VOCATIONAL SCHOOL OF HEALTH SERVICES

Orthopedic Prosthesis and Orthotics Program

CLASS 1 FALL

SEMESTER I

MYO101 BASIC ANATOMY AND PHYSIOLOGY

1-Introduction to Anatomy and Physiology and short terminology, Axes, planes, Terms indicating location and direction; general information

2-Cell Theory, Structural features, Cell organelles, Cell division; Information on the provision of substance exchange

3-Locomotor System Anatomy and Physiology- Osteology

4-Locomotor System; arthrology; General information, joint types, movements. myology; Anatomy, Contraction mechanism, Striated muscles, cardiac muscle, physiology of smooth muscles.

5-Respiratory system Anatomy and Physiology. Nose, Paranasal sinuses, Larynx, trachea, Lungs. Physiology of Respiratory, ventilation, diffusion, Perfusion, Respiratory Regulation.

6-Cardiocirculatory system Anatomy and Physiology. Blood: functions, components, formed elements of blood, Blood groups. Metabolism of the heart, heart sounds. Heart cavities, Veins.

7-Digestive system Anatomy and Physiology I. Oral anatomy, Chewing muscles, Pharynx, Oesophagus, Stomach, Small-large intestines, Kc. Gallbladder, Pancreas, Digestive glands.

8-Digestive System II. Digestion in the mouth, stomach, digestion in the small and large intestines. KC. functions, CHO digestion, Digestion of fat-proteins. Vitamin-Mineral-Electrolyte functions.

9-Urinary System Anatomy and Physiology. Function of kidneys, nephron, urin formation, fluid-electrolyte balance. Distribution of water in the organism, Electrolytes-acid-base balance. Renin-angiotensin system.

10-Genital organs-reproductive physiology. Female and male genital organs. Hormonal control of the reproductive system, hypothalamus, pituitary, gonadotropic hormones. Ovarian hormones, reproductive cycle.

11-Endocrine system anatomy and physiology. Endocrine glands, their functions. Physiological functions of hormones, classification. Hormones and target cells.

12-Nervous system Anatomy and Physiology. Development of nervous tissue, neuron types, functions, synapse, neuroglia cells. FAQ and PSS

13-Sensory organs, Anatomy and Physiology. Ways of seeing, ways of hearing and balance.

OPO115 VOCATIONAL TECHNOLOGY I

1-Basic Concepts and Tools

2-Length Measurement Technique

3-Measurement Errors

4-Calibration

5- Calipers

6-Micrometers

7-Filing

8-Manual Cutting

9-Infinitives

10-Marking

11-Riveting

12-Welded joint

OPO101 MATERIAL INFORMATION I

1-Definition and classification of materials

2-Mineral and non-mineral materials

3-Material inspection and methods, material selection

4-Conciseness, fragility, fatigue

5-Examination of the internal structure of materials

6-Metalographic examinations

7-Spark inspection, technological inspection

8-Alloys, irons, cast irons

9-Non-ferrous metals

10-Steels

11-Plastics

12-Occupational health and safety, safe use of tools and equipment

OPO119 PATTERN AND MODELAGE

1-Materials Used in Workshop Applications

2-Orthotics Applications

3-Prosthesis Applications

4-Common Properties of Materials Used in Orthotics and Prosthesis Applications

5-Modelling Principles in Lower Extremity Orthoses

6-Modelling Principles in Upper Extremity Orthoses

7-Modelling Principles in Spinal Orthoses

8-Modelling Principles in Lower Extremity Prosthesis

9-Modelling Principles in Upper Extremity Prosthesis

10-Modelling Principles in Lower Extremity Prosthesis

11-Future of Applications

RPSI209 POSITIVE PSYCHOLOGY AND COMMUNICATION SKILLS (HSE)

1-Definition of Positive Psychology and Learning the Basic Concepts

2 -Learning The Theoretical Fundamentals Of Positive Psychology

3 -Learning the Brain Infrastructure of Social Behaviors

4 -Emotional Intelligence, Emotional Intelligence in Adults, Children and Youth, Marriage and Business Life, Principles of Emotional Intelligence, Learning the Relationship of Emotional Intelligence with Personality Development, Marriage and Business Life

5 -Learning the Concepts Related to Self-Knowledge and Awareness

6 - Recognizing Others and Learning the Concepts of Empathy

7 -Learning Communication Skills

8 -Learning Motivation and Planning Skills

9 -Learning Problem Solving Skills

10-Learning Anger Control Skills

11 -Learning Relationship Management Skills

12 -Learning the Concept of Persistence and Impulse Control Skills

13 -Learning Healthy Decision Making Skills

14 -Learning the Concepts of Compromise

TURK101 TURKISH LANGUAGE I

1-Learns the necessity of the connection between language and culture.

2- Gain knowledge about the historical course of the Turkish Language.

3-Learns the rules of spelling and punctuation, its necessity and its contribution to success in life.

4-Learns the use of words in the most appropriate place in oral and written expression.

5-Learns to use his ideas and feelings correctly and effectively.

INGU101 ENGLISH I

1-to meet, verb to be, subject pronouns

2- Demonstrative pronouns, countable/uncountable nouns, quantitative expressions

3- Simple present tense, adverbs of frequency

4-Object pronouns, possessive adjectives, have got/has got

5--must,-must,(must/mustn t)-can,-can(can/can t)

6-Past Tense (Simple Past Tense)

7 - Understands what he/she listens at the relevant level and makes comments.

8-Increases vocabulary with various reading passages.

9-Present tense

10-Conjunctions (and-but-that's why-because)

11-Comparisons

12-Gains the ability to understand various English reading passages at intermediate level.

ATA101 PRINCIPLES OF ATATURK AND HISTORY OF REVOLUTION I

1-Concepts, definitions, lesson methods and definitions of resources

2-Industrial Revolution and the French Revolution

3-Disintegration of the Ottoman Empire (XIX. Century)

4-Tanzimat and Reform Edict, I. and II. Constitutionalism

5-I. World, Tripoli and Balkan Wars

6-Mondros Armistice Agreement, Wilson Principles, Paris Conference

7-M. Kemal's Departure to Samsun and the Situation in Anatolia

8-Amasya Circular, National Congresses, Opening of the Parliamentary Assembly

9-The Establishment of the Parliament and Internal Revolts

10-Teskilat-ı Esasi Law, Establishment of the Regular Army

11-I. II. Great Offensive with İnönü, Kütahya-Eskişehir and Sakarya Pitched Battles

12-The treaties during the War of Independence

13- Lausanne Peace Treaty

14-Abolishing the Sultanate

RKUL101 UNIVERSITY CULTURE I* (ÜSEÇ)

Each semester includes seminars, conferences, panels, workshops and talks to be held for 14 weeks within the framework of a program consisting of suggestions from academic units, student council and student clubs at the university.

1ST CLASS

SEMESTER II

OPO126 INTRODUCTION TO PROSTHESIS*

1-Definition, history and classification of the prosthesis

2-Causes of amputation

3-Levels of lower extremity amputation

4-Partial foot amputations and partial foot prosthesis

5-Prosthetic feet

6-Below the knee amputations

7- Below-knee socket types and below-knee prostheses

8-Knee disarticulation prostheses

9-Above knee amputation and prostheses

10- Upper extremity amputation levels and partial hand prostheses

11-Hand and elbow prostheses

12-above elbow and shoulder disarticulation prostheses

OPO128 MATERIAL INFORMATION II

1- Joining methods solders welding rivets

2-Protection from work accidents and work safety

3-Metals

4-Plastics, thermoplastics, composites

5-Textile products fabrics

6-Fiberglass

7-Carbon fibers

8-Trees

9-Natural and artificial leather

10-Catalysts ceramics

11-Plasters

12-Alternative material and biomaterial

13-Application examples and ready-made orthopedic products

FTP213 KINESIOLOGY

1-Introduction to kinesiology

2-Bone tissue and bones

3-Muscle tissue

4-Cartilage and Joints

5-Vertebra

6-Pelvis

7-Hip joint

8-Knee joint

9-Foot and ankle joint

10-Shoulder joint

11-Elbow joint

12-Hand and wrist joint

13-Gait Analysis

OPO132 ORTHOSIS ENTRY*

1-Orthosis Definition and Classification

2-Basic Biomechanical Principles in Orthoses

3-Materials Used in Orthoses

4-Foot and Ankle Biomechanics

5-Foot Deformity and Problems

6-Foot and Ankle Orthotic Elements and Features

7-Foot Orthoses

8-Ankle Orthoses

OPO134 VOCATIONAL TECHNOLOGY II(BSEC)

1- Soldering

2-Clamped joint

3-Detachable joints

4-Threading

5-Drilling and countersinking

6-Bending by hand

7-Shaping by hammering

8-Riveting

9-Compressed air installation

10-Occupational safety and worker health

11-Regulation

INGU102 ENGLISH II

1- Gain the ability to understand various English reading passages at lower intermediate level.

2-Increases vocabulary with various reading passages

3- Understands what he/she listens to at the relevant level and makes comments.

TURK102 TURKISH LANGUAGE II

1-Learns the necessity of language and culture connection

2- Have information about the historical course of the Turkish language.

3-Learns the rules of spelling and punctuation, its necessity and its contribution to success in life.

4-Learns the use of words in the most appropriate place in oral and written expression

5-Learns to use ideas and feelings correctly and effectively.

ATA102 Ataturk's Principles and History of Revolution II

1-To know the sources related to Atatürk's principles

2- By getting down to the roots of the Turkish revolution, he consciously owns Atatürk's reforms.

3- Having a consciousness that recognizes his country, homeland and nation and produces policies suitable for them

RKUL 102 University Culture II*(ÜSEÇ)

1-Improves general cultural knowledge

2-Uses critical thinking, questioning and research skills

3-Develops alternative solutions for different problems

4-Understand the importance and meaning of lifelong learning

5-Transfers the knowledge gained from different disciplines to his/her life

2. CLASS

III. SEMESTER

OPO207 PROSTHESIS I*(BSEC)

1-measurement of below-knee prosthesis

2- Plastering the below-knee prosthesis

3-Manufacture of below-knee prosthesis

4-Hip disarticulation prosthesis construction

5- Partial hand and wrist prostheses measurement, plaster and manufacture

6-Hemipelvectomy, hemicorpectomy prosthesis construction

7-Soft socket preparation and construction, upper extremity silicone prostheses

8-Manufacture of below-knee prosthesis

9-Knee disarticulation prosthesis

10-Knee disarticulation prosthesis impression and plaster cast

11-Prosthesis cost calculation

12-Knee disarticulation modeling and manufacturing

13-Workshop organization and features of prosthetic knee and wrist joints

MET 101 PROFESSIONAL ETHICS (HSE)

1- Examining the concepts of ethics and morality

2- Examining the concepts of ethics and morality

3-Ethics systems

4-Ethical Principles

5-Ethical Dilemma

6-Professional Ethics

7- Professional Corruption

8-Ethical and Unethical Behaviors in Business Life

9-Professional Confidentiality

10-Patient Rights

11-Informed Consent

12-Ethics in the Public

13-Social Responsibility

OPO223 ORTHOSIS I*(HSE)

1-Knee Biomechanics

2-Knee Pathomechanics

Knee Orthoses

4-Long Walking Orthoses

5-Meningomyelocele and Orthoses

6-Fracture and Orthoses

7-DÇC and Orthoses

8-Leg Calve Perthes and Orthoses

OPO221 ORTHESIS ANALYSIS AND EVALUATION

1-Analysis and evaluation introduction

2-Gait analysis

3-Pathological walking

4-Walking aids

5-Definition and importance of physical therapy

6-Orthotic rehabilitation

7- Things to consider in daily life

8-Orthoses and rehabilitation in rheumatological patients

9-Protective rehabilitation in geriatric patients

10-Muscle deformities and functional defects

11-Rehabilitation of contracture and orthosis patients

OPO229 CLINICAL DISEASES IN PROSTHETIC ORTHOSIS

1-Fractures

2-Osteoarthritis

3-Neuropathy

4-Common injuries in the knee area

5-Developmental hip dysplasia

6-Osteoporosis

7- Rheumatoid arthritis, Ankylosing spondylitis

9-Stroke, Spinal cord injuries

10-Brachial plexus, Motor neuron diseases

11-Guillain barre syndrome

12-Sipina bifida, Cerebral palsy

13-Scoliosis

FIRST 101 FIRST AID

1-To apply the basic principles of first aid

2-To learn about the human body

3-Assess the patient/injured and the scene

4-To provide basic life support

5-To apply first aid in respiratory tract obstructions

6-To apply first aid in bleeding, shock, injuries

7-To apply first aid in burns, frostbite and heat stroke

8-To apply first aid in unconsciousness

9-To apply first aid in poisonings

10-To apply first aid in animal bites

11-To apply first aid in case of foreign body getting into eyes, ears and nose.

12-To apply first aid in choking

13-To apply first aid in fractures, dislocations and sprains

14-Carrying the sick and injured

2. CLASS

IV. SEMESTER

OPO204 PROSTHESIS II*

1- Upper extremity amputation levels

2-Upper extremity amputation levels

3-Finger amputations and prostheses

4-Wrist amputation and prostheses

5-Forearm amputation and prostheses

6-Elbow amputation and prostheses

7-Above-elbow amputation socket types

8-Types of above-elbow amputation sockets

9-Shoulder amputation and prostheses

10-Shoulder amputation and prostheses

11-Upper extremity ligament systems

12-Upper extremity ligament systems

OPO208 PROSTHESIS ANALYSIS AND EVALUATION

1-Evaluation of Syme/chopart partial foot prostheses

2-Evaluation and rehabilitation of below-knee prostheses

3-Evaluation and rehabilitation of knee disarticulation prostheses

4-Evaluation and rehabilitation of above-knee prostheses

5-Evaluation and rehabilitation of hip disarticulation prostheses

6-Evaluation and rehabilitation of hip disarticulation prostheses

7-Evaluation and rehabilitation of wrist prostheses

8-Evaluation and rehabilitation of forearm prostheses

9-Evaluation and rehabilitation of elbow disarticulation prostheses

10-Evaluation and rehabilitation of above-elbow prostheses

11-Evaluation and rehabilitation of shoulder disarticulation prostheses

12-Implementation and evaluation of the Harness system

OPO212 ORTHOSIS II*

1-Spine Orthoses

2-Cervical and Cervicothoracal Orthoses

3- Thoracolumbosacral Orthoses

4-Lumbosacral Orthoses

5-Scoliosis Orthoses

6-Functional Anatomy of the Hand

7-Mechanics of the Hand

8-Upper Extremity Functional Anatomy

9-Static Orthoses

10-Contracture Orthoses

11-Tendon Incision Orthoses

12-Upper Extremity Shoulder-Elbow Orthoses

13-Pediatric Splints

14-Upper Extremity Orthoses in Hemipegia

OPO224 BIOMEDICAL TECHNOLOGY (BSEC)

1-Introduction and Course Description

2-Historical Development of Medical Devices and Biomedical Device Technologies

3-Relationship of Biomedical Engineering with Other Sciences

4-Bioengineering, Medical Engineering and Clinical Engineering

5-The Situation of Biomedical Device Technology in Education and Sector in Our Country

6-Employment Areas of Biomedical Device Technicians, Duties and Responsibilities of Biomedical Device Technicians

7-Basic Biomedical Instrumentation and Measurement

8-Human Body, Overview

9-Introduction to Medical Measurement Techniques

10-Biomedical Instrumentation in the Nervous System

11-Biomedical Instrumentation in the Cardiovascular System

12-Biomedical Instrumentation in Other Systems

13-Biomaterials and Tissue Engineering

14-Assessment of the Course

MYO015 Social Responsibility Project

1-What is Social Responsibility? What is the purpose of social responsibility? Why social responsibility studies are important, creation of social responsibility project, what are corporate social responsibility studies?

2-Determining the project

3-Preparation of the presentation covering the determined project subject, project purpose and project team

4-Presentation by students of what has been done for the project so far

5-FIELD STUDY-APPLICATION

6-Evaluation

OPO999 SUMMER INTERNSHIP***

To give the student the ability to practice in the field, accompanied by the theoretical knowledge he received during the semester.

*Applied Lesson

**Vocational Training in Business

***Internship

BSEC: Departmental Electives

HSSE: University Elective Courses