

**BOLU ABANT IZZET BAYSAL UNIVERSITY FACULTY OF HEALTH SCIENCES  
DEPARTMENT OF PHYSICAL THERAPY AND REHABILITATION**

**COURSE CONTENTS**

**SEMESTER I**

**COMPULSORY COURSES**

**COURSE CODE**                      **NAME OF COURSE**                      **(Theory hrs, Practice hrs, ECTS)**

**901001051996 Anatomy I (3 2 8)**

Entrance to anatomy, general concepts of anatomy, general and specific terminology of anatomy, anatomical positions, general knowledge of bones, columna vertebralis and vertebrae, thoracic and lumbar areas, skull bones, upper and lower extremity bones, general knowledge about joints, joint types, whole body joints, pelvis, general and specific knowledge of muscular system, circulatory system, anatomy of heart, vessels and nerves of the heart, arterial system, venous system, lymphatic system, regional topographic anatomy of circulatory system, general knowledge about respiratory system, anatomy of nose, larynx, lungs, bronchia, pleura and mediastinum.

**901001071996 Physiology I (3 2 5)**

At the beginning of the course, the cell biology and physiology will be presented and following body fluid and blood will be described. The sequence of the topic mentioned in this course is arranged parallel with the anatomy course. Circulatory system will be talked under two subheadings as heart and vascular system. Electrical activity of the heart and arrhythmia will be described in detail. In the vascular part of circulatory system, pressure and volume relationship of circulatory system will be described. In respiratory part of the course, the mechanism of inspiration, expiration and the changes of various conditions on the respiratory activity will be talked. Kidney and its functional unit of nephron will be talked in excretory system. Basic function of the nephron including filtration, reabsorption and secretion will be described in detail. Acid-base balance and its relation of excretory and respiratory system will be also mentioned in this course.

**901001211996 Turkish Language I (2 0 2)**

Content of the Course Notion of language. The importance and place of language as a social institution in society. The relation of language and culture. The comparison of Turkish and other world languages and the geographies it is spoken. Phonemes in Turkish and their classification. The phonemic structure and rules of Turkish phonetics. Syllables. The spelling rules and usage. Written expression.

**901001232005 Case Study I (1 0 3)**

At the beginning of the season students separated to the groups, different medical topics given to the per group, one group makes presentation in each week.

**901002171996 Atatürk's Principles and History of Turkish Revolution I (2 0 2)**

Students first learn the process of Ottoman Modernization and the late periods of Ottoman Empire. The class then focuses on the first two decades of the 20th Century. Notable subjects are I. and II. Ottoman Constitutional Periods, Balkan Wars and I. World War. In the following weeks The class aims to teach how Turkish Republic was created through the Independence War as well as the creation of National assembly. Finally how the new Republic was created and the principles of the Turkish revolution are taught.

**901001151996 English I (2 0 2)**

1. Occupations / Singular - Plural Nouns / This - That 2. Countries and Nationalities / to be / Personal Information / Times 3. Present Simple Tense 4. Conjunctions: and – but – because 5. Family Members / have-has got / Quantifiers 6. Object Pronouns/ a – an – the 7. There is – There are / Directions / Parts of a house 8. Mid-term exam 9. Prepositions of Place / Present Continuous Tense 10. Months of the Year / Dates / Seasons / Can-Can't 11. Prepositions of Time / Past Simple Tense 12. Past Simple: to be (was – were) / Vocabulary: Travel 13. Future (be going to) / Everyday Expressions at the Chemist's 14. Countable - Uncountable Nouns / Food Names.

**0901001332011 Histology and Embriology (1 2 2)**

Introduction to the Histology, preparation techniques, commonly used stains, types of microscopes, their usage and specifications, working rules in lab. Specifications of the cells and organelles at light and thin structure level, interconnection elements between the cells, apical surface differentiation. Apoptosis and the cell cycle. Types and specifications of the epithelial tissue. Types, cells, and specifications of the interconnect tissue. Cartilage tissue types. Bone tissue types, specifications and ossification mechanisms. Muscle tissue and types. Nerve tissue, MSS and PSS cells, regeneration.

**SEMESTER II                      COMPULSORY COURSES****901001061996 Anatomy II (3 2 6)**

1-Oral anatomy, tooth and mastication function, clinical and functional anatomy of the digestion organs. 2- functional and clinical anatomy of the kidneys, urethra, bladder and men and women genital organs, topographic anatomy of the urogenital system. 3- regional anatomy of the endocrinal organs. 4- general information about the nervous system, central nervous system, brain meninges, anatomy of the cerebrum, cerebellum, pons and medulla spinalis. 5-

peripheric nervous system, anatomy of the peripheric and aoutonomic nervous system. 6- eye and ear anatomy.

### **901001081996 Physiology II (3 2 5)**

Explanation of how the ingestion process takes place, duty of the organs that takes role in digestion and GIS Disorders. Explanation of endrocrinal system physiology. Explanation of urogenital system, gender hormones and pregnancy physiology. Explanation of nervous system; structure of the neurons, functions of the neurons, functions of the central, prepheric and autonomic nervous system. Explanations of special senses, vision and hearing physiology.

### **901001141996 English II (2 0 2)**

1. Daily Expressions / Vocabulary: Clothes 2. Adjectives / The Weather 3. Obligations: Must / Have to 4. Comparatives – Superlatives 5. Geographical Shapes / Adverbs 6. Present Perfect Tense 7. Office Materials and Activities / used to 8. Mid-term exam 9. Past Continuous Tense 10. Describing People / Verb+adj: look happy 11. Quantifiers / Vocabulary: Food 12. Future: Will / Vocabulary: Money 13. Conditionals: Type 0-1 14. Subject Questions / Should – shouldn't.

### **901001162005 Psychosocial Rehabilitaiton (2 0 2)**

Psychosocial rehabilitation is a scientific and applicaiton area that focus on individuals with chronic health issues. Psychosocial rehabilitation is an area that interested in social psychology, applied health psychology, clinical and consultive psychology areas. Due to increased rate of knowledge and applicaitons related to the individuals with diasbility and chronic health issues for last 40 years it is considered as an sub area of psychology by american Psychology Association. Due to variety of biopsychological reasons; number of individuals with spinal cord injury, brain injury, hemiplegia (Stroke), multiple scleroisis (MS), spina bifida, cerebral plasy, juvenil romathoid arthritis, vision and hearing loss, amputation and pediatric issues increases and resources are spent for rehabilitation and re socialization of those individuals to the society.

### **901001182005 Case Study II (1 0 3)**

At the begininng of the season students separated to the groups, different medical topics given to the per group, one group makes presentation in each week.

### **901001221996 Turkish Language II (2 0 2)**

Application of production attachments of turkish language. Differnet use of adverb and prepositions in turkish language. Rules related to the composition, Plan that is used in composition writing and its use. Noun and conjugation in Turkish language. Reading and analysis of sample textes from literature and thought of world.

**901002181996 Atatürk's Principles and History of Turkish Revolution I (2 0 2)**

Basic specialities of the revolutions and turkish revolution. Flows that affect the turkish revolution. Aim of the turkish revolution: democratic law state, reorganizaiton of turkish economy, national economy and globalizaiton; foundaition of secular turkish law system. Other reforms that brings order and buoyancy to the turkish society. General content of Atatürk's principles and republicanism principle. Nationalism principle. Populism principle and statism. Secularism principle, reformism, criticism against the kemalism and responses.

**0901001322011 Physics (2 0 2)**

Vectors, Newton's movement law, work and energy, linear momentum and collision, circular movement and angular momentum, static balance and flexibility, electrical fields, gauss law, electrical potential, current and resistance, capacitance and dielectricity, direct current circuits, magnetic fields.

**SEMESTER III COMPULSORY COURSES**

**901002252006 Clinical Neuroanatomy (2 0 2)**

Basic features of the periphreal nervous system, innervated the muscles, and the clinical features of the pathologies The macroanatomy, functions and clinical features of the patologies in the spinal cord, brainstem, diencephalon and telencephalon Clinical features and pathology of the autonomic nervous system Interactive lectures process with instructor and students presentations.

**0901002312011 Clinical Medical Sciences I (2 0 3)**

Basic orthopaedics and traumatology, evaluation and diagnostic methods, imaging modalities, information about first aid training, fractures, dislocations, soft tissue injuries, congenital orthopedic diseases, bone development disorders, torticollis, musculoskeletal system pathologies, infections and tumors, hand, foot, spine pathologies, scoliosis, brachial plexus injuries, diagnosis and methods of treatment, neurological examination principles, pyramidal and extrapyramidal system diseases hipertonus and reflexes, cerebrovascular diseases, diseases of the nervous system.

**0901002452011 Assessment and Analysis in Phys. Therapy & Reh. I (2 2 5)**

History of the patient, assessment of general physiotherapy, basic principles of movement, posture analysis (anterior, lateral and posterior posture analysis), shortness and flexibility tests and evaluation, anthropometric measurements (circumference, length, diameter, and skinfold measurements).

**0901002332011 Therapeutic Massage (1 4 2)**

Mechanic, physiologic effects of specific massage and their practical application.

**0901002352011 Palpation in Physiotherapy (0 2 2)**

Vertebra Projection, Determine the location of the superficial muscles of the back, palpable bony points in upper and lower extremity, palpation of carpal and tarsal bones, origo and insertio of muscles, areas of muscle contraction.

**0901002472011 Electrophysical Diagnosis Methods and Modalities I (1 2 2)**

Description of electrical agents, applications and their effects. Direct current, low, medium frequency currents and their effects on body structures, treatment patterns of use.

**0901002372011 Heat-Light-Water (1 2 2)**

As a part of the lesson theoretical and practical information will be given about modalities which are common in physiotherapy such as infrared, heat modalities and hydrotherapy applications.

**0901002492011 Kinesiology And Biomechanics I (3 0 3)**

Identification, movement and Kinezyolojinin types, mechanical principles, bone features and functional compliance of bone to normal and abnormal stress, diseases of bone, cartilage, muscle, kollejen suitable for mechanical structures of the tissues and joints classification, inezyojisi, patok sinovial joints, joint combinations, planes and a relationship of the movement, sliding and rolling movements, joint electronic and contractures, posture, balance, plane and axes directions, normal and pathological gait.

**SEMESTER IV                                    COMPULSORY COURSES**

**901002041996 Exercise Physiology (1 2 2)**

Neuromuscular junction, source of the action potential, muscle system and exercise, energy systems in our body, nervous system and exercise, respiratory system and exercise, circulatory system and exercise, endocrinal system and exercise, post exercise recovery, physical activity and fitness topics.

**901002102003 Electro Phy. Diagnosis and Treatment Mthd. II (1 2 2)**

Definition of the electrical agents. application areas and their efficiency. High frequency currents and their effects on the body and their use in the treatment. Modalities that is used in the muscle strengthening, indication and contraindications of these modalities..

**901002121996 Neurophysiology (2 0 2)**

Education of nervous system functional mechanism by itself and its relation with variety of body functions. After defining the physiological specialities of its most basic structure neuron, analyzing the physiology of the other structures that compose our nervous system, giving thought about the motor activity, equilibrium and posture and special senses..

**0901002282011 Manual Therapy (1 2 2)**



application of exercises programmes, while determining the problems in normal range of motion, teaching to plan exercise programmes and application in different postural problems.

**FTR0339 Clinical Summer Internship I (0 4 4)**

Includes practice for 4 weeks. Electrotherapy applications, basic evaluation methods are performed under supervision.

**FTR0341 Pediatric Rehabilitation (2 2 3)**

Theoretical knowledge about Motor Developmental Delay, Cerebral Palsy, Neuromuscular Diseases, Obstetric Brachial Plexus Paralyze, Neural Tube Defects, Autism. Practical applications of Bobath Approach.

**FTR0343 Neurophysiological Approaches I (2 2 3)**

Stroke and its mechanism, functional movement and its characteristics, the history of neurophysiologic approaches, the basic knowledge of Brunnstrom and practice, the basic knowledge of Johnstone and practice, the basic knowledge of Bobath, trunk and trunk muscles, neuroplasticity and motor relearning, balance and motor control, tonic and phasic muscles, practice.

**FTR0345 Pulmonary Rehabilitation (2 1 3)**

Introduction of pulmonary rehabilitation (description, applications), pathophysiology and rehabilitation of pulmonary diseases, patient evaluation for pulmonary rehabilitation, treatment methods for pulmonary rehabilitation (breathing exercises, huffing, cough, positions to relieve dyspnea, postural drainage, percussion, shaking, vibration, rehabilitation in thoracic surgery, rehabilitation in obstructive and restrictive pulmonary disease.

**SEMESTER VI                      COMPULSORY COURSES**

**0901003422011 Prosthesis and Rehabilitaiton (2 2 3)**

Amputaiton levels and reasons, congenital extremity malformations, partial ahnd and foot prosthesis, different prosthesis models according to the lower and upper extremity amputation levels, static and dynamic sequence lining principles, control mechanisms, myoelectrical prosthesises and amputation rehabilitation.

**0901003202011 Special Topics in Physiotherapy (2 0 2)**

Burn, physiotherapy and rehabilitation in tension type headache and migraine, exercise and give a birth education in pregnancy, postnatal physiotherapy, urogynaecological problems, intensive care and rehabilitation, core stabilzaiton exercises, menopause and rehabilitation, therabant education, swissball exercises.

**0901003242011 Deontology and Ethics (1 0 1)**

Definition of physiotherapy as an occupation, definition of good and evil in medicine, ethical morals, medical ethics, philosophy and ethics, relation between physiotherapy and ethics, specialities of being professional, duties and responsibilities of the physiotherapists, patient rights, giving information to the patients about their situation, occupational competence and autonomy, responsibilities to the occupation and the colleagues, evidence based applications, life long learning, briefing about the physiotherapists' association.

#### **FTR0306 Rehabilitation in Rheumatologic Diseases (2 0 2)**

Rheumatology science and biopsychological model, inflammation, rheumatoid arthritis, juvenile idiopathic arthritis, spondyloarthropathies, fibromyalgia, scleroderma, Sjögren syndrome, gut, septic arthritis, polymyalgia, romaticha, idiopathic inflammatory myopathies and assessment and treatment approaches.

#### **FTR0344 Cardiac Rehabilitation (2 0 2)**

History of the cardiac rehabilitation, definition, principles, applications in the programme, pathophysiology and rehabilitation of the cardiovascular diseases, assessment methods used in cardiovascular rehabilitation, programme planning in cardiovascular rehabilitation.

#### **FTR0346 Neurological Rehabilitation (2 2 3)**

Spinal cord injuries, multiple sclerosis, cerebellar dysfunction, brain trauma, polyneuropathy, extrapyramidal system diseases, disc hernias, facial paralysis, motor neuron diseases, spasticity, amyotrophic lateral sclerosis, post polio syndrome, myasthenia gravis.

#### **FTR0348 Neurophysiological Approaches II (1 4 3)**

Role of neurophysiologic mechanism on movement control, theoretical bases of proprioceptive neuromuscular facilitation (PNF) techniques, application types of PNF techniques, case samples.

#### **0901003232011 Occupational Therapy and Society (2 0 2)**

Definition and aims of the ergotherapy, issues must be considered in patient assessment, education and transfer of the bed level patient, bath and toilet activities, education of activities of daily living, household education and home order, introducing of self aid devices with examples (for second mid-term exams students are asked to design and produce these devices), observation of whether or not buildings and streets in our city is appropriate for the access of individuals with disabilities, studies related to the lower limb rehabilitation, hand, grasps, assessment methods and rehabilitation applications for hand functions.

### **SEMESTER VII    COMPULSORY COURSES**

#### **FTR0431 Clinical Summer Internship II (0 4 4)**



Internship contains 4 weeks of practice. Electrotherapy applications, basic evaluation methods are performed under supervision.

**FTR0405 Neurologic Rehabilitation Internship (2 4 5)**

Evaluation and planning and application of the physiotherapy and rehabilitation program of the patients with neurologic diseases. The students also prepare short seminars about the neurologic conditions and diseases.

**FTR0407 General Physical Therapy and Rehabilitation Internship (2 4 5)**

Evaluation and planning and implementation of the physiotherapy and rehabilitation program of patients with diseases related to general physical therapy and rehabilitation. Students also prepare short seminars on situations and diseases that require physical therapy and rehabilitation.

**FTR0409 Orthopaedic Rehabilitation Internship (2 4 5)**

Evaluation and planning and application of the physiotherapy and rehabilitation program of the patients with orthopaedics diseases. The students also prepare short seminars about the orthopaedic conditions and diseases.

**FTR0411 Pulmonary Rehabilitation Internship (2 4 5)**

Evaluation and planning and application of the physiotherapy and rehabilitation program of the patients with pulmonary diseases. The students also prepare short seminars about the pulmonary conditions and diseases.

**SEMESTER VIII COMPULSORY COURSES**

**0901004222011 Patients' Rights and Law (3 0 4)**

Lectures consists of health law concept, sources and organization, relationship between patients and health Professional, organ and tissue transplantation, clinical research, law appreciation term of medical interventions, health Professional and patient responsibilities, malpractice and compensation responsibility and medical penal law.

**FTR0408 Pediatric Rehabilitation Internship (2 4 5)**

Evaluation and planning and application of the physiotherapy and rehabilitation program of the patients with pediatric diseases. The students also prepare short seminars about the pediatric conditions and diseases.

**FTR0410 Public Health Internship (2 4 5)**

Evaluation and planning and implementation of the physiotherapy and rehabilitation program of the patients on issues concerning public health. Students also prepare short seminars on community health and practices.

**FTR0412 Orthosis and Prosthesis Internship (2 4 5)**

Evaluation and planning and implementation of physiotherapy and rehabilitation program for patients using orthosis-prosthesis. Students also prepare short seminars about orthosis-prosthesis and their applications.

**FTR0414 Cardiac Rehabilitation Internship (2 4 5)**

Evaluation and planning and implementation of physiotherapy and rehabilitation program for patients with cardiac disease. Students also prepare short seminars on cardiac conditions and diseases.

**SEMESTER I-II ELECTIVE COURSES**

**0901001372011 Expression of Body Structures (1 2 2)**

Axes and planes in human body, anatomic variations, joint biomechanics, pathomechanics of deformities, joint ligaments and limiting the movements, plexus brachialis and lesions.

**0901001352011 Computer Applications (1 2 2)**

Basic computer information, Operating System, Word Processor, Electronic Spreadsheet, Internet web browser.

**0901001292011 Exercise for Healthy Living (1 2 2)**

Health, exercise and physical activity, group exercises, stabilization exercises, aerobic exercises, exercise with elastic bands, exercise with balls, stretching exercise, protection of body mechanics.

**0901001312011 Councelling (2 0 2)**

The history of Bolu. General introduction of our university. Izzet Baysal and his work. Visiting city museum. Meeting with other students and teachers by organizing some social activities. Introduction of physiotherapy and understanding of duty and responsibilities of physiotherapist. Occupational ethics.

**0901001272011 Art and History of Paintings (1 2 2)**

This course point-line, light-dark, light, shadow, form associations, composition, ground-form relationships, color, texture issues are included.

**0901001242011 Art and History of Music (1 2 2)**

Theories related to the birth of the music, musci term and introduction to the related terminology, basic terms and concepts (monodie, heterophony, polyphony, homofony, pentatonism, kromatism, modality and tonality), sound and its specialities, muscis of the primitive societies and related information about their instruments, music in far east, asia, Anatolia, mezopotamia, greek civilizaitons, gregorian and ambrose divines, passing through multivoices, baroque era, figured bass, rococo process, classical era in music, homofonic writing and big sonato form, romantic era in music, impressionism and nationalism trends,

modern era and its important trends, postmodernist approaches, important composers of the related eras and trends and their work of arts, also the effect of political, cultural, economical changes and shifts in related era and geography on music, instrument and their evolution, general look at the music forms, importance and place of the Turkish music in general music history, listening: Sample work of art suitable to the content. Watching: Documentaries suitable to the content.

**0901001262011 Diction (1 2 2)**

1. Meeting with the students and expectations. 2. Use of vowels and consonants 3. Exercises 4. Breathing and articulation techniques 5. Toning and punctuation applications 6. Diction applications 7. Good reading and speaking applications 8. Mid-term exam 9. Speaking and writing orthographic rules 10. Poet reading rules 11. Body language and memorized poet reading applications 12. Oratory applications 13. Body language and extemporizing 14. General applications and assessment.

**0901001302011 Physical Education (1 2 2)**

Understanding the importance of body health and physical education. Practical applications in certain branches.

**SEMESTER III-IV                      ELECTIVE COURSES**

**901002191996 Foreign Language: Medical English I (2 0 3)**

English grammar, vocabulary, reading comprehension, listening comprehension, oral productions, and writing skills in order to help students follow occupational English courses in next years and prepare them for learning English courses further after university and in professional life.

**901003172006 Clinical Microbiology (2 0 3)**

Clinical bacteriology, virology, parasitology, mycology, and immunology.

**0901002412011 Nutrition (2 0 3)**

Nutrition and health, nutrients and their properties, usage of nutrients in body, composition of foods, their physical and chemical properties, diet-planning for people of different age, gender and work group.

**0901002432011 First Aid (1 2 3)**

First aid and Emergency care; triage; physical examination; hemorrhages; first aid in shock; first aid in traumas, injuries and crash; first aid at the broken, dislocations bucklings; carrying of the patient; providing basic and advanced life supporting; supporting for advanced life; medical emergencies; environmental emergencies; practices.

**0901002392011 Body Awareness (1 2 3)**

Body-awareness therapy, history and philosophy, theories and principles.

**0901002422011 Pathology (2 0 3)**

1. definition of pathology and analysis methods. 2. Cellular injury 3. Pathological calcification and intracellular accumulation 4. Adaptation mechanisms 5. Definition of inflammation and pathogenesis 6. Acute inflammation 7. Chemical mediators in acute inflammation 8. Chronic inflammation 9. Repair and wound healing 10. Liquid and hemodynamic failures 11. Heart and artery diseases 12. Neoplasia I 13. Neoplasia II.

**901002222006 Clinical Biochemistry (2 0 3)**

Weak interactions in a cellular environment, importance of water, ionic balance, buffer solutions, nucleic acids, amino acids, peptide connection and its specialities, 3 dimensional structure of the proteins, (specialities of the alpha helix and beta layer structure), functional categorization of the proteins (fibrous proteins and globular proteins), role of the proteins, oxygen transportation, antibodies and enzymes, carbohydrates, lipids, vitamins and blood proteins

**0901002362011 Technology and physiotherapy (2 0 3)**

Place and use of technology in physiotherapy. Technology use in physiotherapy assessments. Technological devices used in physiotherapy and rehabilitation. Robotic rehabilitation. Technology in cardiopulmonary and intensive care. Technology in neurological rehabilitation. Technology in geriatric rehabilitation. Technology in pediatric rehabilitation, technology in conservative physiotherapy, physical activity and technology Nintendo Wii.

**901002201996 Foreign Language: Medical English II (2 0 3)**

Letting students to be able to catch up occupational English lessons in following years, make them have English grammar and vocabulary reportary grade that makes them understand that they read and listen in their term of post graduate and occupational life.

**SEMESTER V-VI ELECTIVE COURSES**

**901001192005 Biostatistics (2 0 2)**

Scientific Research and Education Basic Concepts and Approaches The source of information Science Scientific Method Research Research Education Research Process and Techniques Logic Problem Goal Importance Sayılı on limitations Method Research Model Universe and Sampling Data and Collection Data measuring Observation Interview Correspondence Documentary Screening Processing, Solution and Interpretation of Data Processing of Data Resolution of Data Interpretation of Data Possible Misconceptions Findings and Comments Summary, Judgments and Recommendations.

**901003151996 Pharmacology (2 0 2)**

Principles of drug action, drug-receptor interaction, drug absorption, distribution and excretion, drug metabolism, local anesthetics, drugs that affect the neuromuscular junction, autonomic nervous system, Drugs that affect autonomic cholinergic synapses, drugs that affect the sympathetic system, general anesthetics, opioid analgesics and antagonists, corticosteroids, the drugs used in congestive heart failure, antiarrhythmic drugs, angina, hypertension drugs used, drugs that affect the respiratory system, non-steroidal anti-inflammatory drugs.

**0901003252011 Radiology on Physiotherapy (2 0 2)**

Basic concepts in radiology, radiography, computed tomography, magnetic resonance imaging, extremities, spine, and thorax radiology.

**0901003272011 Academic English I (2 0 2)**

English grammar, vocabulary, reading comprehension, listening comprehension, oral productions, and writing skills in order to help students follow occupational English courses in next years and prepare them for learning English courses further after university and in professional life.

**0901003292011 Physiotherapy in the Elderly (2 0 2)**

Physiology of elderly, systemic changes in old ages, balance impairments in elderly, evaluation methods for balance problems and treatment strategies.

**0901003312011 Spa Therapy (1 2 2)**

General properties of thermal springs, diseases and symptoms that we can use Balneotherapy, indication and contraindications, localization of thermal springs and properties of this springs.

**0901003332011 Sports for Disabled (1 2 2)**

Physical activity and exercise, disability groups, classification, assessment of physical activity, planning of physical activity program.

**0901003302011 Physiotherapy in Cancer (2 0 2)**

Cancer mechanism Cancer assessment and treatment approaches Cancer complications Physiotherapy and rehabilitation in cancer Breast, Uterine and Prostate cancer Lymphoedema and Rehabilitation Concept of Complex Decongestive Physiotherapy Case discussion

**0901003262011 Academic English II (2 0 3)**

Letting students to able to catch up occupational english lessons in following years, make them have english grammer and vocabulary reportary grade that maket hem understand that they read and listen in their term of post graduate and occupational life.

**0901003322011 Workers' Health (2 0 3)**

Occupational law, worker rights and responsibilities, occupational accidents and occupational diseases, ergonomics risks and prevention methods and occupational physiotherapists related to the occupational life.

**0901003342011 Public relations (2 0 3)**

Historical development of public relations, its effect on public management. Importance, aim and process of the public relations. Targeted masses in public relations. Basic principles in public relations. Recognition and introducing in public relations. Closely related areas to the public relations: human relations, propaganda, commercial and corporate commercial. Public relations and communication: communication process, basic components, qualification, types. Communication tools used in public relations: electronic written methods, visual, -visual auditory tools, 3 dimensional communication tools, combined media use, specific cases and internet. Social responsibility, corporate identity design, corporate and individual image making.

**0901003362011 Communication (2 0 3)**

Communication term, communication process, communication components, communication problems, body language, personal image.

**901001202005 Scientific Research Methods (2 0 3)**

Main aims of the scientific research. Specialities of the research. Research stages. Determination of research topic. Determination of the aims of the research and its methods. Determination and application of data collection tools. Application of data analysis tests. Suggestion making. Report writing.

**0901003282011 Physiotherapy and Special Education (2 0 3)**

Behavior problems, mental retardation, autism and common developmental Disorders and similar diseases.

**SEMESTER VII-VIII      ELECTIVE COURSES**

**901004152008 Case Study III (1 2 3)**

Article research on medical issues such as orthopedic, neurological, geriatric, pediatric rehabilitation. Seminar presentation in the class.

**901004172008 Final Project I (1 2 3)**

Scientific research, statistics and 4 thesis, report it using the information gained in the professional class, his teacher advisor offers.

**0901004192011 Business (2 0 3)**

giving information about; preparing measures against foreseeable risks, market analysis, and planning how we set up a business in today's economy.

**0901004212011 Organization in Physiotherapy I (1 2 3)**

The course covers organizations in physiotherapy and rehabilitation and related principles, standards, organization models.

**FTR0401 Low Back and Neck Health (2 0 3)**

Functional anatomy, bio mechanics and pathomechanics of spine Assessment, evaluation and treatment application of neck and back pathologies Principles of neck and back school Clinical decision and case examples.

**FTR0403 Balance and Rehabilitation (2 0 3)**

What is balance? The reasons underlying balance problems. Structures and systems responsible for maintaining balance. Evaluation methods for balance problems and rehabilitation programs for restoring balance.

**0901004202011 Organization in Physiotherapy II (1 2 3)**

This lecture will be focused on organizations related to the physiotherapy and rehabilitation, standards, principles and organization models specific to these organizations.

**901004162008 Case study IV (1 2 3)**

Literature search about a topic related to the physiotherapy. Presentation of the related topic to the counseling lecturer as a seminar or presentation.

**901004182008 Final Project II (1 2 3)**

Use of scientific research, statistic and occupational knowledge obtained until 4th grade in thesis and making a report for counseling lecturer.

**FTR0402 Home Care Physiotherapy and Reh. Services (2 0 3)**

Duties of the physiotherapist and other health Professional that takes place in home care services, importance of home care physiotherapy and rehabilitation, planning and application of home care physiotherapy services, participation to the projects and cases related to the topic.

**FTR0404 Hand Rehabilitation (2 0 3)**

Hand and upper limb anatomy and biomechanical principles, soft tissue problems, fractures, articular problems, rehabilitation principles after nerve injury

**FTR0406 Complementary Therapies (2 0 3)**

Complementary therapies, energy techniques, breathing methods, meditation methods and applications including exercise, yoga, tai chi, other methods, treatment environment.