UNIVERSITY OF KYRENIA
MEDICINE FACULTY
PHASE I

COURSE SYLLABUSS

Course Name : Basic Sciences						
Course Code	Year	Semester	Credit	ECTS Credit	Course Application (Hour/Week)	
					Theoretical	Practical
BSC 100	1	Güz Bahar		56	422	128
Course Type: Compulsary				Course Prerequisite:		Course Language: English
Course Category				Basic Vocational Course Theoretical	Skills Lesson Practice	
Course Venue and Time				- Prof. Dr. Ilkay Salihoğlu Amphitheater (08:30-17:30) Everyday.		

Course Objectives and Goals	Objective: At the end of Term I, our students will be able to list the basic information about the structure, structure and functioning of the cell, explain the public health problems and basic concepts, list the basics of genetics, anatomical structures, microbiology, basic life support theoretical and practical applications and first aid when necessary, Will be able to think analytically, communicate well with patients and their relatives with Clinical Skills Training, Communication Skills in Medicine, Evidence-Based Medicine, Human Sciences in Medicine, Problem-Based Learning and Critical Thinking applications.
Course Learning Outcomes	**Knowledge <u>Gain:</u>** - Will be able to define the basic concepts related to the structure, structure and functioning of the cell. - Will be able to explain basic genetic concepts

	- Will be able to explain biochemical metabolic pathways - Will be able to define microbiological concepts - Will be able to define the anatomical structure of organs and structures of the organism. - Will be able to define the basic concepts related to the structuring and functioning of tissues. - Will be able to comprehend the microscopic structures of normal tissues and organs - Will be able to explain the mechanisms of biochemical synthesis - Will be able to comprehend the physiological mechanisms of the organism - Will be able to define biophysical concepts - Will be able to explain basic anatomical concepts - Will be able to explain the concepts of emergency approach to the patient - Will be able to define important health problems and primary health services in Turkey and in the world - Will be able to classify research planning and data collection methods, - Explain the embryonic development process - Will be able to define the anatomical structure of organs and structures of the organism. - Will be able to describe the historical development of medicine and ethical rules - Will be able to explain the concepts of computer hardware, software and usage 39 - Will be able to interpret basic medical concepts on the scenario - Will be able to explain the concept of professionalism that they will apply throughout their professional life. - Will be able to comprehend the relationship between science and medicine - Gain knowledge about the coexistence of medicine and philosophy, whose common areas are human **Skill Gain:** - Will be able to apply professional skills related to basic life support - Will be able to explain the normal body structure, show the positions of the organs - Recognize the microscopic features of normal tissues and organs - Will be able to apply the synthesis mechanism and function of macro and micro molecules synthesized in the organism with experimental setups. - Will be able to apply basic communication skills - Ability to practice accessing evidence - They will gain critical thinking, problem solving, decision making and creative thinking skills. Attitude Gain: - Be aware of the importance of respect in human relations - Will care about the attitudes required by the medical profession - Embrace the importance of lifelong and self-learning

Contents of the Course	
Week	**Introduction to Medicine Course Board**
1	- Will be able to describe the atom and its structure, chemical bonds - Will be able to define and classify the structural properties of organic compounds. - Will be able to define the concepts of bond and energy in living things - Will be able to explain the main molecules such as protein, lipid and carbohydrate
2	- Will be able to define the concepts of genetics and evolution - Understand the molecular structures that play a role in the structure and function of the eukaryotic cell, the relationships and controls between these structures - "What is medicine?" able to answer the question
3	- Will have knowledge about the method of medicine - Will be able to explain the concept of health-disease - Will be able to explain public health and perspective
4	- Will be able to list the characteristics of primary, secondary and tertiary health care services. - Will be able to tell the role of environmental factors in health-related events - Will be able to explain the concept and types of environmental impact - Will be able to explain the concept of basic health services
5	- Will be able to list the tools that can be used for health monitoring - Will be able to explain the concept of health protection and development - Will be able to explain the methods that can be used in health promotion - Will be able to explain the importance of keeping healthy records
6	- Practice hand washing, donning and removing sterile gloves - Able to receive and save stories from friends - Demonstrate basic inspection methods
7	- Will be aware of the importance of hand washing, wearing and removing sterile gloves in the profession of medicine. - To act in accordance with the culture of the medical profession and the values atmosphere of the medical faculty. - Understand the importance of keeping healthy records.

Contents of the Course	
Week	**From Molecule to Cell Course Board**
1	- Will be able to define bioenergetics - Explain the structure of amino acids - Identify peptides and proteins - Will be able to explain enzymes, their classes and kinetics - Will be able to define the molecules that control the division and functioning of cells in embryo and adult period and their control, - Will have information about inheritance types of human genetic diseases, family tree drawing, genetic counseling and basic clinical genetics.
2	- Will be able to explain the development of medicine with an evolutionary approach in the light of revolutionary changes that shape the development of the medical profession in the history of medicine, physicians who left their mark, and fundamental events that created transformation. - Will be able to explain the concepts of electric charge, electric force, electric field (E),

	electric potential and potential energy and capacitance - Understand the health effects of E current, DC current, - Will be able to explain the history and basic concepts of psychiatry, defense mechanisms - Explain the importance of health indicators
3	- Will be able to count health indicators and usage areas - Will be able to tell the values of current basic health, mother-child health, fertility and death criteria in Turkey - Will be able to explain the functioning of the current health system in Turkey - Will be able to explain the current central and provincial health organization structure in Turkey - Be able to explain the supply chain - Will be able to count the types and duties of health personnel providing health services.
4	- Will be able to apply family tree drawing - Will be able to apply the knowledge gained from the academic view of the history of medicine in current studies - Will be able to measure body temperature, pulse and respiratory rate and blood pressure - Will be aware of the mechanisms in biological systems
5	- Will be aware of the importance of genetic counseling in the prevention of genetic diseases in the society - Will be aware of the importance of deepening the view of the medical profession and the development of professional sensitivity in the light of knowledge of the history of the profession - Will comprehend the intricacies of measuring body temperature, pulse and respiratory rate, and blood pressure and its importance in patient follow-up

Contents of the Course	
Week	**Cell Biology Course Board**
1	- Interpreting the digestion and metabolism of nucleoproteins and dealing with diseases being able to evaluate the relationship - To be able to interpret both synthesis steps, defects and clinical findings, - To be able to comprehend the metabolism of inorganic compounds in the body and their importance in clinical situations - To be able to describe the structural features of microorganisms (virus, bacteria, fungus, parasite) - To explain the life cycles and reproduction conditions of microorganisms -To comprehend the knowledge of bacterial metabolism and physiology - To be able to explain the terms and methods of sterilization and disinfection. - To be able to comprehend information about bacterial genetics.
2	- Define antimicrobial drugs and resistance mechanisms - To be able to explain antibiotic susceptibility test methods - To be able to describe microorganism antigens and antigen-antibody reactions and immune response to infectious agents - To be able to describe the basic concepts of immunology and the general defense pathways of the host - To explain the concepts of antigen and antibody, to list the characteristics of antigen-antibody

	coupling and the basic principles of related tests. - To be able to evaluate the basic elements of the communication process - To be able to list the points to be considered in basic life support and removal of an object from the airway.
3	- To be able to define first aid, to explain 112 and emergency aid systems, to tell first aid steps in different frequently encountered situations. - To be able to tell the first aid methods to be given in cases of unconsciousness and circulatory system deterioration. - To be able to count the approach steps to the survivors who were poisoned, drowned, bitten and stung by various animals. - To be able to explain the principles of bleeding control and wound care - To be able to tell the microscope types and working principles - To be able to describe the forms of cell divisions - To be able to say the adaptation mechanisms of cells to stress
4	- To be able to describe the formation processes of necrosis and apoptosis, histologically observed changes in the cell and the process of destruction of residues - To be able to count the histological structure of cell membranes, organelles, nuclei and inclusions - To be able to count the histological follow-up steps - To be able to explain the concept of professionalism that they will apply throughout their professional life - To be able to evaluate the unity of medicine and philosophy, whose common areas are human, to explain effective methods in basic communication - To be able to distinguish cell shapes and microorganisms at the beginning of the microscope using the light microscope - To be able to apply the dyeing methods used in the examination of microorganisms and to distinguish with which dye special preparations are dyed.
5	- To be able to distinguish tissue types under the microscope - To be able to apply cultivation methods for the production of microorganisms and to define their media - To examine the colony morphology of microorganisms - To apply antibiotic susceptibility tests - To apply serological test methods - To apply the method of measurement of uric acid - To apply the measurement method of bilirubin and urobilinogen in urine - To be able to apply inorganic phosphate measurement method - To be able to apply elastic bandage wrapping, subcutaneous and intravenous injection, dressing skills in skin injuries
6	- To know, understand and act on situations where first aid should be applied, to apply first aid in various situations - To apply cardiopulmonary resuscitation and foreign body removal from the airway - To apply first aid in bleeding and injuries - To apply first aid in case of poisoning, bite and sting - In cases of circulatory system disorders and unconsciousness To be able to apply first aid - Evaluate and apply what they read with a critical and investigative approach - To be aware of the importance of the functioning of the biological system
7	- Being aware of the importance of protecting himself and the environment by adopting the necessity of complying with the laboratory working principles and rules - Being aware of the principles of using the microscope - Being aware of the importance of group work and cooperation

	- To be aware of the importance of basic communication skills - To be able to distinguish the points to be considered while dressing in elastic bandage wrapping, subcutaneous and intravenous injection skin injuries - To be aware of the importance of effective and correct decision making and appropriate first aid in approaching the emergency patient.

Contents of the Course	
Week	**From Cell to Tissue Course Board**
1	- To be able to understand the general information about the bones in our body, to tell the locations, types and functions of the bones. - Comprehending the general information about the joints in our body, to be able to tell the places, types and functions of the joints - To be able to evaluate the relationship of anatomical information about bone with clinical conditions - To be able to evaluate the relationship of anatomical information about the joint with clinical conditions - To be able to tell the types of cover epithelium from which germ leaf it develops and its features
2	-To be able to define the gland epithelium and connective tissue, to explain from which germ leaf it develops. -To be able to tell the cells, components, types of cartilage tissue, from which germ leaf it develops -To be able to tell the cells, components, types of bone tissue, from which germ leaf it develops -Defining the organic and inorganic matrix of bone tissue -Defining the structure of the joints
3	-To be able to explain electrical properties and electrical equivalent models of membrane and cell -Evaluating the cause and necessity of the biological potential difference, calculating the cell potential with different models and finding the ion currents -To be able to explain the physical properties of sound and the formation of ultrasound, the importance of piezoelectric effect in the formation of ultrasound. -To be able to tell the areas where ultrasound is used in medicine and its purposes - To be able to talk about piezoelectric structures in tissue, to explain invasive and non-invasive techniques in the healing of bone fractures with bone electric current.
4	-To be able to count the fluid compartments and content differences in the body -To be able to count and interpret the transport mechanisms in the cell membrane - To be able to explain the importance of osmosis, osmotic pressure in the organism -Be able to tell the signal transmission pathways in the control of cells with chemical messengers -To be able to explain the basic properties of membrane potentials and action potentials. -To be able to examine basic medical concepts through the scenario
5	-To be able to distinguish and show the cranium, cavitas cranii, neurocranium and viscerocranium bones - Ability to show the locations and ligaments of the joints in the body -To be able to apply the skills of accessing information, self-learning, analytical thinking and working as a team -To be able to distinguish the types of cover and gland epithelium under the microscope

6	-Ability to examine tissues under the microscope -Accurate measurement using laboratory materials -Being aware of the importance of using cadavers and the responsibility of behaving in a way that does not harm the cadaver and tissues. -Being aware of the importance of group work and cooperation in practical applications.

Contents of the Course	
Week	**Tissue Biology Course Board**
1	- Define general information about bones, joints and muscles - To be able to define the columnna vertebralis, ossa thoracis, sternum, costae and compages thoracis - To be able to define the bones of the head, upper and lower extremities - To be able to define the muscles, nerves and vessels of the head, neck, upper and lower extremities - Should be able to classify medulla spinalis and spinal nerves
2	- To be able to explain the anatomy of the axilla - To be able to describe the plexus brachialis - To be able to describe the gluteal region - To be able to explain the clinical anatomy of the head, neck, upper and lower extremities - Define the biochemical properties of nerve, epithelial and connective tissue
3	- Should be able to explain the mechanism of muscle contraction and energy sources - Explain the use of ultrasound in medicine - Must be able to count muscles, their types, their locations in the organism, and their structural and contractile properties. - Define the neuromuscular relationship and the response to stimulation and the importance of calcium in the muscle. - Define the autonomic nervous system and explain its organization
4	- To be able to define neurotransmitters and their receptors, to tell their synthesis and destruction ways - To be able to describe the function of nerve cell, synapse, neuromuscular junction. - To be able to describe the sense organs and receptors - To describe the electrical and chemical events in the receptors - To be able to tell the types of cover epithelium, from which germ leaf it develops and its features
5	- To be able to define gland epithelium and connective tissue, to explain from which germ leaf it develops - To be able to tell the cells, components, types of cartilage tissue and from which germ leaf it develops - To be able to tell the cells, components, types of bone tissue, from which germ leaf it develops - To define organic and inorganic matrix of bone tissue - Should be able to describe the joint structure
6	- To be able to tell the cells, components, types of muscle tissue, from which germ leaf it develops

	- To be able to tell the cells, components, types of nerve tissue, from which germ leaf it develops - To be able to define Dermis and Epidermis cells with their features - Must be able to show the ability to open a vascular access - To be able to distinguish and show the Cranium, Cavitas cranii, Neurocranium and Viscerocranium bones - To show the types of joints and ligaments in the human body

Sources	
Lecture Notes/Textbooks	Lehninger Principles of Biochemistry, Nelson-Cox, 3.baskıdan çeviri, palme yayıncılık, 2005 Human Biochemistry, Palme Yayıncılık, Onat-Emerk-Sözmen 2.baskı, 2006 Biyokimya Açıklamalı ve soru cevaplı, Akademisyen Tıp Kitabevi, 2014 Marks' Basic Medical Biochemistry, 2.baskı, Güneş Tıp Kitabevi Zubay's Principles of Biochemistry, Fifth Edition, 2017 Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostic, Seventh Edition, 2015 Leslie P. Gartner James L.Hiatt: Cell Biology and Histology. 7. Edition İstanbul tıp kitapevi Ronald W. Dudek . Embryology . 6. Edition İstanbul tıp kitapevi Moore K.L, Persaud T.V.N. 2019 The developing Human . Clinically Orinted Embryology. 11. Edition İstanbul, Nobel Tıp Kitap Evleri Gartner L.P, Hiatt L. 2016 Celle Biology and Histology 7. Edition İstanbul. İstanbul tıp kitabevi. Junqueira LC, Carneiro J. 2009 Basic Histology text&atlas. Nobel Tıp Kitapları. İstanbul Sadler T.W. 9. Baskı. 2005 Medical Embryology Palme Yayıncılık. Ankara.

	GartnerP., Hiatt J.L. 2009 Color atlas of histology.Histofizyoloji. Dördüncü baskı. İstanbul Moore KL, Persaud TVN 2009 Before We Are Born (Embriyoloji ve Doğum Defektlerinin Temelleri), 8. Edition Güneş Tıp Kitapevi,Ankara Ross, M.H., HISTOLOGY (A Text and Atlas with Correlated Cell and Molecular Biology). Library of Congress Cataloging-in-Publication, 2011.8. Edition. Robert B Raffa, Scott M. Rawls, Elena Portyansky. Netter's Illustrated Pharmacology, Beyzarov, 2014. Elsevier. Katzung, Susan B. Masters, Anthony J. Trevor Temel ve Klinik Farmakoloji, Nobel Tıp Kitabevi, 2016 (çeviri kitap) Richard A. Harvey, Lippincott Farmakoloji, Nobel Tıp, 2014. (Çeviri kitap) B. Katzung. Basic and Clinical Pharmacology. McGraw-Hill. 12th ed. 2011. Brunton L, Chabner B, Knollman B. Goodman & Gilman's The Pharmacological Basis of Therapeutics. McGraw-Hill. 12th ed. 2011. Rang HP, Dale MM, Ritter JM, Flower RJ, Henderson G. Rang and Dale's Pharmacology. 7th ed. 2012 Olson KR. Spesific poisons and drugs: Diagnosis and treatment, In: Poisoning & Drug Overdose. Fourth Ed. New York: McGraw-Hill Companies, 2004. Engelhardt, Dietrich: Ethics in the Everyday Life of Medicine. The Range of Medicine from Treatment to Research. Beauchamp, T.L.; Childress, J.F.: Principles of Biomedical Ethics. Çelik, Faik: İnsancıl Bir Tıp ve İyi Hekimlik İçin Hekimliğin Seyir Defteri. Deomed. İstanbul 2013. Dawsan, A; Verweij, M.: Ethics, Prevention and

	Public Health.Çev.: Ayşen Bulut, Ahmet Can Bilgin, Muhtar Çokar ve Mahmut Yardım. HASUDER. İstanbul 2016. Polat, Oğuz: Medical Practice Errors. 2. Baskı. Ankara 2015. Hakeri, Hakan: Medical Law. Seçkin Yayıncılık. Ankara 2007. Sarı, N.; Altıntaş, A.; Başağaoğlu, İ ve ark.: Medical History and Medical Ethics Textbook. İ.Ü. Cerrahpaşa Tıp Fakültesi 40. Yılda 40 kitap Serisi. İstanbul 2007. Sütlaş, Mustafa: Patient and Relatives Rights. İstanbul 2000.

Evaluation System		
Term Terms	**Number**	**Grade Ratio**
Continuity / Participation		
Laboratory		
Practice		
Field Study		
Course-Specific Internship (Job Placement)		
Quizzes/Workshop Critic		
Homework		
Presentation /Jury		

Project		
Seminar/ Application		
Midterm Exams/Oral Exams		%60
Final/Oral Exams		%40

Course Success Evaluation Chart

Letter Success Note	Success Coefficient	Point	Success Evaluation
AA	4.00	90-100	VERY GOOD
BA	3.50	85-89	VERY GOOD/GOOD
BB	3.00	75-84	GOOD
CB	2.50	65-74	MEDIUM/GOOD
CC	2.00	55-64	MEDIUM- GRADUATION CONDITION
DC	1.50	50-54	MEDIUM-PASS
DD	1.00	45-49	PASS CONDITIONALLY SUCCESSFUL
FF	0.00	<45	UNSUCCESSFUL

ECTS/ WORKLOAD TABLE			
Activities	**Number**	**Duration (Hour)**	**Total Workload**
Lesson Preparation	28	20	560
Course	28	28	784
Midterm	5	2	10
Midterm Exam Preparation	5	6	30
Final Exam	1	4	4
Final Exam Preparation	1	12	12
Presentation/Presentations			0
Presentation Preparation			0
Research and research Paper for Projects			0
Project Writing			0
Team Work			0
Classroom Discussion			0
Quiz			0
Quiz preparation			0
Pre-Class Homework			0
Homework			0
Micro Teaching Session			0
Lesson Planning			0
Material Adaptation			0

Material Development			0
Drafting			0
Drawing			0
Spelling Experiment			0
Private Lesson			0
Portfolio Preparation			0
Portfolio Presentation			0
		Total Workload	**1400/25=56**