FIRAT UNIVERSITY
ELAZIG ORGANIZED INDUSTRIAL ZONE VOCATIONAL SCHOOL
DESIGN DEPARTMENT
INDUSTRIAL DESIGN PROGRAM

1. CLASS I. SEMESTER

COURSE CODE	COURSE NAME	T	P	CR	C/E	ECTS
AİT101	Ataturk's Principles and History of Turkish Revolution-I	2	0	2	C	2
TRD109	Turkish Language-I	2	0	2	C	2
YDI107	English-I	2	0	2	C	2
MAT101	Mathematics-I	3	0	3	C	3
OEU103	Basic Drawing Techniques	2	2	3	C	5
OEU105	Basic Design-I	2	2	3	C	5
OEU107	Material Information	3	0	3	C	3
	Electıve Course	0	2	1	E	2
	Electıve Course	2	0	2	E	2
	Electıve Course	2	0	2	E	2
	Electıve Course	2	0	2	E	2
	TOTAL	**22**	**6**	**25**		**30**
Electıve Courses						
OEU109	Freehand Drawing Techniques-I	0	2	1	S	2
OEU111	Marketing Principles	2	0	2	S	2
OEU113	Occupational Health and Safety	2	0	2	S	2
OEU115	Static	2	0	2	S	2
OEU117	Environmental Protection	2	0	2	S	2
OUE119	Model Making	0	2	1	S	2

***Abbreviations**: T = Theoretical Course Hours; P = Practice Course Hours; Cr = Course Credit; C = Compulsory Course; E = Elective Course; ECTS = European Credit Transfer System*

1. CLASS II. SEMESTER

COURSE CODE	COURSE NAME	T	P	CR	C/E	ECTS
AİT102	Ataturk's Principles and History of Revolution-II	2	0	2	Z	2
TRD110	Turkish Language-II	2	0	2	Z	2
YDI108	English-II	2	0	2	Z	2
MAT102	Mathematics-II	3	0	3	Z	3
OEU104	Computer Aided Drawing	2	2	3	Z	4
OEU106	Basic Design-II	2	2	3	Z	5
OEU108	Basic Mechatronics and Robotic Design	2	0	2	Z	2
OEU110	Manufacturing Processes	2	2	3	Z	4
	Electıve Course	2	0	2	S	2
	Electıve Course	0	2	1	S	2
	Electıve Course	2	0	2	S	2
	TOTAL	**21**	**8**	**25**		**30**

Electıve Courses						
OEU112	Machine Elements	2	0	2	S	2
OEU114	Free Hand Drawing Techniques-II	0	2	1	S	2
OEU116	Entrepreneurship	2	0	2	S	2
OEU118	Professional Ethics	2	0	2	S	2
OUE120	Web Design Basics	0	2	1	S	2

***Abbreviations**: T = Theoretical Course Hours; P = Practice Course Hours; Cr = Course Credit; C = Compulsory Course; E = Elective Course; ECTS = European Credit Transfer System*

2. CLASS III. SEMESTER

COURSE CODE	COURSE NAME	T	P	CR	C/E	ECTS
OEU221	Industrial Design-I	2	1	3	Z	3
OEU223	Computer Aided Design-I	2	1	3	Z	3
OEU225	Ergonomics	2	0	2	Z	2
OEU227	Vocational Practice Training-I	0	16	8	Z	8
OEU229	Production Techniques	2	0	2	Z	2
OEU231	Internship Evaluation	0	2	1	Z	6
	Electıve Course	2	0	2	S	2
	Electıve Course	2	0	2	S	2
	Electıve Course	2	0	2	S	2
	TOTAL	**14**	**20**	**25**		**30**
Electıve Courses						
OEU233	Welding Technology-I	2	0	2	S	2
OEU235	Basic Strength	2	0	2	S	2
OEU237	Business Management	2	0	2	S	2
OEU239	Quality Assurance and Standards	2	0	2	S	2

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2. CLASS IV. SEMESTER

COURSE CODE	COURSE NAME	T	P	CR	C/E	ECTS
OEU222	Industrial Design-II	2	1	3	Z	3
OEU224	Computer Aided Design-II	2	1	3	Z	3
OEU226	Cost Analysis in Product Design	2	0	2	Z	2
OEU228	Vocational Practice Training-II	0	16	8	Z	8
OEU230	New Product Development Techniques	2	0	2	Z	3
OEU232	Unconventional Manufacturing Methods	2	1	3	Z	5
OEU234	Rapid Prototyping	0	2	1	Z	2
	Electıve Course	2	0	2	S	2
	Electıve Course	0	2	1	S	2
	TOTAL	**12**	**23**	**25**		**30**
Electıve Courses						
OEU236	Welding Technology-II	2	0	2	S	2
OEU238	Print Making	0	2	1	S	2
OEU240	Innovation Management	2	0	2	S	2
OEU242	First Aid	0	2	1	S	2

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1.11. COURSE CONTENTS

1. CLASS I. SEMESTER

		T	P	CR	C/E	ECTS
AİT101	**Ataturk's Principles and History of Turkish Revolution-I**	**2**	**0**	**2**	**Z**	**2**

19th century State of the Ottoman Empire (Constitutional Monarchy Periods), Tripoli and Balkan Wars, World War I and its consequences, Societies, War of Independence, Mudanya Armistice Treaty, Lausanne Peace Treaty

		T	P	CR	C/E	ECTS
TRD109	**Turkish Language-I**	**2**	**0**	**2**	**Z**	**2**

Definition of Language, Language and Culture Relationship, Place of Turkish Language among World Languages, Sounds and Classification in Turkish, Syllable Knowledge, Construction and Inflection Suffixes, Noun and Action Conjugation in Turkish, Adverbs and Prepositions in Turkish, Sentence Knowledge

		T	P	CR	C/E	ECTS
YDİ107	**English-I**	**2**	**0**	**2**	**Z**	**2**

Determiners, prepositions, place, time, motion, singular and plural nouns, countable and uncountable nouns, tenses, present tense, present continuous, past continuous, modals, will, should, should not, must, must not, can, comparative constructions, pronouns, personal pronouns, possessive pronouns, adjectives, affirmative sentences, negative sentences and question sentences, conjunctions, and, but

		T	P	CR	C/E	ECTS
MAT101	**Mathematics-I**	**3**	**0**	**3**	**Z**	**3**

The aim of this course is to teach the introductory topics of mathematics. At the end of the course, students will be able to solve questions about Units of Measure, Four Operations in Natural Numbers, Operations with Significant Numbers, Exponential Expressions, Root Expressions, Identities, Factorization, Fractions, Percentages, Profit-Loss Problems, Scaling, Systems of Equations, Triangles, Triangular Prism, Surface Area and Volumes, Lines and Their Slopes, Trigonometric Ratios in Right Triangle.

		T	P	CR	C/E	ECTS
OEU103	**Basic Drawing Techniques**	**2**	**2**	**3**	**Z**	**5**

Standard Writing and Numbers, Lines Used in Technical Drawing, Geometric Drawings, Projection; Projection Types, Projection Planes, Point-Line-Plane Projections. Removing Appearance, Golden Ratio, Perspective Definition and Application, Sketch Making, Conversion of Prepared Sketches into Project, Preparation of Detail and Perspective Drawings

		T	P	CR	C/E	ECTS
OEU105	**Basic Design-I**	**2**	**2**	**3**	**Z**	**5**

Introduction of Basic Concepts of Design, Design Elements, Golden Ratio, Exercises to Improve Mental Hand Skills to Cope with Design Problems, Studies on the Concept of Creativity, Definition of Industrial Design within the Framework of Design Concept and Giving Professional Information, Introduction to the Concept of Process in Industrial Design, Questioning the Product-User Relationship, Examination of Historical, Social and Technological Development of Countries in Design

		T	P	CR	C/E	ECTS
OEU107	**Material Information**	**3**	**0**	**3**	**Z**	**3**

Materials and Their Properties: Examples showing the effects on the selection of the right material for the internal structure and purpose, Force Effects on Materials, Mechanical Effects, Mechanical Properties of Materials, Hardness and Wear, Physicochemical Effects, Thermal Properties: Heat Effect and Thermal Expansion, Heat Permeability. Electrical, Magnetic and Optical Properties, Water Absorption and Permeability, Qualities of Materials Used in Industrial Products Design, Effects of These Qualities on Design, Glass, Wood, Metals, Ceramics, Plastics, Preservatives and Paints, Composite Materials, Advanced Technology Production Methods, Use and Shaping Possibilities and Performances of Smart and Nano-Technological Materials

ELECTIVE COURSES

		T	P	CR	C/E	ECTS
OEU109	**Freehand Drawing Techniques-I**	**0**	**2**	**1**	**S**	**2**

Freehand Drawing Techniques and Materials, Teaching Freehand Drawing Methods to Ensure the Development of the Ability to See Form and Texture to Provide Visual Communication, Various Painting Techniques and Applications with Freehand Painting

		T	P	CR	C/E	ECTS
OEU111	**Marketing Principles**	**2**	**0**	**2**	**S**	**2**

Marketing Concept, Marketing Systems, Market and Market Segmentation Concepts, Consumer Markets, Classification of Marketing Functions, Exchange and Distribution Functions, Product Planning and Development, Branding and Packaging, Price, Distribution, Promotion

		T	P	CR	C/E	ECTS
OEU113	**Occupational Health and Safety**	**2**	**0**	**2**	**S**	**2**

Occupational safety and safety threatening factors in the environment, Occupational Health and Safety Law No. 6331, Labor Law No. 4857, Occupational Health and Safety Regulations, Meanings of safety and health signs in workplaces, Fight against noise, vibration and dust in workplaces, Health and safety precautions in working with carcinogenic and mutagenic substances, Precautions to be taken in working with explosive, explosive, hazardous and harmful substances, emergencies in workplaces and measures to be taken, occupational safety precautions in manufacturing works, occupational safety precautions in electrical and working at height, Personal Protective Equipment and Use in Workplaces, Occupational diseases, occupational accidents and injuries

		T	P	CR	C/E	ECTS
OEU115	**Static**	**2**	**0**	**2**	**S**	**2**

Principles of Statics, Force Vector, Solid Body, Planar Forces, Center of Gravity, Equilibrium, Moment of Inertia

		T	P	CR	C/E	ECTS
OEU117	**Environmental Protection**	**2**	**0**	**2**	**S**	**2**

Knowledge of Environmental Regulations, Risk Analysis, Waste Storage, Personal Protection Measures, International Health and Safety Alerts, Occupational Health and Safety Regulations

		T	P	CR	C/E	ECTS
OEU119	**Model Making**	**0**	**2**	**1**	**S**	**2**

Model Making in Industrial Product Design. Different Techniques Used in Model Making. Equipment and Materials Used in Model Making. Model Study Using Different Equipment and Materials.

1. CLASS II. SEMESTER

		T	P	CR	C/E	ECTS
AİT102	**Ataturk's Principles and History of Revolution-II**	**2**	**0**	**2**	**Z**	**2**

Proclamation of the Republic, Abolition of the Caliphate, Multi-Party Regime Experiments, Revolutions in the Field of Law, Revolutions in the Field of Education, Revolutions in the Social Field, Kemalism, Atatürk's Principles, Atatürk's Foreign Policy

		T	P	CR	C/E	ECTS
TRD110	**Turkish Language-II**	**2**	**0**	**2**	**Z**	**2**

Spelling Rules and Practice, Punctuation Marks and Practice, General Information About Composition, Plan and Practice Used in Writing Composition, General Qualities of Expression, Expression Disorders, Reading and Analyzing Works Related to Literature and World of Thought, Rules to be Followed in the Preparation of Scientific Writings

		T	P	CR	C/E	ECTS
YDİ108	**English-II**	**2**	**0**	**2**	**Z**	**2**

Tenses, present, present simple, simple present, past simple, future simple, modals, might, could, could, can, must, may, adverbs, adverbs of place, direction, purpose, state, adjectives, order of adjectives, comparison, superlative constructions, passive construction, passive construction in present, simple present, past simple, past simple, future simple passive construction, conditional clauses, adjective clauses, transitive clauses, verb constructions, to, ing, noun clauses, adverb clauses, comparative constructions.

		T	P	CR	C/E	ECTS
MAT102	**Mathematics-II**	**3**	**0**	**3**	**Z**	**3**

The aim of this course is to explain the basic concepts of mathematics and to have the necessary and sufficient foundation for mathematics. At the end of this course, students will be able to analyse data, calculate area and volume in geometric shapes, use coordinate systems in three-dimensional space, calculate derivatives and integrals.

		T	P	CR	C/E	ECTS
OEU104	**Computer Aided Drawing**	**2**	**2**	**3**	**Z**	**4**

Introduction of Current CAD Programs, Line Drawing Using a CAD Program, Circle and Arc Drawing, Ellipse, Polygon Drawings, Magnification, Reduction, Scale, Mirroring, 2D Technical Drawing Drawing Applications, Dimensioning, Copying, Moving, Deleting, Easy Drawing Methods Such as Matrix and Pattern Format Copying, Scanning, Layer Definition, 2D Technical

Commands Required for Drawing and Outputting Pictures on Computer, Introduction to 3D Modeling, 3D Modeling Methods, Wireframe Modeling, Boundary Representative Modeling, Solid Modeling with Structural Solid Geometry Method, Solid Elements, Adding, Subtracting Elements, Creating Solid Model with Interfacing Methods

		T	P	CR	C/E	ECTS
OEU106	**Basic Design-II**	**2**	**2**	**3**	**Z**	**5**

Factors and Methods Related to Perception and Comprehension, All Contemporary Linear Communication Expression Techniques and Related Standards, Formation of Common Acceptances in Graphic Expression Language, Gaining Graphic Thinking and Graphic Embodiment Skills in Applicable Quality. Color Theory; Warm-Cold Colors, Opposite Colors, Tone-Value. The Importance of Sketch and 3D Sketch Studies, Packaging Design

		T	P	CR	C/E	ECTS
OEU108	**Basic Mechatronics and Robotic Design**	**2**	**0**	**2**	**Z**	**2**

The aim of this course is; To explain the operation of the microcontroller and to learn how to create basic algorithms for microcontrollers and to learn how to load this algorithm to the microcontroller with the interface program. At the end of this course, the student; Recognizes sensors, Microcontroller, Uses the interface program, Designs a robot, Knows the use of DC motor, Creates an algorithm and loads this algorithm to the microcontroller with interface programs.

		T	P	CR	C/E	ECTS
OEU110	**Manufacturing Processes**	**2**	**2**	**3**	**Z**	**4**

Machining, Dimensional and geometric tolerances, surface roughness, Tools, Turning, Milling, Planing, Vargeling, Grinding, Drilling, Broaching, Cutting, Precision machining methods, Plastic forming, Hot forming, Cold forming, Forging, Rolling. Extrusion, Drawing, Sheet metal processing methods.

ELECTIVE COURSES

		T	P	CR	C/E	ECTS
OEU112	**Machine Elements**	**2**	**0**	**2**	**S**	**2**

Introduction to Strength Calculations, Stress Hypotheses, Continuous Strength Concept, Drawing Bending Diagrams, Finding Critical Sections, Axles and Shafts, Friction Effective Connections, Shaft Connections, Wedge Connections, Wedge Shafts, Press Fittings, Pins and Pernos, Bolt Connections, Screw Mechanisms, Welding Connections, Rivet Connections, Solder and Glue Connections, Elastic Connectors and Springs

		T	P	CR	C/E	ECTS
OEU114	**Free Hand Drawing Techniques-II**	**0**	**2**	**1**	**S**	**2**

Visual Expression Techniques on Two and Three Dimensional Drawings and Compositions of Basic Design Process and Result.

		T	P	CR	C/E	ECTS
OEU116	**Entrepreneurship**	**2**	**0**	**2**	**S**	**2**

The aim of this course is to increase the entrepreneurship potential of students. At the end of this course, students learn the concept of entrepreneurship, the establishment processes of small businesses, the problems and solutions of small businesses.

		T	P	CR	C/E	ECTS
OEU118	**Professional Ethics**	**2**	**0**	**2**	**S**	**2**

Ethical principles and standards that determine the world norms related to welding technology are reviewed, ethical standards related to professional practice, education and research activities are taught, ethical violations are discussed through examples.

		T	P	CR	C/E	ECTS
OEU120	**Web Design Basics**	**0**	**2**	**1**	**S**	**2**

Internet and web definitions, HTML basic tags, text appearance tags, hyperlink creation, table operations, forms, frames, multimedia tools, style template (CCS), browser problems and solutions

2. CLASS III. SEMESTER

		T	P	CR	C/E	ECTS
OEU221	**Industrial Design-I**	**2**	**1**	**3**	**Z**	**3**

Introduction to Industrial Design, Review and Evaluation of Existing Industrial Products in terms of Design and Function, Introductory Studies on Design Elements, Research and Application of Current Design Criteria on a Simple Industrial Product as a Project, Integration with Perspective GZTF (SWOT) Analysis

		T	P	CR	C/E	ECTS
OEU223	**Computer Aided Design-I**	**2**	**1**	**3**	**Z**	**3**

Solid Modeling, Surface Modeling, Technical Drawing, Sheet Material Design, Simulation, Animation, Realistic Imaging Modules in Catia or Solidworks Programs

		T	P	CR	C/E	ECTS
OEU225	**Ergonomics**	**2**	**0**	**2**	**Z**	**2**

Human Characteristics from Ergonomic Perspective, Use of Human Ergonomics in Product Design, Environment and Machine Properties from Ergonomic Perspective and Harmony of These Properties with Human, Use of Ergonomics in Machine, Tool-Equipment and Environment Design, Ergonomic Regulation of Lighting, Color, Sound and Climate in Working Environments, Concept of Anthropometry, Definition of Anthropometric Data and Its Place in Design, Static Anthropometry, Dynamic

Anthropometry, Use of Static and Dynamic Anthropometry in Product Design, Use of Ergonomics and Design Criteria in Interior Architecture, Furniture Design, New Product Design, Product Development and Product Design for Special Groups (Elderly, Disabled)

		T	P	CR	C/E	ECTS
OEU227	**Vocational Practice Training-I**	**0**	**16**	**8**	**Z**	**8**

It includes a 14-week internship of 2 working days a week in a workplace related to the program. Introduction of industrial areas, Demonstration of production stages, Observation of working conditions of suitable companies, Sharing work experiences, Introduction of companies in the industry

		T	P	CR	C/E	ECTS
OEU229	**Production Techniques**	**2**	**0**	**2**	**Z**	**2**

Metal Production Methods with Casting, Powder Metallurgy, Forging, Rolling, Extrusion Drawing, Welding Turning, Milling, Grinding, Drilling, Broaching and Precision Machining Methods. Wood Production Methods with Cutting, Turning, Milling and Bending Wood Production Methods. Plastic Production Methods with Hot Forming, Cold Forming and Injection Methods. Glass, Ceramic, Textile and Various Composite Materials Processing and Industrial Products Production Techniques

		T	P	CR	C/E	ECTS
OEU231	**Internship Evaluation**	**0**	**2**	**1**	**Z**	**6**

Evaluation of internship, evaluation and presentation of internship notebooks.

ELECTIVE COURSES

		T	P	CR	C/E	ECTS
OEU233	**Welding Technology-I**	**2**	**0**	**2**	**S**	**2**

Basic Forming in Welding, Oxy-Gas Welding, Electric Arc Welding

		T	P	CR	C/E	ECTS
OEU235	**Basic Strength**	**2**	**0**	**2**	**S**	**2**

Supports and Support Reactions, Frames, Cages, Cables, Stress, Axial Force, Shear Force, Torsion, Bending

		T	P	CR	C/E	ECTS
OEU237	**Business Management**	**2**	**0**	**2**	**S**	**2**

The aim of the course is to teach the basic concepts and objectives of business and business management, to determine their relations with the environment, to make the classification of enterprises, to list the stages of business establishment, to teach business functions, to give information about leadership and management issues.

		T	P	CR	C/E	ECTS
OEU239	**Quality Assurance and Standards**	**2**	**0**	**2**	**S**	**2**

Standardization, definition, objectives and principles, TSE and its duties, regional and international standardization organizations, quality and quality concepts, definition of quality and related concepts, quality approach, quality costs and risks, quality control concept, quality assurance, quality management principles, TS-EN-ISO 9000, TS-EN-ISO 9001, TS-EN-ISO 9004, ISO 9011 standards and explanations, professional standards, understanding professional standards.

2. CLASS IV. SEMESTER

		T	P	CR	C/E	ECTS
OEU222	**Industrial Design-II**	**2**	**1**	**3**	**Z**	**3**

Basic Object Design Problem Solving, Basic System, Object Consisting of a Few Parts, Three Dimensional Form Development, Basic Model Making, Material Use, Planning the Form and Structure of the System to be Formed by a Few Simple Objects Together, Considering Factors Such as Size and Balance, Design and Examination of Technical, Social, Aesthetic, Mixed Objects, Preparation of Project Proposals and Related Presentation Drawings, Project Drawing Applications and Model Demonstration, Product-Project (Portfolio) File Preparation

		T	P	CR	C/E	ECTS
OEU224	**Computer Aided Design-II**	**2**	**1**	**3**	**Z**	**3**

Maya, Rhino and Lightwave, Cinema 4D, 3D Max, 3D Digital Design, Working Principles, Basic and Advanced Modeling, Model Transfers, Vray, Brazil, Maxwell Renderer Applications and Animation Creation

		T	P	CR	C/E	ECTS
OEU226	**Cost Analysis in Product Design**	**2**	**0**	**2**	**Z**	**2**

Modern Cost Approaches, Activity Based Costing, Life Cycle Costs, Target Costing, Just-in-Time Production and Just-in-Time Costing, Effect of Quality Costs, Labor and Material Costs Used in the Production Process of the Product, Costs Related to Production Operations (Work Order Cost Account), Production and Related Services (Planning, Maintenance, Repair, etc.) Cost Accounts, Cost Accounts by Operation (Activity Based Cost Account), Work Order Cost Account and Activity Based Cost Account Comparison and Product Sales Price Calculation.) Cost Accounts, Cost Accounts by Operation (Activity Based Cost Account), Comparison of Work Order Cost Account and Activity Based Cost Account and Product Sales Price Calculation

		T	P	CR	C/E	ECTS
OEU228	**Vocational Practice Training-II**	**0**	**16**	**8**	**Z**	**8**

It includes a 14-week internship of 2 working days a week in a workplace related to the program. Introduction of industrial areas, Demonstration of production stages, Observation of working conditions of suitable companies, Sharing work experiences, Introduction of companies in the industry

		T	P	CR	C/E	ECTS
OEU230	**New Product Development Techniques**	**2**	**0**	**2**	**Z**	**3**

Factors Forcing Firms to Design and Develop New Products, Determination of Customer and User Needs, New Product Strategies, Importance of New Product Development, The Role of

Industrial Design in New Product Development Process, Process and Organization of New Product Development Activities, Product Planning, Product Specifications, Product Architecture, Concept Selection, Concept Development, Concept Testing, Prototyping, Economics of Product Development, Analysis of New Product Development Activities with Examples from Turkey and the World, New Product Launch Management with New Product Performance Criteria and Risk Assessments, The Place and Importance of Innovation in Strategic Organization Management to Create Competitive Advantage, New Product and Stages of New Product Development Process

		T	P	CR	C/E	ECTS
OEU232	**Unconventional Manufacturing Methods**	**2**	**1**	**3**	**Z**	**5**

Brief review of unconventional manufacturing methods and comparison with conventional manufacturing methods, Classification of unconventional machining methods according to the type of energy used in machining and review of machining principles, tools, machining parameters, machining capabilities and applications of these methods, Ultrasonic Machining, Abrasive Jet Machining, Water Jet Machining, Electrochemical Machining, Electrochemical Grinding, Electrochemical Honing, Chemical Machining, Electroerosion Machining, Wire Electroerosion Machining, Laser Machining, Plasma Machining.

		T	P	CR	C/E	ECTS
OEU234	**Rapid Prototyping**	**0**	**2**	**1**	**Z**	**2**

Introduction of Different Formats and Methods in Prototype Production, Introduction of Application Techniques and Possibilities such as Model, Prototype and MockUp, Prototype Production Applications such as Deposition Fusion Modeling, 3D Printers, Stereolithography, Laser Intensification, Introduction and Comparison of Advanced 3D Digital Design Programs, Modeling Techniques Used in 3D Studio Max Programs, Designs Conversion Formats

ELECTIVE COURSES

		T	P	CR	C/E	ECTS
OEU236	**Welding Technology-II**	**2**	**0**	**2**	**S**	**2**

MIG/MAG Welding, TIG Welding, Submerged Arc Welding

		T	P	CR	C/E	ECTS
OEU238	**Print Making**	**0**	**2**	**1**	**S**	**2**

Introduction to Various Original Printing Techniques, Screen Printing, Metal Carving, Wood and Linoleum Carving. Ebru, Stone Printing, etc. Traditional Printing Arts

		T	P	CR	C/E	ECTS
OEU240	**Innovation Management**	**2**	**0**	**2**	**S**	**2**

Basic concepts; change, design, invention, innovation. Types of innovation; product, process, marketing and organizational innovations. The value of innovation for individuals, companies and countries. The relationship between innovation and development. Innovation models. Systems approach in innovation management; national, regional and sectoral innovation systems. Innovation strategy. Innovation management process. Intellectual property rights. Financing innovation; local and international sources for monetary support of innovation.

		T	P	CR	C/E	ECTS
OEU242	**First Aid**	**0**	**2**	**1**	**S**	**2**

Basic Applications of First Aid, Basic Life Support in Adults, Basic Life Support in Children and Infants, First Aid in Respiratory Tract Obstruction, External and Internal Bleeding, Wounds and Wound Types, Regional Injuries, First Aid in Head and Spine Fractures, First Aid in Upper Extremity Fractures, Dislocations and Sprains, Hip and Lower Extremity

First Aid in Fractures, Dislocations and Sprains, Electric Shock, Radioactivity, First Aid in Diseases Requiring Emergency Care, Poisoning, Heatstroke, Burns and Freezing, First Aid in Foreign Body Escape, Emergency Transport Techniques, Fast Transport Techniques in Short Distance, Transport of Patients and Injured