

**ISTINYE UNIVERSITY**  
**VOCATIONAL SCHOOL OF HEALTH SERVICES**  
**DEPARTMENT OF ELECTRONEUROPHYSIOLOGY**  
**COURSE DESCRIPTIONS**

**1<sup>st</sup> SEMESTER**

**ENF111- Physiology | 3 ECTS**

Introduction to human physiology, tissue and systems, homeostasis, Muscular System, Nervous System, Cardiovascular System, Blood and Immune system, Respiratory System, Sensory System, Digestive System, Urinary System, Endocrine System and Reproduction

**ANT111- Introduction To Anatomy | 3 ECTS**

To give information about the anatomical structure and properties of human body.

**ENF113- Electroneurophysiology I | 5 ECTS**

To teach students the foundation and the working principles of the devices used in Electroneurophysiology, such as EEG and EMG.

**BIL111- Information And Communication Technology | 4 ECTS**

Aim is to give usage abilities of operating system, internet and office programmes (MS Word) by being introduced basic concepts of computer system.

**ENF125- Biophysics | 3 ECTS**

Basic Electrical Concepts and Applications in Medicine, Membrane Biophysics, Electrical Properties of Cell Membranes, Local Potentials, Action Potentials, Transducers, Filters, Amplifiers, Measuring Instruments and Oscilloscope, Biophysical Foundations of EEG, Evoked Potentials.

**TRM111- Medical Terminology | 3 ECTS**

The purpose of this course is help students to write the correct medical term, by gaining the ability to articulate and analyze the infrastructure to create other medical issues.

### **MSE111- Occupational Ethics | 3 ECTS**

This course will help students learn about the ethical concept and health professional ethics and find solutions to the problems they face in their professional life.

### **ING111- English I | 2 ECTS**

Students will understand English effectively and use basic grammar of English Rules. Through this course, students will be able to interpret simple dialogues in English and use the new structures and words they have learned in their daily lives.

### **ATA111- Ataturk's Principles And History Of Turkish Revolution II |2 ECTS**

Teaching the military, political, economic and social events of the Ottoman Empire in the internal and external politics, the struggle for national liberation and the formation of the new Turkish Republic.

### **TURK111- Turkish Language I | 2 ECTS**

To give information about language definition, role and importance in communication, verbal and written expression techniques in literary and scientific fields, writing rules and expression disorders.

## **2<sup>nd</sup> SEMESTER**

### **ENF121- Neurology I | 5 ECTS**

Teaching the basic features of neurological diseases with neurological anatomy. Disorders of consciousness and coma, Primary Headaches, Secondary Headaches, Parkinson's Disease and Movement Disorders, Epilepsy, Cerebrovascular Diseases, Spinal Cord Diseases, Neuro muscular junction, and Muscle disorders, Amnesia and Dementia diseases, Neglect syndromes. Importance of EEG and using of EEG in the treatment of neurological diseases.

### **ENF122- Electroneurophysiology II 6 ECTS**

Clinical features of seizures, localized and generalized epileptiform patterns, slow waves and asymmetries, EEG report writing, focal brain lesions, diffuse, toxic and metabolic encephalopathies, organic brain syndromes and dementia, coma and other alternations of mental status, drug effects, psychiatric disorders and EEG, Electrocorticography, chronic intracerebral recordings, Sleep disorders, intraoperative monitoring.

### **Enf123- Cognitive Neurophysiology I | 4 ECTS**

Physiological Basis of Behavior and Introduction to Cognitive Neurophysiology, Introduction to Physiological Mechanisms of Intellectual Functions of Brain.

### **Enf124- Pharmacology 4 | ECTS**

Introduction to Pharmacology. Pharmaceutical dosage forms. Drugs absorption, distribution. Metabolism and excretion of drugs. Interactions between drugs.

### **ENF221- Polysomnography | 5 ECTS**

Purpose of PSG and principles and diagnostic tests to the students

### **ING121-English II | 2 ECTS**

Students will be able to understand English, use it effectively and compare basic grammar rules of English. Through this course, students can comment on simple dialogues in English and use the new structures and words they have learned in their daily lives.

### **ATA121- Ataturk's Principles And History Of Turkish Revolution II | 2 ECTS**

This course examines Atatürk's principles and reforms and the political developments after the Ataturk with the establishment process of the Republic of Turkey.

### **TURK121- Turkish Language II | 2 ECTS**

Proper use of punctuation marks in writing, development of plain text writing skills, listening and reading skills are taught.

## **3<sup>rd</sup> SEMESTER**

### **ENF211- Electroneurophysiology Practices I | 6 ECTS**

Electroneurophysiological methods and analysis as applied in clinic. Introduction to artificial intelligence and basic concepts. Applications of artificial intelligence. Brain-computer interface (BCI), EEG-based brain-computer inter face systems, P300 speller system, classification of P300 signals. Recent developments in brain-computer inter face studies.

### **ILK111- First Aid | 3 ECTS**

First aid entry and general characteristics, evaluation of basic life function, respiratory and circulatory system, first aid injury, bleeding in first aid, shock and first aid, burns and first aid, poisoning and first aid, fracture-dislocations and sprains first aid, basic life support.

### **ENF213- Neurology II | 5 ECTS**

Episodic epilepsy and other neurological diseases. Radiculopathies, Plexopathies, Polyneuropathies, Entrapment neuropathies, peripheral nerve injury, language disorders, Behavioral Neurology, Muscle Disorders, Sleep Disorders, Demyelinating Diseases, Central Nervous System Infections, walking and posture disorders, visual disorders.

### **ENF214- Cognitive Neurophysiology II | 5 ECTS**

Learning; non-associative Learning, Associative Learning, Neuroplasticity, Long Term Potensitation (LTP), long-term depression (LTD). Memory, Short-Term Memory, Working Memory, Long Term Memory, explicit memory, episodic memory, semantic memory, implicit memory types, amnesia and dementia. Lateralization of brain, neuronal mechanisms of speech, categorization in the brain, the frontal processes, neural systems of emotion neurophysiology of language.

### **SAİ211- Communication In Health | 3 ECTS**

Description, types and techniques of communication in healthcare services are discussed; acquisition and development of inter-personnel communication skill.

### **STS211- Stress Management | 3 ECTS**

Explaining the importance of the human dimension of organizations, the research techniques and tools which are used for the management of human, concepts and measurement methods for the management of human.

### **ENF215- Compulsory Internship | 5 ECTS**

The professional knowledge gained at the school, students will receive internships during the third semester to ensure that they acquire new practical and technical skills, to acquire business skills, and to communicate effectively with other disciplines and administrators.

### **Manifest Of Istinye University I | 1 ECTS**

After graduation of Istinye University students to increase their employability, social and life skills to help them discover and increase their skills. The Manifesto of Istinye University in different categories such as art, sports, career and so on. students participating in the activities are expected to report on the activities they attend. After the evaluation of the report prepared by the student center, the students are counted as past or repeated.

## **4<sup>th</sup> SEMESTER**

### **Electroneurophysiology Practices II | 7 ECTS**

Electroneurophysiological methods and analysis as applied in clinic. Introduction to artificial intelligence and basic concepts. Applications of artificial intelligence. Brain-computer interface (BCI), EEG-based brain-computer interface systems, P300 speller system, classification of P300 signals. Recent developments in brain-computer interface studies.

### **Manifest Of Istinye University II | 1 ECTS**

After graduation of Istinye University students to increase their employability, social and life skills to help them discover and increase their skills. The Manifesto of Istinye University in different categories such as art, sports, career and so on. Students participating in the activities are expected to report on the activities they attend. After the evaluation of the report prepared by the student center, the students are counted as past or repeated.

### **ENF222- Basic Professional Skills | 5 ECTS**

Provide students with a relevant work environment which would enable them to apply the knowledge, skills and competences they acquire during their education and training period into practical life in their field as well as to enhance those skills, competences and knowledge and to gain practical experience in their field of study.

### **ENF223- Functional Neuroimaging Technology | 3 ECTS**

Aims to provide a basic overview of the most commonly utilized techniques in the neurosciences for functional imaging the brain and discuss their applicability.

### **History of Art | 3 ECTS**

What is art?, Style, perception and representation, Periodization of civilization history, Formation and development processes of Turkish art before and after Anatolia, Art-architecture and culture in the first Turkish-Islamic states, Architecture and decoration program of Seljuk and Beylik period The process of formation and development of Turkish art during the period of Early Ottoman, Ottoman and Westernization, Internal and external influences on the formation of Turkish art, Art movements and the effects of these movements on architecture, The development process of Turkish ornamentation and handicrafts.

### **Neurological Equipment Technology | 3 ECTS**

To give information about technology of equipment used in neurological applications

### **EMG And Evoked Potentials | 3 ECTS**

To give information about EMG, SSEP, BAER-BERA-BAEP and VEP and their application.

### **Mental Health In Patients | 4 ECTS**

Basic concepts related to mental health are health, illness, mental health, body image, hope-harmony, self-recognition, behavior, attitude, personality development and personality disorders, culture and psychiatry, death, chronic illness and family, organ donation and psychosocial approaches, psychiatric problems in patients, aims to provide information on home care topics