT | 2007 | Ship Machinery Operation and Maintenance I | (3-0)3 |
| MRT | 2009 | Ship Construction | (3-0)3 |
| MRT | 2011 | Electrical Techniques I | (3-0)3 |
| MRT | 2013 | Maritime Safety III | (2-0)2 |
| MRT | 2015 | Medical First Aid | (2-0)2 |
| MRT | 2990 | Summer Training | Non-Cr |
| BIL | 2001 | Computers II | (2-0)2 |
| MRP | 2015 | Maritime English II | (2-0)2 |

Fourth Semester

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|-----|------|---|--------|
| MRT | 2010 | Thermodynamics | (4-0)4 |
| MRT | 2012 | Project | (2-0)2 |
| MRT | 2014 | Electrical Techniques II | (4-0)4 |
| MRT | 2016 | Auxiliary Ship Machines II | (3-0)3 |
| MRT | 2018 | Ship Machinery Operation and Maintenance II | (3-0)3 |
| MRT | 2020 | Automatic Control | (3-0)3 |
| MRT | 2022 | Maritime Safety IV | (2-0)2 |
| MRP | 2001 | International Maritime Agreements | (2-0)2 |
| MRP | 2020 | Sea English III | (2-0)2 |

COURSE DESCRIPTIONS

MRT 1001 Marine Chemistry (2-0)2
Basic concepts in chemistry. Basic rules. Stoichiometric calculations. Gases, liquids, and solids. Nuclear reactions. Solvents. Balance in chemical reactions. Acids and bases. Oxidation and reduction reactions. Inorganic chemistry. Organic chemistry. Aqueous chemistry, chemical and physical reactions of sea water. Corrosion and inspection of corrosion. Sea pigments. Anti-fouling systems. Fuel chemistry. Gliding substances. Dangerous materials. Sea pollution.

MRT 1003 Mechanics (3-0)3
Vector algebra and vector systems. Force systems, centre of mass, statics of substantial points. Balance. Moment, friction and law of friction. Speed and acceleration. Rectilinear motion. Curvilinear moment. Newton's second law. Dynamics and substantial points. Force and energy. Hydrostatics. Hydraulics.

MRT 1004 Material Planning (3-0)3
Usage and features of construction and maintenance equipment. Operations, basic metallurgy, metals and working processes. Nonmetallic materials and materials under load, vibration issues are dealt with.

MRT 1006 Workshop I (3-0)3
Fixed links, riveting, soldering, self-safe links, types of welding; ark welding and tools, application of ark welding, position of ark welding, principles of electrical ark welding, oxyacetylene welding and its equipment, application of oxyacetylene welding, health and safety during welding, welding on low-carbon steel, welding faults, pipe processing, work safety applications.

MRT 1007 Introduction to Ship Machinery (4-0)4
Internal combustion engines, diesel engines and fuel engines, operation principles; low, mid and high speed engines, tanks, types of tanks, gas turbines, types of steam turbines, constituent parts of steam turbines, steam turbine circuits, heat converters, evaporators and distillation principles.

MRT 2001 Workshop II (3-0)3
Maintenance and manufacturing in ships, equipments in engine rooms, safety precautions in engine rooms, files and filing, squaring, marking, measuring and inspection, drills, drill workbenches and their applications, turn benches and their applications, thermal process of carbon steel, adhesives and sticking.

MRT 2003 Diesel Engine Technology II (3-0)3
Systems that belong to diesel engines. Cooling water systems. Brine systems. Greasing and lubricant systems. Starting air systems. Exhaust gas systems. Fuel systems. Maneuver preparation. Fundamentals of safe watch-keeping.

MRT 2005 Auxiliary Ship Machinery I (3-0)3
Basic information on auxiliary boilers. Types and structures of auxiliary boilers. Auxiliary boilers and fume distribution. Operating auxiliary boilers. Heat converters. Evaporators and distillation principles. Types of pumps and their principles of operation. Pumping systems and control systems. Ballast, bilge, fire pumps and their systems. Types of air compressors and their principles of operation. Fuel and lubrication oil separators. Bilge separator and drain water systems.

MRT 2007 Ship Machinery Operation and Maintenance I (3-0)3
Operation and maintenance of main boilers and auxiliary boilers. Boilers breakdown. Corrosion in boilers and corrosion protection. Usage of brine and fresh water in boilers. Reclamation of the water in boilers and the test of boiler water. Operation of pumps and their maintenance. Operation of compressors and their maintenance. Compressed air systems and its distribution. Operation and maintenance of a bilge separator and drain water equipment. Operation and maintenance of oil and fuel separators.

MRT 2009 Ship Construction (3-0)3
Ship structure: sizes and shapes of ships, ship voltages, boat structures, prow and stern hardware, rudders and ship screws, load lines brands, and draft numbers. Ship balance:

displacement, buoyancy, freshwater margin, stationary balance, initial balance, slope angle, stationary balance curves, shifting of centre of gravity, slope and its repair, water surface effect, trimming, loss of floatability.

MRT 2010 Thermodynamics (4-0)4

Definitions and basic principles. The first law of thermodynamics. Thermodynamic systems. Heat and work. The second law of thermodynamics. Entropy and heat energy. Carnot principle cycles. Transformation of gases. Heat machine cycles, constant volume (Otto), constant pressure (Diesel) and mixed cycles. Real power cycles.

MRT 2011 Electrical Techniques I (3-0)3

Features of a ship electrical system: theory of electron, diagrams and symbols, simple circuits and Ohm's law, series and parallel circuits, ammeters, voltmeters and other level meters, activity, energy and power, conductors, insulation, maintenance principles, batteries, magnetism and electromagnetism, induction. Electrical testing and measurement devices: Methods of testing and measurement and the devices used for these aims. Security requirements for electrical systems: Essential security.

MRT 2012 Project (2-0)2

It is a personal factual-data-based research project on topics such as navigation, marine safety, cargo handling, stability, communication, maritime etc. which has to be written and presented according to academic writing guidelines at the level of undergraduate studies.

MRT 2013 Maritime Safety III (2-0)2

Battle with advanced fire: Types of fire and chemistry of fire, protection against fire and equipments, ways of battling with fire at sea and harbor and tactics. Organization and training of fire crew: Preparation of plans for unexpected situation, structure and location of fire crew. Systems and equipment of fire: battle with fire and detection systems, fixed fire systems, compact and mobile fire extinguishing equipment.

MRT 2014 Electrical Techniques II (4-0)4

Principles of generators and motors. Alternating current. Distribution. Transformers. Cables. Alternators. Direct

current generators. Alternative current generators. Direct current motors. Maintenance of motors and starters. Impedance and inductance. Lighting. Correction of engine breakdowns. Electrical systems of chemical tankers and liquefied gas tankers. Methods of diagnosing and repairing engine breakdowns.

MRT 2015 Medical First Aid (2-0)2

Application of immediate first aid during an accident or illness. First aid kits. The anatomy and the functions of human body. Medical first aid guide to be used in the accidents caused by hazardous materials, first aid guide published in Turkey against getting poisoned. Treatment of patients or castaways. Spinal injuries. Burn or scalded injuries, the effects of hot and cold temperature. Fractures, dislocations and muscle injuries. Medical care for survivors.

MRT 2016 Auxiliary Ship Machinery II (3-0)3

Evaporators, incinerators. Alternators, generators and control systems. Deck machinery. Stern tube system and shaft system. Propeller types. Steer principles. Hydraulic steer control systems. Electrical control of steers. Emergency steer system.

MRT 2018 Ship Machinery Operation and Maintenance II (3-0)3

Operation and maintenance of evaporators. Operation and maintenance of shaft systems. Operation and maintenance of auxiliary deck machines. Operation and maintenance of steer systems. Operation and maintenance of heat transformers. Fuel, bilge and ballast operations. Operations in the engine room during shifts. Automation and control principles. Use of repair and maintenance equipment in ships. Operation of AC and DC systems.

MRT 2020 Automatic Control (3-0)3

Basics of control systems. Measurement and control. Measuring systems. Control units. Sensory organs. Signal measurement. Amplifiers and methods of reducing noise. Engine Room control practices to be dealt with during the term.

MRT 2022 Maritime Safety IV (2-0)2

Emergency response plans. Passenger safety and rescue in emergency cases. Rescuing people from a ship in danger. Port emergency

procedures. Preparations to be done to help a ship in danger. Search and rescue. MERSAR.

MRT 2990 Summer Training Non-Cr

The objective of summer training is for the student to get to know different sectors and

expertise areas of his profession, to start building up a CV, and to get the kind of work experience that will put him/her ahead of his peers when he/she goes out looking for a job after graduation.

