YÜKSEK İHTİSAS UNIVERSITY

SCHOOL OF MEDICINE

ENGLISH PROGRAM

PHASE – I

2025 – 2026 EDUCATION

TRAINING GUIDE

Hazırlayan	Kontrol Eden	Onaylayan
TIP Fakültesi Birim Kalite Komisyonu	Fakülte Sekreteri (Dr. Öğretim Üyesi Görkem CENGİZ)	Kalite Koordinatörlüğü

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

PREGRADUATE MEDICAL EDUCATION COORDINATION

Hazırlayan	Kontrol Eden	Onaylayan
TIP Fakültesi Birim Kalite Komisyonu	**Fakülte Sekreteri (Dr. Öğretim Üyesi Görkem CENGİZ)**	**Kalite Koordinatörlüğü**

CHIEF COORDINATION OFFICE	
Chief Coordinator (Phase 1-2-3)	Prof. Dr. Ayla Kürkçüoğlu
Chief Coordinator (Phase 4-5-6)	Prof. Dr. Mutlu ACAR
Vice Chief Coordinator	Dr. Öğr. Üyesi Ülker ÇUHACI
PHASE I COORDINATORSHIP	
Coordinator (Turkish)	Dr. Öğr. Üyesi Müge ÖÇAL DEMİRTAŞ
Coordinator (English)	Dr. Öğr. Üyesi Pınar ŞAHİN
Vice Coordinator (Turkish)	Arş. Gör. Mehmet Can EBİNÇLİ
Vice Coordinator (English)	Arş. Gör. Pınar TARIKAHYA
PHASE II COORDINATORSHIP	
Coordinator (Turkish)	Dr. Öğr. Üyesi Aslıhan Esra BİÇER
Coordinator (English)	Doç. Dr. Çiğdem ÇİÇEK
Vice Coordinator (Turkish)	Arş. Gör. Özgenur KOÇAK
Vice Coordinator (English)	Arş. Gör. İlayda NUMANOĞLU
PHASE III COORDINATORSHIP	
Coordinator (Turkish)	Doç. Dr. Gamze ÖZBEK GÜVEN
Coordinator (English)	Dr. Öğr. Üyesi Burcu BABA
Vice Coordinator (Turkish)	Arş. Gör. Katre Cemre ÖZDEMİR
Vice Coordinator (English)	Arş. Gör. Rabia Şeyma Nur TAŞDEMİR
PHASE IV COORDINATORSHIP	
Coordinator	Doç. Dr. Fatih YIĞMAN
PHASE V COORDINATORSHIP	
Coordinator	Doç. Dr. Mustafa AKKAYA
PHASE VI COORDINATORSHIP	
Coordinator	Prof. Dr. Fatma Nurhayat SAYDAM

YÜKSEK İHTİSAS ÜNİVERSİTESİ
TIP FAKÜLTESİ
DÖNEM-1 İNGİLİZCE
EĞİTİM-ÖĞRETİM REHBERİ
T.C.

YÜKSEK İHTİSAS UNIVERSITY

MEDICAL FACULTY ENGLISH PROGRAMME

PHASE I COURSES ve ECTSs

CODE	COMPULSORY COURSES	T	U	L	ECTS
MED 1000	Anatomy	76	18	94	
	Biophysics	34	-	34	
	Physiology	28	8	36	
	Public Health	15	-	15	
	Histology and Embryology	32	7	39	
	Medical Biochemistry	46	10	56	
	Medical Biology	40	2	42	
	Medical Microbiology	21	7	28	
	Medical History and Ethics	12	-	12	
TOTAL ECTS TO BE TAKEN AS A COMPULSORY COURSE		**304**	**52**	**356**	**42**
CODE	**ADAPTATION to MEDICINE COURSE**	**T**	**U**	**L**	**ECTS**
MED 1001	Behavioural Sciences	8	-	8	
	Critical Thinking and Art	7	-	7	
	Communication Skills	2	-	2	
	Clinical Skills Training	-	3	3	
	Human Sciences in Medicine	4	-	4	

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

TOTAL ECTS TO BE TAKEN AS A ADAPTATION to MEDICINE COURSE		**21**	**3**	**24**	**1**
CODE	**EVIDENCE BASED MEDICINE COMMITTEE**	**T**	**U**	**L**	**ECTS**
MED 1002	Evidence Based Medicine	3	-	3	
	Biostatistics	10	-	10	
TOTAL ECTS TO BE TAKEN AS A EVIDENCE BASED MEDICINE COURSE		**13**	**-**	**13**	**1**
CODE	**COMMON COMPULSORY COURSES**	**T**	**U**	**L**	**ECTS**
MED TUR 101	Turkish Language-I	4	-	4	2
MED TUR 102	Turkish Language-I	4	-	4	2
MED HIS 101	Ataturk's Principles and History of Revolution-II	2	-	2	2
MED HIS 102	Ataturk's Principles and History of Revolution-II	2	-	2	2
MED ING 101	English Language-I	4	-	4	2
MED ING 102	English Language-II	4	-	4	2
TOTAL ECTS TO BE TAKEN AS A COMMON COMPULSORY COURSE					**12**
CODE	**ELECTIVE COURSES**	**T**	**U**	**L**	**ECTS**
MEDELEC 107	Advanced Medical Law	2	0	2	2
MEDELEC 109	Literature and Medicine I	2	0	2	2
MEDELEC 2601	Speaking for Medical Students	2	0	2	2
MEDELEC 2602	Health Physics	2	0	2	2
MEDELEC 101-2	Stem Cell Biology	2	0	2	2
MEDELEC 103-2	Chemical Mechanisms of Cancer	2	0	2	2
MEDELEC 2608	Sensor Technologies in Medicine	2	0	2	2
TOTAL ECTS TO BE TAKEN AS AN ELECTIVE COURSE					**4**

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

TOTAL ECTS TO BE TAKEN IN YEAR I	**60**

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

PHASE I LEARNING AIM AND OBJECTIVES

Aim:

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

By the end of this term, students are expected to adapt to medical education and faculty life; understand the physical, chemical, and biological properties of the molecules that constitute life; comprehend the transmission of genetic information and the integrity of cellular structures and functions; learn the basic anatomical and histological structures of the human body; grasp the fundamental mechanisms of developmental processes, the musculoskeletal system, and biological functions; and gain basic awareness of the concepts of health, disease, and public health.

Learning Objectıves:

Knowledge

1. Explains the structural and bonding properties of atoms, molecules, and biological macromolecules.
2. Relates the principles of water, ions, buffer systems, and energy transformation to biological systems.
3. Defines the structures, functions, and metabolic roles of carbohydrates, lipids, proteins, nucleic acids, and vitamins.
4. Explains the characteristics, classification, and factors affecting enzyme activity.
5. Describes the basic structures of cells, their organelles, and membrane systems.
6. Explains the mechanisms of substance transport across the cell membrane, receptors, signal transduction, and intercellular communication.
7. Explains the processes and biological significance of the cell cycle, mitosis, meiosis, and apoptosis.
8. Describes the types, functions, and medical significance of stem cells.
9. Explains the types of tissues (epithelial, connective, muscle, and nerve) in terms of their structure, function, and differences.
10. Explains the biochemical properties and metabolism of bone, cartilage, and muscle tissues.
11. Identifies the bones, joints, and muscle attachments of the skeletal system.
12. Explains the functional relationship between the nervous system, muscles, and skeleton.
13. Defines the concept of homeostasis at the cellular, tissue, and organ levels.
14. Explains the processes of physiological excitation, action potential, muscle contraction, and nerve transmission.
15. Defines the basic concepts of microbiology, the classification of microorganisms, and their growth conditions.
16. Explains the principles of sterilization, disinfection, and antisepsis.
17. Summarizes the mechanisms of action and resistance of antimicrobial agents.
18. Explains the basic concepts of public health, the levels of preventive health services, and the importance of community health.
19. Defines the concepts of health, disease, equity, and justice.
20. Explains the historical development of medicine, the milestones of Islamic and Western medicine, and the evolution of medicine from Hippocrates to the present day.
21. Explains the biological effects of ionizing and non-ionizing radiation.
22. Defines the principles of the use of electromagnetic waves, ultrasound, and lasers in medicine.

Skills

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

23. Sets up and uses the microscope correctly and distinguishes the basic characteristics of tissues.
24. Identifies and interprets cell and tissue samples under a light microscope.
25. Prepares solutions and buffers, measures pH, performs spectrophotometric measurements, and determines protein content.
26. Performs the basic steps of DNA isolation and PCR applications.
27. Uses laboratory instruments such as micropipettes, centrifuges, and vortex mixers correctly.
28. Follows sterile working principles in the microbiology laboratory.
29. Identifies bones, muscles, and joints on models or cadavers and demonstrates their locations.
30. Relates physiological processes (e.g., muscle contraction, osmotic balance, reflexes) to experimental observations.

Attitude

31. Behaves carefully, attentively, and ethically in laboratory and cadaver studies.
32. Works collaboratively within a team, with a sense of sharing and responsibility.
33. Adopts the physician's role in protecting and promoting public health.
34. Takes responsibility for their own learning process and performs self-assessment.
35. Develops awareness of environmental and human health and a sense of sustainability.
36. Internalizes the foundations of a professional identity specific to the medical profession.

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

PHASE I – COMMITTEE I

COURSE CODE: MED 1010

LECTURE CODE	LECTURE NAME		THEORETICAL LECTURE HOUR	PRACTICAL LECTURE HOUR	TOTAL LECTURE HOUR
MED 1010	Coordinatorship Lecturers	Committee Exam Discussion Hour	1	0	1
		Committee Introduction Hour	1	0	1
	Biophysics		15	-	15
	Public Health		3	-	3
	Medical Biochemistry		14	4	18
	Medical History and Ethics		12	-	12
	TOTAL		**44**	**4**	**48**

COMMITTEE AIMS and LEARNING OBJECTIVES

AIM:

At the end of this committee, it is aimed that students adapt to the medical faculty, gain knowledge about the physical and chemical structure of molecules, understand the concepts of health and disease as well as the importance of public health, and learn about the historical development of medical science.

LEARNING OBJECTIVES:

1. Understands the place and importance of Biophysics among the basic sciences, recognising the laws of physics that can be applied to living organisms using a systems approach
2. Explains the mechanical properties of biological materials using fundamental laws of physics

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

3. Understands the biophysical topics that may be encountered in the basic sciences throughout medical school education, and explains the electrical concepts that may be encountered in clinical sciences using electrical laws
4. Recognises circuit elements used in patient monitoring
5. Knows controlled electrical current applications to biological systems and the physiological effects electrical current creates in organisms
6. Explains the basic principles and medium properties of electrophoresis, a method with a wide range of applications in medicine
7. Knows the interactions between molecules and atoms and the physical principles of bonds
8. Explains the behaviour of ions in aqueous solutions and the fundamental physical principles of their interactions with water molecules
9. Knows the physical properties of water molecules and their role in nature and human life
10. Explains energy requirements in humans and the heat transfer mechanisms involved in regulating body temperature
11. Knows and explains different definitions of health.
12. Explains the concept of disease.
13. Explains the public health approach and its basic concepts.
14. Lists and defines the fundamental principles of public health.
15. Lists the five categories of preventive health services and explains them when asked.
16. Lists the categories and functions of curative (therapeutic) services.
17. Defines and explains medical and social rehabilitation.
18. Explains the concepts of equity and equality in health services and their differences.
19. Explains/shows the place of public health within other branches of medicine.
20. Explains, adopts, and advocates the public health perspective.
21. Explains the basic concepts of medical biochemistry and its importance in the field of medicine.
22. Identifies the structures of aliphatic, aromatic, alicyclic, and heterocyclic compounds and explains their medical applications.
23. Describes the properties of water and biological fluids, hydrogen bonding, and the concept of pH.
24. Performs basic biochemical calculations.
25. Defines the concept of buffer solutions and explains their role in biological systems.
26. Describes the principles of bioenergetics and explains the role of ATP in energy metabolism.
27. Lists the basic laboratory equipment used in biochemistry laboratories and explains their functions.
28. Prepares solutions of varying concentrations in a laboratory setting.
29. Prepares buffer solutions using appropriate laboratory techniques.
30. Lists the main periods of medical history.
31. Defines the methods used in medical history research.
32. Relates medical history data to modern medical practices.
33. Classifies medical history sources chronologically and thematically.
34. Enumerates the historical changes in the concept of medicine.
35. Lists diseases and treatment methods in primitive societies.
36. Provides examples of shamanism and religious practices in medicine.
37. Lists medical practices and healthcare institutions in ancient civilizations.
38. Lists the main treatment methods used in ancient civilizations.
39. Relates religious and cultural influences to treatment methods.
40. Lists Hippocrates' contributions and the main features of rational medicine.
41. Defines the theory of four elements and four humors.
42. Explains the historical importance of the Hippocratic Oath.

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

43. Lists the influence of the Church on medieval medicine.
44. Explains the reflections of scholastic thought on medicine.
45. Enumerates the developments in anatomy and physiology during the Renaissance.
46. Lists the contributions of the Scientific Revolution to medicine.
47. Explains the emergence of modern anatomy, physiology, and microbiology.
48. Explains the impact of the Scientific Revolution on modern medical practices.
49. Lists the important figures and works in the development of medicine in the Islamic world.
50. Explains the role of Bayt al-Hikma and madrasas in medicine.
51. Lists the main methods and treatment approaches in Islamic medicine.
52. Lists healthcare institutions and structures in the Seljuk period.
53. Defines the concepts of darüşşifa and bimarhane.
54. Lists the main treatment methods used in Seljuk medicine.
55. Explains the contributions of Seljuk physicians to the scientific world.
56. Lists the structure and functioning of Ottoman healthcare institutions.
57. Explains the duties of the Chief Physician (hekimbaşı).
58. Enumerates surgical, pharmaceutical, and folk medicine practices in the Ottoman period.
59. Defines the system of medical education and training in the Ottoman era.
60. Explains the interaction between Ottoman medicine and Western medicine.
61. Lists the health reforms during the Republican period.
62. Explains the establishment and development of modern medical schools.

TOPICS

BIOPHYSICS			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Interdisiplinary Sciences, Biophysics and Living Organisms	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Fundamental Laws of Mechanics and Mechanical Properties of Biological Structures	Theoretical	2	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Fundamental Electrical Laws and Electrical Properties of Biological Structures	Theoretical	3	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Measurement and Observation of Biological Signals: Transducers	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Electric Current Applications to Biological Systems	Theoretical	2	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Electrophoresis	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr
yiu@yiu.edu.tr

Telefon : 0312 329 10 10
İnternet Adresi :
E-posta :

Intramolecular and Intermolecular Forces	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Behavior of Ions in Aqueous Solution	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Biophysical Properties of Water and Their Importance for Organisms	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Energy Transformations in Biological Systems: Fundamental Laws of Thermodynamics	Theoretical	2	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
PUBLIC HEALTH			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Public Health Approach	Theoretical	1	Dr. Yavuzalp SOLAK
Health and Disease	Theoretical	1	Dr. Yavuzalp SOLAK
Health Promotion and Prevention	Theoretical	1	Dr. Yavuzalp SOLAK
MEDICAL BIOCHEMISTRY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Introduction to Biochemistry	Theoretical	1	Prof. Dr. Kadirhan SUNGUROĞLU
Basic Biochemical Concepts	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Aliphatic Organic Compounds	Theoretical	2	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Aromatic, Alicyclic and Heterocyclic Compounds and Their Medicinal Aspects	Theoretical	2	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Basic Calculations in Biochemistry	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Solution Preparation and Concentration Calculations	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Lab I- Solution Preparation	Practical	2	Department Lecturers
Structure and Biological Functions of Water and pH	Theoretical	2	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Buffer Solution Preparation	Theoretical	2	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Lab II- pH Measurement and Buffer Solution Preparation	Practical	2	Department Lecturers
Laboratory Measurement Methods	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

Bioenergetics and ATP	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
MEDICAL HISTORY nad ETHICS			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
History of Medicine and Medical History Methodology	Theoretical	1	Assoc. Prof. Dr. Vedat YILDIRIM
Concepts of Medicine and Medicine in Primitive Societies	Theoretical	1	Assoc. Prof. Dr. Vedat YILDIRIM
Medicine in the First Civilizations	Theoretical	2	Assoc. Prof. Dr. Vedat YILDIRIM
Hippocrates and the Birth of Rational Medicine	Theoretical	1	Assoc. Prof. Dr. Vedat YILDIRIM
Medieval and Renaissance Medicine in Europe	Theoretical	1	Assoc. Prof. Dr. Vedat YILDIRIM
Scientific Medicine from the Scientific Revolution and the Age of Enlightenment to the Present	Theoretical	1	Assoc. Prof. Dr. Vedat YILDIRIM
Medicine in the Islamic World	Theoretical	1	Assoc. Prof. Dr. Vedat YILDIRIM
Seljuk Medicine	Theoretical	1	Assoc. Prof. Dr. Vedat YILDIRIM
Ottoman Period Medicine	Theoretical	1	Assoc. Prof. Dr. Vedat YILDIRIM
Medicine in the Republican Era	Theoretical	1	Assoc. Prof. Dr. Vedat YILDIRIM

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

FROM MOLECULE to CELL COMMITTEE

Phase 1 – COMMITTEE II

COURSE CODE: MED 1020

LECTURE CODE	LECTURE NAME		THEORETICAL LECTURE HOUR	PRACTICAL LECTURE HOUR	TOTAL LECTURE HOUR
MED 1020	Coordinatorship Lecturers	Committee Exam Discussion Hour	1	0	1
		Committee Introduction Hour	1	0	1
		Meeting with Dean	1	0	1
	Public Health		8	-	8
	Medical Biochemistry		24	6	30
	Medical Biology		18	2	20
	TOTAL		**50**	**8**	**58**

COMMITTEE AIMS and LEARNING OBJECTIVES

AIM:

At the end of this committee, students are expected to learn the basic chemical structure and properties of biological molecules, understand the fundamental molecular mechanisms responsible for the transmission and regulation of genetic information and their integration in cellular functioning, comprehend the physical basis of molecular interactions and biological processes, improve their social communication skills, and learn about basic public health issues.

LEARNING OBJECTIVES:

1. Explains the meaning of normal and abnormal.
2. Lists the vital signs.
3. Lists the physical (objective) findings of illness.
4. Lists the subjective (patient's feeling) findings of illness.

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

5. Lists and explains the physical examination findings.
6. Lists the effects of migration on public health and explains their causes.
7. Explains the relationship between regular urbanization and health.
8. Lists and explains the relationship between irregular urbanization and health.
9. Explains the importance and functions of water for living beings and human health.
10. Lists the sources of drinking and utility water.
11. Explains the current status and future of drinking and utility water in the world.
12. Explains the current status and future of drinking and utility water in Türkiye.
13. Explains the relationship between individual behaviors and health.
14. Explains the relationship between social behavior patterns and health.
15. Lists positive and negative personal behaviors for health.
16. Lists positive and negative social behaviors for health.
17. Lists and explains the causes of climate change and crisis.
18. Lists the effects of climate change and crisis on work and public health.
19. Explains the United Nations' methods and programs for combating the climate crisis.
20. Demonstrates the statistical meaning of normal and abnormal using the bell curve.
21. Adopts and advocates the importance of adequate and clean water for health.
22. Adopts the importance of protecting water resources.
23. Adopts and advocates the importance of protecting drinking and utility water sources.
24. Adopts and advocates the importance of water conservation.
25. Explains the relationship between individual behaviors and health.
26. Explains the relationship between social behavior patterns and health.
27. Lists positive and negative personal behaviors for health.
28. Lists positive and negative social behaviors for health.
29. Values and advocates the relationship between behaviors and health.
30. Believes in and advocates the importance of combating the climate crisis.
31. Explains the biochemical functions of cellular organelles.
32. Describes the structures, functions, and biological significance of nucleic acids.
33. Explains the structures, classifications, and properties of amino acids, peptides, and proteins.
34. Explains the properties and classifications of enzymes, and the factors affecting enzyme activity.
35. Identifies the structures of carbohydrates, lipids, and vitamins; classifies them and explains their biological roles.
36. Measures the absorbance of samples using a spectrophotometer and calculates the results using a standard curve.
37. Determines the protein concentration in an unknown sample using an appropriate protein assay method.
38. Performs appropriate chemical tests for carbohydrate detection and identifies the type of carbohydrate.Hayatın orijini ile ilgili temel teorileri açıklar.
39. Explain the fundamental theories related to the origin of life.
40. Describe the structure of DNA, its role as the molecule of heredity, and its synthesis mechanism.
41. Explain the types of mutations and DNA repair mechanisms.
42. List the structure, types, and functions of RNA.
43. Define the mechanisms of RNA and protein synthesis.
44. Explain the mechanisms of gene expression regulation and epigenetic modifications.
45. Describe fundamental molecular biology techniques.
46. Use basic laboratory instruments such as micropipettes, centrifuges, and vortex mixers.
47. Perform the steps of DNA isolation in a laboratory setting.
48. PerformthePCRtechnique.

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta : yiu@yiu.edu.tr

49. Explainthebridgingroleofmolecularbiologyknowledgebetweenbasicsciencesandclinical sciences.
50. Apply molecular biology knowledge to understand and interpret new developments in the field of health sciences.
51. Actinaccordancewithbiosafetyrulesandlaboratorydiscipline.

TOPICS

PUBLIC HEALTH			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Disease Indicators	Theoretical	1	Dr. Kamer KALIP
Migration, Urbanization, Globalization and Health	Theoretical	1	Dr. Kamer KALIP
Environment and Health	Theoretical	1	Dr. Yavuzalp SOLAK
Water and Health	Theoretical	1	Dr. Kamer KALIP
Health Related Behaviours	Theoretical	1	Dr. Kamer KALIP
Global Climate Crisis and Health	Theoretical	1	Dr. Yavuzalp SOLAK
Home Accidents	Theoretical	1	Dr. Yavuzalp SOLAK
Women and Health	Theoretical	1	Dr. Yavuzalp SOLAK
MEDICAL BIOCHEMISTRY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Biochemical Importance of Cell Organelles	Theoretical	2	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Structures and Functions of Nucleotides and Nucleic Acids	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Structure, Classification and Chemical Reactions of Amino Acids	Theoretical	2	Assoc. Prof. Dr. Çiğdem ÇİÇEK

Peptides and Oligopeptides	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Structures, Properties and Classifications of Proteins	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Proteolysis and Protein Turnover	Theoretical	1	Prof. Dr. Simin ROTA
Lab I- Spectrophotometric Measurement	Practical	2	Department Lecturers
Lab II- Protein Measurement	Practical	2	Department Lecturers
Enzymes and Their Properties and Classifications	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Factors Affecting Enzyme Activity	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Enzyme Kinetics	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Regulation of Enzyme Activity	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Carbohydrates, Monosaccharides and Their Chemical Properties	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Disaccharides and Oligosaccharides	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Polysaccharides	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Glycoproteins	Theoretical	1	Assoc. Prof. Dr. Çiğdem ÇİÇEK
Lab III- Carbohydrate Experiments	Practical	2	Department Lecturers
Lipids and Their Classifications	Theoretical	1	Prof. Dr. Ayşegül AKBAY
Classification and Properties of Fatty Acids	Theoretical	1	Prof. Dr. Ayşegül AKBAY
Triglycerides, Phospholipids, Glycolipids - I	Theoretical	2	Prof. Dr. Ayşegül AKBAY

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

Structural Properties and Classification of Lipoproteins	Theoretical	1	Prof. Dr. Ayşegül AKBAY
Steroid Molecules	Theoretical	1	Prof. Dr. Ayşegül AKBAY
Vitamins and Their Classifications and Properties	Theoretical	2	Assoc. Prof. Dr. Çiğdem ÇİÇEK
MEDICAL BIOLOGY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
The Origin of Life	Theoretical	1	Dr. İsmail Musab Gülaçar
Nucleic Acids: DNA and Its Structure	Theoretical	1	Dr. İsmail Musab Gülaçar
DNA as a Molecule of Inheritance	Theoretical	1	Dr. İsmail Musab Gülaçar
DNA Replication	Theoretical	2	Dr. İsmail Musab Gülaçar
Chromatin Structure and Packaging of DNA	Theoretical	1	Dr. İsmail Musab Gülaçar
Mutations and DNA Repair Mechanisms	Theoretical	3	Dr. İsmail Musab Gülaçar
Nucleic Acids: RNA Structure and Types	Theoretical	2	Dr. İsmail Musab Gülaçar
Transcription	Theoretical	1	Dr. İsmail Musab Gülaçar
Translation	Theoretical	1	Dr. İsmail Musab Gülaçar
Control of Gene Expression and Epigenetics	Theoretical	2	Dr. İsmail Musab Gülaçar
Molecular Biological Methods	Theoretical	3	Dr. İsmail Musab Gülaçar
LAB: DNA Isolation and PCR (3 group)	Practical	2	Department Lecturers

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

CELL SCIENCES COMMITTEE

Phase I – Committee III

COUSE CODE : MED 1030

LECTURE CODE	LECTURE NAME		THEORETICAL LECTURE HOUR	PRACTICAL LECTURE HOUR	TOTAL LECTURE HOUR
MED 1030	Coordinatorship Lecturers	Committee Exam Discussion Hour	1	0	1
		Committee Introduction Hour	1	0	1
	Biophysics		9	-	9
	Physiology		12	2	14
	Public Health		4	-	4
	Medical Biochemistry		2	-	2
	Medical Biology		22	-	22
	Medical Microbiology		21	7	28
	TOTAL		**70**	**9**	**79**

COMMITTEE AIMS and LEARNING OBJECTIVES

AIM:

At the end of this committee, students are expected to learn the biological characteristics and functions of cell structures, understand the physical and physiological mechanisms of substance transport across the cell membrane, comprehend the structural features of microorganisms and their interactions with the host, and gain awareness about the protection of public health.

LEARNING OBJECTIVES:

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

1. Explains the formation of biological macromolecules that constitute the cell membrane, their electrical behaviour, and the physical principles of their interaction with each other.
2. Explains the conditions under which potentials at the membrane potential level can be obtained and the potential differences that arise in tissues.
3. Explains the electrical circuit and circuit elements that represent the electrical behaviour of the membrane and the electrical properties of the cell.
4. Explains the potentials arising from ion concentration differences and the electrical properties of the membrane using different modelling approaches.
5. Explains the observation of ion currents through channels by means of the membrane potential locking onto a fixed value.
6. Explains the electrical activity of excitable cells and the formation of action potentials using electrical concepts.
7. Explains the basic structure and physiological functions of the cell.
8. Defines the structure and functions of the cell membrane.
9. Explains the pathways of substance transport across the cell membrane (diffusion, osmosis, transport).
10. Distinguishes passive and active transport mechanisms and provides examples.
11. Defines the pathways of intercellular communication (receptors, ligands, signal transduction)
12. Explains the types of receptors (ion channel–linked, G protein–coupled, tyrosine kinase, etc.) and their effects.
13. Defines the concept of homeostasis and explains it with examples.
14. Defines body fluid compartments (ICF, ECF) and their compositional differences.
15. Explains the generation of the cell membrane potential and the resting potential.
16. Explains the concept of the action potential and its basic phases.
17. Classifies the pathways of membrane transport using a table or diagram.
18. Represents the distribution of body fluid compartments graphically.
19. Draws the phases of the action potential in a diagram and indicates ion movements.
20. Explains the key determinants of membrane potential (Na^+/K^+ ATPase pump, ion channels, etc.).
21. Associates different modes of membrane transport with corresponding cellular processes.
22. Describes molecular mechanisms of cellular signaling pathways using illustrative examples.
23. Develops scientific curiosity regarding the physiological functions of the cell.
24. Seeks to understand the effects of cellular-level processes on systemic health.
25. Positions acquired knowledge of cell physiology as a foundation for future learning in tissue and systems physiology.
26. Acts carefully, diligently, and ethically in theoretical and laboratory studies.
27. Develops an attitude that values scientific explanation and causality.
28. Takes responsibility in group work and contributes to creating a collaborative and respectful learning environment.
29. Lists the main hazards to the health of healthcare workers.
30. Lists the tools used by healthcare workers to protect their own health.
31. Adopts the importance of healthcare workers protecting their own health.
32. Compares the basic properties of intracellular and extracellular fluids.
33. Explains the distribution and functions of electrolytes (Na^+, K^+, Cl^-, Ca^+, etc.) in the body.
34. Explain the basic structures and differences between prokaryotic and eukaryotic cells.
35. Define the structures and functions of cell organelles.
36. Explain the molecular structure, organization, and transport mechanisms of the cell membrane.
37. Describethecomponentsofthecytoskeletalsystemandtheirrolesincellmovement.
38. Define the interactions of cells with each other and with the extracellular matrix.
39. Explain intracellular signaling pathways and their key molecules.

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

40. Summarizethecellcycleanditsregulatorymechanisms.
41. Describe the stages and biological significance of cell division (mitosis and meiosis).
42. Explainapoptosisandothermechanismsofcelldeathwiththeirdifferences.
43. Explain the types of stem cells and their fundamental biological characteristics.
44. Describe cellular and molecular changes in cancer biology.
45. Explainthefundamentalimportanceofcellbiologyknowledgeforlifesciencesandmedicine.
46. Explain the role of cellular structural alterations in the mechanisms of disease.
47. Explain the structure, permeability, and metabolic functions of the bacterial cell membrane.
48. Define prokaryotic ribosomes and the basics of protein synthesis.
49. Summarize microbial energy production mechanisms (fermentation, aerobic/anaerobic respiration).
50. Recognize basic information about intracellular parasites (e.g., viruses, chlamydiae, rickettsiae).
51. Explain microbial growth curve and replication dynamics.
52. Evaluate microbial growth conditions (temperature, pH, oxygen, nutrient requirements).
53. Differentiate cellular features of various microorganisms.
54. Interpret schematic representations of microbial cell structures.
55. Correlate microbial growth and replication concepts with basic clinical examples.
56. Appreciate the clinical impact of microbial cellular processes.
57. Value scientific observation and analytical thinking.
58. Develop a respectful and curious attitude towards microbial diversity.
59. Show willingness to link cellular-level knowledge to clinical microbiology in future practice.

TOPICS

BİOPHYSICS			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Molecular Organization and Biophysical Properties of the Cell Membrane	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Cause of Biological Potential Difference: Asymmetry	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Electrical Properties of Membrane and Cell, Equivalent Circuit Models	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Electrical Activity of the Cell Membrane: Nernst, Goldman-Hodgkin Katz and Hudgkin Huxley Modeling	Theoretical	2	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Active behavior of the cell membrane- Voltage-clamp technique	Theoretical	2	Asst. Prof. Dr. Şerife Cankurtaran SAYAR

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

Action Potential Generation in Excitable Cells, Passive Membrane Model and Cable Theory	Theoretical	2	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
PHYSIOLOGY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Introduction to Physiology	Theoretical	1	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Body Fluids	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Homeostasis	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Cell and Functional Structure	Theoretical	1	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Material Transport in the Cell Membrane	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Membrane potential	Theoretical	1	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Action Potentials	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Signal transduction in the cells	Theoretical	1	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
LAB: Osmotic Fragility, Hemolysis Tests	Practical	2	Department Lecturers
PUBLIC HEALTH			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Child and Health	Theoretical	1	Dr. Yavuzalp SOLAK
Vulnerable Groups (Disabled, Refugee, Child, Pregnant, Elderly)	Theoretical	1	Dr. Yavuzalp SOLAK
Tobacco Control	Theoretical	1	Dr. Yavuzalp SOLAK
Health of healthcare workers	Theoretical	1	Dr. Yavuzalp SOLAK
MEDICAL BIOCHEMISTRY			

Topic	TYPE	HOUR	FACULTY MEMBER
Intracellular and Extracellular Fluids, Properties, Electrolytes	Theoretical	2	Assoc. Prof. Dr. Çiğdem ÇİÇEK
MEDICAL BIOLOGY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Prokaryotic and Eukaryotic Cells	Theoretical	1	Dr. İsmail Musab GÜLAÇAR
Structures and Functions of Cell Organelles	Theoretical	2	Dr. İsmail Musab GÜLAÇAR
Molecular Structure and Organization of the Cell Membrane	Theoretical	2	Dr. İsmail Musab GÜLAÇAR
Transport Mechanisms in the Cell Membrane	Theoretical	2	Dr. İsmail Musab GÜLAÇAR
Vesicular Transport Mechanisms in the Cell Membrane	Theoretical	1	Dr. İsmail Musab GÜLAÇAR
Cytoskeletal System and Cell Movement	Theoretical	2	Dr. İsmail Musab GÜLAÇAR
Cell-Cell and Cell-Matrix Interactions	Theoretical	2	Dr. İsmail Musab GÜLAÇAR
Signal transduction in the cells	Theoretical	2	Dr. İsmail Musab GÜLAÇAR
Cell Cycle and Control	Theoretical	2	Dr. İsmail Musab GÜLAÇAR
Cell Division: Mitosis and Meiosis	Theoretical	2	Dr. İsmail Musab GÜLAÇAR
Cell Death Mechanisms	Theoretical	2	Dr. İsmail Musab GÜLAÇAR
Stem Cell Biology	Theoretical	1	Dr. İsmail Musab GÜLAÇAR
Molecular Biology of Cancer	Theoretical	1	Dr. İsmail Musab GÜLAÇAR
MEDICAL MICROBIOLOGY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Introduction to Microbiology and Classification of Infectious Agents	Theoretical	1	Prof. Dr. Seyyal ROTA
Bacterial Structure	Theoretical	2	Prof. Dr. Seyyal ROTA
Morphology and Staining of Bacteria	Theoretical	1	Prof. Dr. Seyyal ROTA
Structure and Reproduction Characteristics oF Rickettsia, Chlamydia, and Mycoplasmas	Theoretical	1	Prof. Dr. Seyyal ROTA

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

LAB I: Using Microscope in Microbiology Laboratory and Working with Biological Materials	Practical	1	Asst. Prof. Dr. Ülker ÇUHACI
LAB II: Media	Practical	1	Asst. Prof. Dr. Ülker ÇUHACI
LAB III: Bacterial culture media and culture methods	Practical	1	Asst. Prof. Dr. Ülker ÇUHACI
LAB IV: Culturing from microbiota	Practical	1	Asst. Prof. Dr. Ülker ÇUHACI
Bacterial Genetics	Theoretical	2	Prof. Dr. Seyyal ROTA
Bacterial Metabolism and Growth	Theoretical	2	Prof. Dr. Seyyal ROTA
Sterilization, disinfection and antisepsis	Theoretical	2	Prof. Dr. Seyyal ROTA
General Characteristics and Classification of Viruses	Theoretical	1	Prof. Dr. Seyyal ROTA
Viral structure	Theoretical	1	Prof. Dr. Seyyal ROTA
General Characteristics and growth of the Fungi	Theoretical	1	Prof. Dr. Seyyal ROTA
LAB V: Morphology and Staining Methods of Fungi	Practical	1	Asst. Prof. Dr. Ülker ÇUHACI
Mold and fungi that grow in maya form	Theoretical	1	Asst. Prof. Dr. Ülker ÇUHACI
General Characteristics of the Parasites	Theoretical	1	Asst. Prof. Dr. Görkem CENGİZ
LAB VI: Morphology of Parasites and Laboratory Diagnostic Methods	Practical	1	Asst. Prof. Dr. Ülker ÇUHACI
Antibiogram Action and Resistance Antibiotics	Theoretical	2	Prof. Dr. Seyyal ROTA
Mechanisms of Action and Resistance of Antiviral, Antiparasitic, and Antifungal Drugs	Theoretical	2	Prof. Dr. Seyyal ROTA
Laboratory Methods in Antibiotic Selection	Theoretical	1	Prof. Dr. Seyyal ROTA
LAB VII: Antibiogram Tests	Practical	1	Asst. Prof. Dr. Ülker ÇUHACI

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
0312 329 10 10
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon :

İnternet Adresi :

E-posta :

TISSUES and THEIR FUNCTIONS

Phase 1 – COMMITTEE IV

COURSE CODE: MED 1040

LECTURE CODE	LECTURE NAME		THEORETICAL LECTURE HOUR	PRACTICAL LECTURE HOUR	TOTAL LECTURE HOUR
MED 1040	Coordinatorship Lecturers	Committee Exam Discussion Hour	1	0	1
		Committee Introduction Hour	1	0	1
	Anatomy		32	8	40
	Biophysics		7	-	7
	Histology and Embryology		14	5	19
	Medical Biochemistry		4	-	4
	TOTAL		**57**	**13**	**70**

COMMITTEE AIMS and LEARNING OBJECTIVES

AIM:

By the end of this committee, students are expected to learn anatomical terminology, understand the anatomical structures of bones and joints, learn how to use a microscope and identify the histological structures of basic tissues, comprehend the biochemical mechanisms underlying the structure and function of tissues, and learn the interaction of electromagnetic waves with tissues.

LEARNING OBJECTIVES:

1. Students can define anatomycal terminology
2. Students can define important structures on bones
3. Students can explain the types of joints and their features
4. Students can describe the structure and features of the thorax and vertebral column
5. Students describe the structure and movements of the thoracic and vertebral joints
6. Students can define superior bones and bony structures

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

7. Students can identify upper extremity joints
8. Students can list the neighborhood and structural features of important structures in the neurocranium bones.
9. Students can list the neighborhood and structural features of important structures in the viscerorocranium bones
10. Students can describe reference points and special areas in the view of the head and face from various directions
11. Students can list the features and function of the temporomandibular joint
12. Students can describe the structures that make up the pelvic girdle
13. Students can identify important structures on the lower bones
14. Students can list lower limb joints
15. Students can define basic anatomycal structures in bones and joints on radiographic images
16. Students can explain the anatomycal background of common medical conditions in bones
17. Students can demonstrate the location of joints and ligaments in the body.
18. Students can apply skills such as accessing information, self-learning, analytical thinking, and teamwork.
19. Students can identify bone models in the anatomy laboratory.
20. Students aware of the importance of group work and collaboration in practical applications.
21. Knows what non-ionising and ionising radiation sources are, the characteristics of natural and man-made fields, and how the human body behaves in response to these fields
22. Recognises imaging methods used in medicine
23. Explains the properties of lasers, how they are formed, and their interaction with tissue
24. Explains the properties and behaviour of sound as a wave and how ultrasound is obtained
25. Recognises piezoelectric structures and explains how tissues are imaged using ultrasound
26. Describes the definition of the Department of Histology and Embryology, the types of microscopes used, and their purposes.
27. Explains the steps of tissue processing, the chemicals used, and the differences between their functions, describes the purposes of dyes used in tissue staining.
28. Explains the specializations of epithelial cells, the junctional complexes they form, and their types.
29. Explains the cells, components and types of connective tissue.
30. Explains the formed elements of blood tissue, their functions, and structure of plasma.
31. Describes the cells, structure, types, and functions of cartilage tissue.
32. Describes the cells, structure, types, and functions of bone tissue.
33. Distinguishes covering and glandular epithelium cells by using a light microscope.
34. Distinguishes connective tissue fibers and cells by using a light microscope
35. Distinguishes the blood tissue cells by using a light microscope.
36. Distinguishes the types and cells of cartilage tissue by using a light microscope.
37. Distinguishes the types and cells of bone tissue by using a light microscope.
38. Defines the biochemical components and bone tissue and explains its metabolism.
39. Explains the role of calcium, phosphate, and collagen in bone structure.
40. Describes the components of connective tissue (collagen, elastin, proteoglycans) and their functions.
41. Explains the biochemical activities of osteoblasts, osteoclasts, and osteocytes.

TOPICS

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

ANATOMY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Anatomical Terminology	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Introduction to bones/General informations about bones	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Introduction to joints/General informations about joints	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Vertebral Column, thoracic wall skeletal framework: sternum, ribs	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Thoracic wall and vertebrae joints	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Neurocranium Bones	Theoretical	4	Asst. Prof. Dr. Derya Şahin Öztürkcan
Viscerocranium Bones	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Cranium of various aspects, temporomandibular joint	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Upper limb bones	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Upper limb joints	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Bones of pelvic girdle	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Lower Limb Bones	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Lower Limb Joints 3	Theoretical	3	Asst. Prof. Dr. Derya Şahin Öztürkcan
Radiological Anatomy	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

Clinical Anatomy	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Lab 1: Thoracic wall and vertebrae joints	Practical	1	Department Lecturers
Lab 2: Neurocranium Bones	Practical	1	Department Lecturers
Lab 3: Neurocranium Bones	Practical	1	Department Lecturers
Lab 4: Viscerocranium Bones	Practical	1	Department Lecturers
Lab 5: Cranium of various aspects, temporomandibular joint	Practical	1	Department Lecturers
Lab 6: Upper limb bones and joints	Practical	1	Department Lecturers
Lab 7: Lower limb bones and joints	Practical	1	Department Lecturers
Lab 8: Entire skeletal system	Practical	1	Department Lecturers

BIOPHYSİCS

Topic	TYPE	HOUR	FACULTY MEMBER
The Electromagnetic (EM) Spectrum and Natural and Artificial Sources of Electromagnetic Fields	Theoretical	2	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Radiological Systems and Techniques Used in Clinical Imaging Units	Theoretical	2	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Fundamental Principles of Laser and Its Applications in Medicine	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
Sound and Its Physical Properties, the Piezoelectric Effect, and Ultrasound Generation	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

Piezoelectric Structures in Biological Tissues and Ultrasound-Based Medical Imaging	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
HISTOLOGY and EMBRYOLOGY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Introduction to Histology&Embryology and Microscope types	Theoretical	1	Asst. Prof. Dr. Çağla Zübeyde KÖPRÜ
Tissue Preperation and Histochemistry	Theoretical	1	Asst. Prof. Dr. Çağla Zübeyde KÖPRÜ
Covering Epithelium	Theoretical	2	Asst. Prof. Dr. Pınar ŞAHİN
Glandular Epithelium	Theoretical	1	Asst. Prof. Dr. Pınar ŞAHİN
Connective Tissue	Theoretical	3	Asst. Prof. Dr. Pınar ŞAHİN
Blood Tissue	Theoretical	2	Asst. Prof. Dr. Çağla Zübeyde KÖPRÜ
Cartilage Tissue	Theoretical	2	Asst. Prof. Dr. Gizem İLTER AKTAŞ
Bone Tissue	Theoretical	2	Asst. Prof. Dr. Gizem İLTER AKTAŞ
Lab I- Covering Epithelium	Practical	1	Department Lecturers
Lab II- Glandular Epithelium	Practical	1	Department Lecturers
Lab III- ConnectiveTissue	Practical	1	Department Lecturers
Lab IV- Blood Tissue	Practical	1	Department Lecturers
Lab V- Cartilage - BoneTissue	Practical	1	Department Lecturers
MEDICAL BIOCHEMISTRY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Biochemistry of Bone Tissue	Theoretical	2	Assoc. Prof. Çiğdem ÇİÇEK
Biochemistry of ConnectiveTissue	Theoretical	2	Assoc. Prof. Çiğdem ÇİÇEK

LOCOMOTOR SYSTEM COMMITTEE

Phase 1 – COMMITTEE V

COURSE CODE : MED 1050

LECTURE CODE	LECTURE NAME		THEORETICAL LECTURE HOUR	PRACTICAL LECTURE HOUR	TOTAL LECTURE HOUR
MED 1050	Coordinatorship Lecturers	Committee Exam Discussion Hour	1	0	1
		Committee Introduction Hour	1	0	1
	Anatomy		44	10	54
	Biophysics		3	-	3
	Physiology		16	6	22
	Histology and Embryology		18	2	20
	Medical Biochemistry		2	-	2
	TOTAL		**83**	**18**	**101**

COMMITTEE AIMS and LEARNING OBJECTIVES

AIM:

By the end of this committee, students are expected to know the anatomical and histological characteristics of structures related to movement, learn the functional properties of muscle and nerve tissues, and comprehend the fundamentals of embryology and the embryological development processes of humans.

LEARNING OBJECTIVES:

1. Students express basic information about the Spinal Cord and Spinal Nerves
2. Students can express basic information about muscles
3. Students can say the functions of facial mimic and chewing muscles

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

4. Students can describe important structures and their neighborhoods in the superficial structures of the neck.
5. Students can explain the anatomy of the sub-hyoid and suprahyoid muscles
6. Students can explain the anatomy of the deep muscles and arteries in the anterior neck region
7. Students can list the boundaries of triangular areas in the neck region and the structures contained within these areas.
8. Students can define and describe the anatomy of the pectoral region
9. Students can define and describe breast anatomy
10. Students can describe and describe the anatomy of the shoulder muscles
11. Students can define and describe the anatomy of the axilla
12. Students can describe and describe the anatomy of the anterior aspect of the arm
13. Students can define and describe the anatomy of the posterior aspect of the arm
14. Students can describe the anatomy of the Brachial Plexus and its branches
15. Students can describe the anatomy of the anterior aspect of the forearm
16. Students can describe the anatomy of the posterior aspect of the forearm
17. Students can describe the anatomy of structures on the palmar and dorsal aspect of the manus
18. Students can describe the anatomy of the superficial neck and back muscles
19. Students can identify and list upper extremity veins and the areas they feed
20. Students can explain the anatomy of clinical cases related to the face and upper extremities.
21. Students can list the nerves forming the lumbosacral plexus and the function of the nerves originating from this plexus
22. Students can describe the anatomy of the superficial muscles of the gluteal region
23. Students can describe the anatomy of the deep muscles of the gluteal region
24. Students can define and list the muscle, vascular and nerve structures in the anterior region of the thigh
25. Students can define and list the muscle, vascular and nerve structures in the inner thigh
26. Students can define and list the muscle, vascular and nerve structures in the back of the thigh
27. Students can define and list the muscle, vascular and nerve structures in the anterior outer region of the leg
28. Students can define and list the muscle, vascular and nerve structures in the posterior region of the leg
29. Students can describe the anatomy of the foot
30. Students can list the vessels in the lower extremity, the areas they supply, and the areas of pulse
31. Students can explain the anatomycal background of common medical conditions in the muscle and peripheral structures of the upper and lower extremities
32. Students can identify and name muscle tissue on a cadaver.
33. Students can demonstrate peripheral nerves on a cadaver.
34. Students can demonstrate vessels on a cadaver.
35. Students can demonstrate clinically important areas on a cadaver, such as fossae, triangles, and canals.
36. Students can demonstrate the locations of muscles in the body and distinguish the vessels and nerves of these muscles.
37. Students can work in groups and collaborate in practical applications.
38. Students understand the importance of cadaver use and takes responsibility for behaving in a way that will not harm the cadaver or its tissues.
39. Understands the types of heat generated as a result of muscle activity and the mechanical properties of the muscle.

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

40. Explains the measurement of the electrical activity of skeletal muscle (EMG) and the detection of any abnormalities.
41. Defines the major classes of body tissues (epithelial, connective, muscle, nervous) from a physiological perspective.
42. Explains the pathways of intercellular communication and signal transduction mechanisms.
43. Evaluates the relationship between cells, tissues, and microsystems in a physiological context.
44. Compares the physiological characteristics of skeletal, cardiac, and smooth muscle tissues.
45. Explains the mechanisms of muscle contraction (excitation–contraction coupling).
46. Defines actin–myosin interactions and the role of ATP.
47. Explains the electrical and mechanical properties of muscle fibers.
48. Defines the structure and basic functions of neurons.
49. Explains the generation and conduction of action potentials.
50. Defines the concept of synapses, the role of neurotransmitters, and the mechanisms of neural communication.
51. Explains the effect of myelination on nerve conduction.
52. Arranges the events of muscle contraction in sequence and represents them schematically.
53. Illustrates key concepts of neural communication (threshold potential, refractory period, etc.) in graphical form.
54. Evaluates case-based examples to determine neurotransmitter actions at synapses.
55. Compares physiological differences among muscle types.
56. Explains the fundamental processes of neuromuscular communication and relates them to clinical scenarios (e.g., myasthenia gravis, effects of botulinum toxin).
57. Shows interest in how cellular and tissue-level physiological processes affect system-level functions.
58. Recognizes the importance of normal muscle and nerve function for quality of life.
59. Integrates cell and tissue physiology knowledge as a basis for learning advanced physiological systems.
60. Appreciates the importance of scientific accuracy and understanding cause–effect relationships.
61. Acts carefully, diligently, and ethically in theoretical and practical applications.
62. Demonstrates a cooperative, respectful attitude in group work and laboratory exercises.
63. Explains the cells, structure, types and functions of muscle tissue.
64. Explains the cells, structure, types, and functions of nerve tissue.
65. Explains the process of embryo invasion into the endometrium and the development of extraembryonic structures.
66. Explains the stages of embryonic development (primitive streak formation, neurulation, and formation of the three germ layers) and the formation of primary chorionic villi.
67. Describes the processes of oogenesis and spermatogenesis and explains their differences.
68. Defines the uterine and genital cycle, the events that occur, and the hormones that affect this cycle, and explains their differences.
69. Explains the fertilization process, its stages, the implantation, and blastocyst formation.
70. Explains the events that occur during the embryonic and fetal periods.
71. Defines the placenta, its components, and fetal membranes (amnion, allantois, umbilical cord, yolk sac).
72. Defines multiple pregnancies and their types, explain how congenital anomalies occur, and explain teratogens.
73. Distinguishes the types and cells of muscle tissue by using a light microscope.
74. Distinguishes the cells of nervous tissue by using a light microscope.
75. Explains the structural proteins of muscle tissue and their functions.
76. Explains the biochemical mechanisms of muscle contraction.
77. Explains energy metabolism and ATP consumption in muscle cells.

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530 Çankaya / Ankara
Telefon : 0312 329 10 10
İnternet Adresi : www.yuksekihtisasuniversitesi.edu.tr
E-posta : yiu@yiu.edu.tr

TOPICS

ANATOMİ			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Spinal Cord and Spinal Nerves	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Introduction to muscles	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Muscles of facial expression and mastication	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Superficial Structures of the neck	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Suprahyoid and Infrahyoid Muscles	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Deep Structures of the Neck	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Triangles of the Neck	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Pectoral Region and the Breast	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Muscles of Shoulder	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Axilla, anterior and posterior compartment of the arm	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Plexus Brachialis	Theoretical	3	Asst. Prof. Dr. Derya Şahin Öztürkcan
Anterior Compartment of the Forearm	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

Posterior Compartment of the Forearm	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Palm and dorsum of the hand	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Superficial Muscles of the Nape and Back	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Vessels of the Upper Extremity	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Clinical Anatomy	Theoretical	4	Asst. Prof. Dr. Derya Şahin Öztürkcan
Lumbosacral Plexus	Theoretical	3	Asst. Prof. Dr. Derya Şahin Öztürkcan
Superficial Muscles of the Gluteal Region	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Deep Muscles of the Gluteal Region	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Anterior Compartment of the Thigh	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Medial Compartment of the thigh	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Posterior Compartment of the Thigh	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Anterolateral Compartment of the Leg	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Posterior Compartment of the Leg	Theoretical	1	Asst. Prof. Dr. Derya Şahin Öztürkcan
Anatomy of the Foot	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Vessels of lower extremity	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan
Clinical Anatomy	Theoretical	2	Asst. Prof. Dr. Derya Şahin Öztürkcan

Lab 1: Spinal Cord, Muscles of facial expression and mastication, Suprahyoid and Infrahyoid Muscles	Practical	1	Department Lecturers
Lab 2: Deep Structures of the Neck, Triangles of the Neck	Practical	1	Department Lecturers
Lab 3: Plexus Brachialis	Practical	1	Department Lecturers
Lab 4: Pectoral Region and the Breast, Axilla	Practical	1	Department Lecturers
Lab 5: Muscles of shoulder, posterior compartment of the arm and forearm, Dorsum of the hand	Practical	1	Department Lecturers
Lab 6: Anterior compartment of the arm and forearm, palm of the hand, vessels of the upper extremity	Practical	1	Department Lecturers
Lab 7: Lumbosacral Plexus	Practical	1	Department Lecturers
Lab 8: Muscles of the gluteal region, posterior compartment of the thigh, posterior compartment of the leg, anatomy of the foot , vessels of lower extremity	Practical	1	Department Lecturers
Lab 9: Anterior compartment of the thigh, anterior compartment of the leg, anatomy of the foot , vessels of lower extremity	Practical	1	Department Lecturers
Lab 10: Peripheric nerves, vessels and muscles of body	Practical	1	Department Lecturers
BIOPHYSICS			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
The mechanical properties and heat production of muscles	Theoretical	2	Asst. Prof. Dr. Şerife Cankurtaran SAYAR

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

Basic Principles of electromyography (EMG)	Theoretical	1	Asst. Prof. Dr. Şerife Cankurtaran SAYAR
FİZYOLOJİ			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Peripheral Nervous System Physiology	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Morphological and Functional Structure of Nerve Cells	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Synaptic Transmission Properties and Neurotransmitters	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Muscle Action Potential, Excitation- Contraction Coupling	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Molecular Mechanism of Contraction in Skeletal Muscle	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Mechanical Properties and Types of Muscle Contraction	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Types of Skeletal Muscle Fibers	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
Smooth Muscle Physiology	Theoretical	2	Asst. Prof. Dr. Sümeyye RAMAZANOĞLU
LAB I: EMG	Practical	2	Deparment lecturers
LAB II: Skeletal Muscle Experiment	Practical	2	Deparment lecturers
LAB III: Smooth Muscle Experiment	Practical	2	Deparment lecturers
HISTOLOGY and EMBRYOLOGY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Muscle Tissue	Theoretical	2	Asst. Prof. Dr. Çağla Zübeyde KÖPRÜ
Nerve Tissue	Theoretical	2	Asst. Prof. Dr. Gizem İLTER AKTAŞ
Introduction to General Embryology & Gametogenesis	Theoretical	2	Asst. Prof. Dr. Gizem İLTER AKTAŞ

Adres : Yüksek İhtisas Üniversitesi Rektörlüğü 06530
Çankaya / Ankara
www.yuksekihtisasuniversitesi.edu.tr

yiu@yiu.edu.tr

Telefon : 0312 329 10 10

İnternet Adresi :

E-posta :

Uterine and Genital Cycle	Theoretical	1	Asst. Prof. Dr. Gizem İLTER AKTAŞ
Fertilization, Blastocyst Formation and Implantation	Theoretical	2	Asst. Prof. Dr. Gizem İLTER AKTAŞ
Bilaminar Germ Disc (2nd Week of Development)	Theoretical	2	Asst. Prof. Dr. Pınar ŞAHİN
Trilaminar Germ Disc (3rd Week of Development)	Theoretical	2	Asst. Prof. Dr. Pınar ŞAHİN
Embryonic and Fetal Period	Theoretical	2	Asst. Prof. Dr. Çağla Zübeyde KÖPRÜ
Placenta and Fetal Membranes	Theoretical	2	Asst. Prof. Dr. Gizem İLTER AKTAŞ
Multiple Pregnancies and Developmental Defects	Theoretical	1	Asst. Prof. Dr. Çağla Zübeyde KÖPRÜ
Lab I-Muscle Tissue	Practical	1	Deparment Lecturers
Lab II-Nerve Tissue	Practical	1	Deparment Lecturers
MEDICAL BIOCHEMISTRY			
Topic	**TYPE**	**HOUR**	**FACULTY MEMBER**
Biochemistry of Muscle Tissue, Muscle Protein Breakdown	Theoretical	2	Assoc. Prof. Dr. Çiğdem ÇİÇEK