

**International School of Medicine / Medicine (English)**

**2023 - 2024 Academic Year**

**Introduction to Medical Science**

**Syllabus**

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
Introduction to Medical Science	01. Committee	Fall Semester	82+4	0	6
<b>Prerequisites Courses</b>					
<b>Recommended Elective Courses</b>					
<b>Language of Instruction</b>	English				
<b>Course Level</b>	First Cycle (Bachelor's Degree)				
<b>Course Type</b>	Committee				
<b>Course Coordinator</b>	Assist.Prof. Salih GENCER				
<b>Name of Lecturer(s)</b>	Assist.Prof. Salih GENCER				
<b>Assistant(s)</b>					
<b>Aim</b>	The aim of this committee is to provide physician candidates with basic medical concepts and knowledge in molecular biology, genetics, histology, embryology and organic chemistry at the beginning of medical education and to establish professional awareness and responsibility through education in the field of medicine, history of medicine and philosophy of science.				
<b>Course Content</b>	This course contains; Medical Biology and Genetics: Overview of the fundamental concepts in cell biology and genetics; The chemistry of the cell and biosynthesis, Histology and Embryology: Introduction to histology and embryology; Microscope types; Usage of light microscope; Cell organelles; Nucleus and nucleolus, Organic Chemistry: General chemistry, solutions, concentration units, preparation of solutions, introduction to chemistry laboratory; Chemical equilibrium, stoichiometry, acids-bases, buffer solutions; Atomic structure, electron configurations for atom, quantum numbers and orbitals, chemical bonds; Isomers; Alkenes, reactions of alkenes, reactions of alkynes, Deontology and History of Medicine: What is Medicine? Knowledge of medical management; Definition and importance of deontology and medical ethics; Medical education and its evolution; Methodology and education of medical history; Prehypocratic medicine; Hypocratic medicine; Medieval European medicine; Islamic medicine and famous physicians; Medicine in ancient Turks and Anatolian Seljuks; Renaissance medicine; Medicine in Europe 17th, 18th, 19th centuries; Ottoman medicine; Contemporary scientific medicine; Physician's identity and doctor's oaths; Introduction to the principles of medical ethics; Art, forms of sight and rituals; Basic concepts of law and law-medicine relation; Duties of the physician in Turkish law; Visual culture; The legal responsibility of physicians; Concept of rights; Medical record keeping and its importance, Philosophy of Science and Medicine: Basic problems in philosophy of science and medicine; Science and philosophy relation in antiquity; The relationship between modern view of nature and medical philosophy; Ontology and medicine relation; Epistemology and medicine relation; Ethics and medicine relation, Medical Education and Informatics: Definition of health, its philosophy, types of health care, its relations to individuals and history of health education; Measurement and evaluation of health education and health service, health informatics and its effects in health education and service sector and future of health system; Health economics and health systems, health law, responsibilities of health workers, malpractice and insurance; Health communication, patient rights and rights of health workers; Health informatics and data security, Medicine and Humanities: Health, disease concepts, psychosocial effects of diseases in psychosocial terms; Stepping into the patient role, psychology of being ill, reactions to the illness and acceptance process; Stress, health-disease association, coping with stress and anger; Patient-physician relationship; Managing patient behavior that creates difficulties; Difficulties of the patient's family and approach to the patient's family; The main complementary methods used in medicine; Main artistic applications in medicine.				
<b>Course Learning Outcomes</b>			<b>Teaching Methods</b>	<b>Assessment Methods</b>	
Gain knowledge about the concepts of molecular biology and genetics, and the molecular mechanisms of cellular functioning.			14, 16, 9	A	
Acquire basic knowledge about histology and embryology and gain basic laboratory experience related to these subjects.			14, 16, 17, 9	A, D	
Gains knowledge about developmental stages of medicine and history of medicine, gaining the ability to cope the ethical and legal problems encountered in professional practice with an analytical point of view.			10, 12, 13, 14, 16, 4, 9	A	
Gain knowledge about the definition of health, philosophy, types of health care and its relation to individuals, history of health education, measurement and evaluation in health service, health informatics and its effects on health education and service sector and future of health system, health economics and health systems, health law, malpractice and insurance.			13, 14, 16, 19, 23, 9	E	
Get knowledge about the development stages of science and contributions to medical education.			10, 13, 9	A	
Gains knowledge and skills about psychosocial assessment and psychosocial approaches. Gains awareness of the main complementary methods and artistic practices used in the field of medicine and develops a holistic perspective.			13, 16, 9	A, D	
Gain knowledge about chemical reactions and properties of organic compounds in living organisms.			12, 17, 18, 9	A, D	
<b>Teaching Methods</b>	10: Discussion Method, 12: Problem Solving Method, 13: Case Study Method, 14: Self Study Method, 16: Question - Answer Technique, 17: Experimental Technique, 18: Micro Teaching Technique, 19: Brainstorming Technique, 23: Concept Map Technique, 4: Inquiry-Based Learning, 9: Lecture Method				
<b>Assessment Methods</b>	A: Traditional Written Exam, D: Oral Exam, E: Homework				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	Medical Biology and Genetics: Overview of the fundamental concepts in cell biology and genetics; The chemistry of the cell and biosynthesis				
2	Histology and Embryology: Introduction to histology and embryology; Microscope types; Usage of light microscope; Cell organelles; Nucleus and nucleolus				
3	Organic Chemistry: General chemistry, solutions, concentration units, preparation of solutions, introduction to chemistry laboratory; Chemical equilibrium, stoichiometry, acids-bases, buffer solutions; Atomic structure, electron configurations for atom, quantum numbers and orbitals, chemical bonds; Isomers; Alkenes, reactions of alkenes, reactions of alkynes				
4	Deontology and History of Medicine: What is Medicine? Knowledge of medical management; Definition and importance of deontology and medical ethics; Medical education and its evolution; Methodology and education of medical history; Prehypocratic medicine; Hypocratic medicine; Medieval European medicine; Islamic medicine and famous physicians; Medicine in ancient Turks and Anatolian Seljuks; Renaissance medicine; Medicine in Europe 17th, 18th, 19th centuries; Ottoman medicine; Contemporary scientific medicine; Physician's identity and doctor's oaths; Introduction to the principles of medical ethics; Art, forms of sight and rituals; Basic concepts of law and law-medicine relation; Duties of the physician in Turkish law; Visual culture; The legal responsibility of physicians; Concept of rights; Medical record keeping and its importance				

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Lecture Schedule		
Sequence	Topics	Preliminary Preparation
5	Philosophy of Science and Medicine: Basic problems in philosophy of science and medicine; Science and philosophy relation in antiquity; The relationship between modern view of nature and medical philosophy; Ontology and medicine relation; Epistemology and medicine relation; Ethics and medicine relation	
6	Medical Education and Informatics: Definition of health, its philosophy, types of health care, its relations to individuals and history of health education; Measurement and evaluation of health education and health service, health informatics and its effects in health education and service sector and future of health system; Health economics and health systems, health law, responsibilities of health workers, malpractice and insurance; Health communication, patient rights and rights of health workers; Health informatics and data security	
7	Medicine and Humanities: Health, disease concepts, psychosocial effects of diseases in psychosocial terms; Stepping into the patient role, psychology of being ill, reactions to the illness and acceptance process; Stress, health-disease association, coping with stress and anger; Patient-physician relationship; Managing patient behavior that creates difficulties; Difficulties of the patient's family and approach to the patient's family; The main complementary methods used in medicine; Main artistic applications in medicine	
Evaluation Methods		Weight(%)
Midterm Exam		60
General Exam		40

Resources
1. Alberts et al., "Essential Cell Biology", 4th ed., Garland Science Publishers, 2013 2. Kierzenbaum, "Histology and Cell Biology, An Introduction to Pathology", 3rd ed., Saunders, 2011 3. Sari et al., "Tıp Tarihi ve Tıp Etiği Ders Kitabı", Cerrahpaşa Tıp Fakültesi Yayınları, 2007 4. Singer and Erickson, "A Companion to Medical Anthropology", Wiley-Blackwell, 2011 5. Bruice, "Organic Chemistry", 7th ed., Pearson, 2013 Course notes, presentations of lecturer, open online courses on Coursera and EdX