

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

**2023 - 2024 Academic Year**

**Biological Regulation**

**Syllabus**

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
Biological Regulation	04. Committee	Spring Semester	71+26	0	7
<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>	Assoc.Prof. Nihal KARAKAŞ				
<b>Name of Lecturer(s)</b>	Assoc.Prof. Nihal KARAKAŞ				
<b>Assistant(s)</b>	Arş. Gör. Alpen ORTUĞ, Arş. Gör. İlyas ÖZÇİÇEK, Arş. Gör. Feyza BAYRAMOĞLU, Arş. Gör. Duygu GÜRSOY				
<b>Aim</b>	To have a general knowledge about the tissues forming organisms, basic organic substances related with function of the organism, cell aging, stem cell concept and locomotor system anatomy (bones-joints)				
<b>Course Content</b>	This course contains; MEDICAL BIOLOGY AND GENETICS: Basic structure and functions of proteins, Genetic material of cells: DNA, chromosomes and genomes, DNA replication, repair and recombination, DNA genetic information from DNA, control mechanisms of gene expression, Epigenetics, HISTOLOGY AND EMBRYOLOGY: Introduction to microscopy and microscopy, Microscopy and Microscopy techniques, General embryology Introduction and terminology, tissue types, muscle types, BIOCHEMISTRY: Molecular meaning of life, Lipids, fats, hormones and structure, signal transduction, mechanism of action of hormones, structure and classification of proteins, protein analysis mechanism, nutrition biochemistry, body fluids, ANATOMY: Anatomiye giriş ve genel kavramlar, üst ekstremitte kemikleri ve eklemleri, alt ekstremitte kemikleri ve eklemleri, columna vertebralis ve eklemleri, cranium kemikleri ve eklemleri, mimik kaslar, BASIC STATISTICS: Introduction to statistics, relation with medicine, data, information, variable concepts and types, summarizing methods of data: central and prevalence measures of distributions, data presentation methods: tables and graphs, probability concept, probability rules, probability distributions, sampling methods, sample size calculations, correlation and regression analysis, introduction to materiality tests.				
<b>Course Learning Outcomes</b>			<b>Teaching Methods</b>	<b>Assessment Methods</b>	
			14, 16, 17, 9	A, D	
			12, 13, 9	A, E	
			14, 17, 9	A, H	
			17, 6, 9	A, D	
<b>Teaching Methods</b>	12: Problem Solving Method, 13: Case Study Method, 14: Self Study Method, 16: Question - Answer Technique, 17: Experimental Technique, 6: Experiential Learning, 9: Lecture Method				
<b>Assessment Methods</b>	A: Traditional Written Exam, D: Oral Exam, E: Homework, H: Performance Task				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	MEDICAL BIOLOGY AND GENETICS: Basic structure and functions of proteins, Genetic material of cells: DNA, chromosomes and genomes, DNA replication, repair and recombination, DNA genetic information from DNA, control mechanisms of gene expression, Epigenetics				
2	HISTOLOGY AND EMBRYOLOGY: Introduction to microscopy and microscopy, Microscopy and Microscopy techniques, General embryology Introduction and terminology, tissue types, muscle types				
3	BIOCHEMISTRY: Molecular meaning of life, Lipids, fats, hormones and structure, signal transduction, mechanism of action of hormones, structure and classification of proteins, protein analysis mechanism, nutrition biochemistry, body fluids,				
4	ANATOMY: Anatomiye giriş ve genel kavramlar, üst ekstremitte kemikleri ve eklemleri, alt ekstremitte kemikleri ve eklemleri, columna vertebralis ve eklemleri, cranium kemikleri ve eklemleri, mimik kaslar				
5	BASIC STATISTICS: Introduction to statistics, relation with medicine, data, information, variable concepts and types, summarizing methods of data: central and prevalence measures of distributions, data presentation methods: tables and graphs, probability concept, probability rules, probability distributions, sampling methods, sample size calculations, correlation and regression analysis, introduction to materiality tests				
<b>Evaluation Methods</b>		<b>Weight(%)</b>			
Midterm Exam		60			
General Exam		40			

Resources	
Kierzenbaum A.L., Histology and Cell Biology, An Introduction to Pathology, Third ed. SAUNDERS. Gartner L.P., Hiatt J.L.: Color Text Book of Histology. Second ed. SAUNDERS. Moore K.M., Persaud T.V.N. Çev. Ed: Yıldırım M., Okar İ., Dağlık H. Klinik Yönleri ile İnsan Embriyolojisi. 6. Ed. NOBEL TIP Sadler T.W: Langman's Medical Embryology, Eleventh Edition. Lippincott Williams & Wilkins, USA Schoenwolf G.C.: Larsen's Human Embryology. 4. Ed. CHURCHILL LIVINGSTONE ELSEVIER	
1.Experimental Biochemistry for Medical Sciences (Türkan Yiğitbaşı,S.Sibel Erdem,Perinur Bozaykut, Nesrin Emekli), 2.Lippincott Biochemistry, 3.Harper's Biochemistry, 4.Lehninger Principles of Biochemistry, 5.Henry's Clinical Diagnosis and Management by Laboratory Methods.	
Moore, Keith L., Arthur F. Dalley, and Anne MR Agur. Clinically oriented anatomy. Lippincott Williams & Wilkins, 2013.	
1."Sağlık bilimlerinde araştırma ve istatistik yöntemler" Osman Hayran, Hanefi Özbek, Nobel Tıp Kitabevleri, 2017, İstanbul, Türkiye. 2."Epidemiology: Principles and Practical Guidelines" Jan Van den Broeck, Jonathan R. Brestoff, Eds., 2013, Springer. 3."Essentials evidence-based medicine" Mayer D. 2nd edition, 2010, Cambridge University Press. 4."Measurement in Medicine:A Practical Guide" Henrica C. W. de Vet, Caroline B. Terwee, Lidwine B. Mokkink, Dirk L. Knol, 2011,Cambridge University Press. 5."Understanding Biostatistics" First Edition. Anders K., 2011, John Wiley & Sons. 6."The essentials of biostatistics for physicians, nurses, and clinicians" Michael R. Chernick, 2011 by John Wiley & Sons.	