



2022

Student Guide (First Year)



College of Medicine UQUMED

10/4/2022

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About UQUMED

The College of Medicine at Umm Al-Qura University was established in 1996, and the Bachelor of Medicine, Bachelor of Surgery program at Umm Al-Qura University was updated in 2021, to be a leading national undergraduate program in the field of medical education, scientific research, and health-related care and promotion.

UQUMED Vision

To be a leading national college of medicine in the field of medical education, scientific research and health-related care and promotion.

رؤية كلية الطب

أن تكون كلية الطب رائدة محلياً في مجال التعليم الطبي والبحث العلمي والرعاية الصحية و التوعية لها.

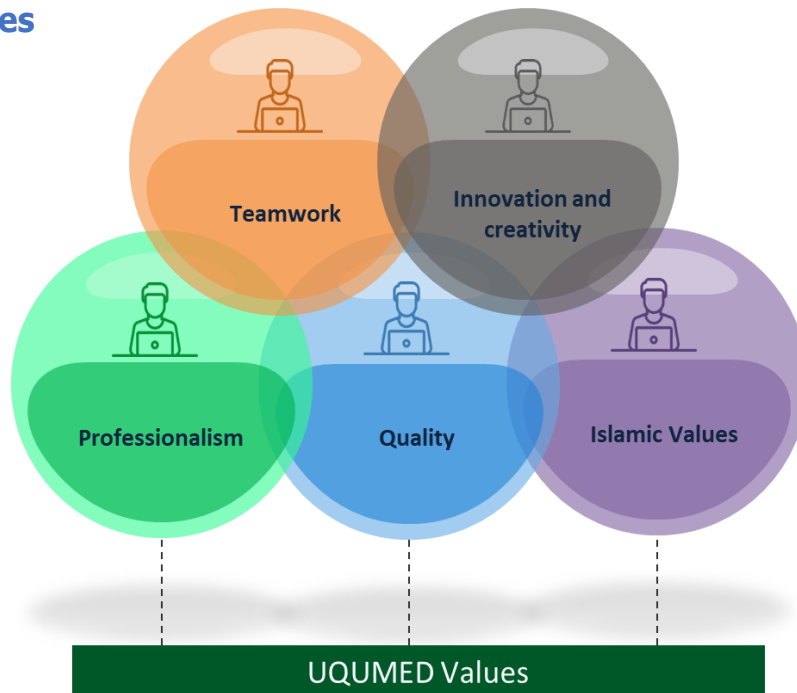
UQUMED Mission

To graduate highly qualified healthcare professionals by delivering levels of excellence in education and research aiming to improve medical services and promote health and quality of life for all.

رسالة كلية الطب

تخريج كوادر صحية ذات كفاءة عالية من خلال توفير بيئة متميزه بمعايير عالية الجودة في التعليم الطبي والبحث العلمي بهدف تحسين الخدمات الطبية وتعزيز الصحة و جودة الحياة للجميع.

UQUMED Values



UQUMED Program Vision

To be a leading national undergraduate program in medicine and surgery in the field of medical education, scientific research, and health-related care and promotion.

رؤية البرنامج :

أن يكون برنامج الطب والجراحة رائداً محلياً في مجال التعليم الطبي والبحث العلمي والرعاية الصحية و التوعية لها.

UQUMED Program Mission

To prepare physicians who are competent, and life-long learners capable of serving the needs of the community in the best tradition of the medical profession.

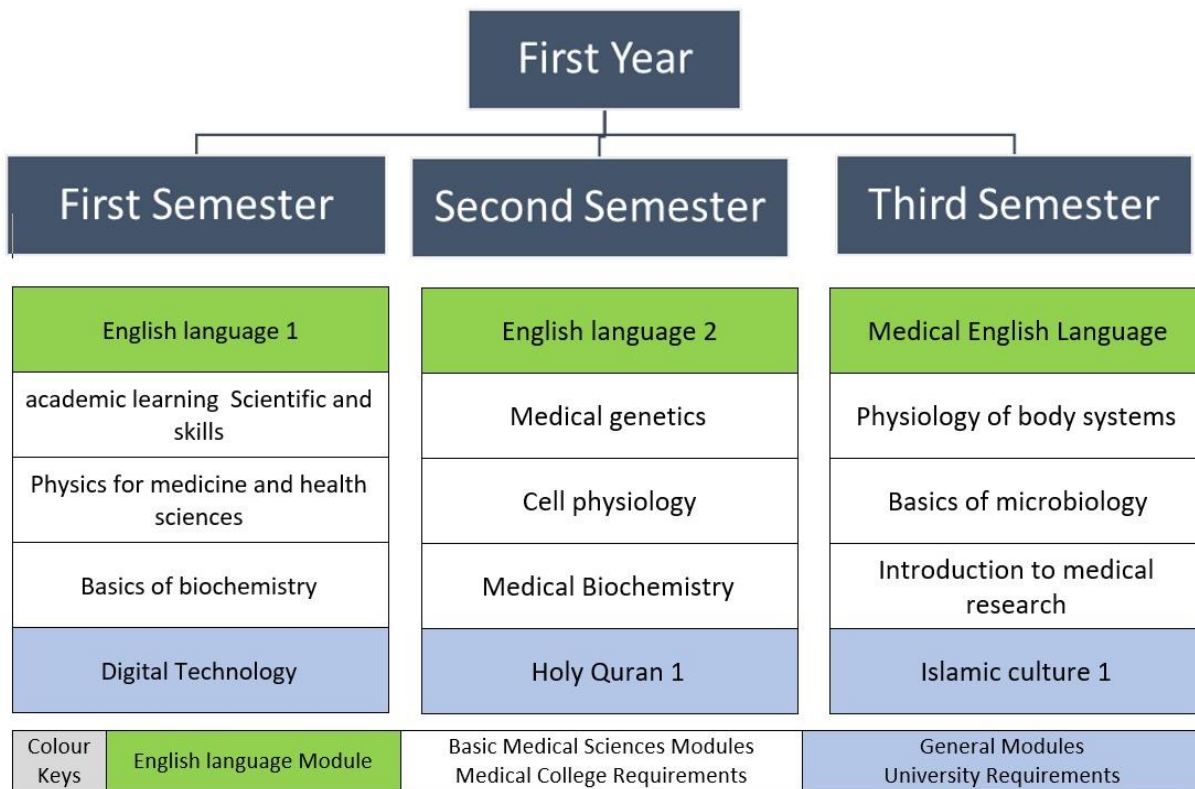
رسالة البرنامج:

إعداد أطباء ذو كفاءة عالية قادرين على التعليم والتعلم مدى الحياة، متمكنين من خدمة إحتياجات المجتمع بأفضل المعايير الطبية والأخلاق المهنية.

About First Year

The first-year curriculum focuses on a fundamental understanding of how the various basic science disciplines relate to the human body. The course covers the essential elements as well as the more specialized areas of physiology, biochemistry and medical genetics and Microbiology. Alongside these core science subjects; students will also gain an appreciation of what it means to be a medical professional an insight into technological advances in medicine and an understanding of medical ethics. The first-year program is designed to prepare students for a place at medical school and help them to develop strong study skills and effective communication and research techniques, which are essential for success in their medical studies and beyond.

General Map of the First Year Programs of Bachelor's Degree in Medicine and Surgery / Dentistry



First Year Course plan in detail

القسم المسؤول عن تدريس المقرر/الكلية	الساعات المعتمدة للمقرر	Course Name (English)	Course Code (English)	اسم المقرر بالعربي	الفصل الدراسي
مركز اللغة الإنجليزية	4	English language 1	ELCM1101	اللغة الإنجليزية 1	١
قسم الطب والجراحة- كلية الطب	4	Scientific and academic learning skills	MED1301	مهارات تعلم علمية وأكاديمية	
قسم علم المعلومات- كلية الحاسب الالى	2	Digital Technology	DS1101	التقنية الرقمية	
قسم الفيزياء- كلية العلوم التطبيقية	4	for Physics medicine and health sciences	PHY1114	الفيزياء للطب والعلوم الصحية	
قسم الكيمياء الحيوية- كلية الطب	4	of Basics biochemistry	MED1103	أساسيات علم الكيمياء الحيوية	
مركز اللغة الإنجليزية	4	English language 2	ELCM1102	اللغة الإنجليزية 2	٢
قسم الوراثة الطبية- - كلية الطب	4	Medical genetics	MED1102	علم الجينات الطبي	
قسم وظائف الأعضاء-- كلية الطب	4	physiology Cell	MED1101	علم وظائف الخلية	
قسم الكيمياء الحيوية-- كلية الطب	5	Medical biochemistry	MED1105	علم الكيمياء الحيوية طبية	
قسم القراءات- كلية الدعوة وأصول الدين	2	Quraan 1 Holy	QR1101	قرآن كريم ١	
مركز اللغة الإنجليزية	4	Medical English Language	ELCE1203	اللغة الإنجليزية الطبية	٣
قسم وظائف الأعضاء-- كلية الطب	4	of Physiology body systems	MED1104	علم وظائف أجهزة الجسم	
قسم الاحياء الدقيقة- كلية الطب	5	of Basics microbiology	MED1106	أساسيات علم الاحياء الدقيقة	
قسم الطب والجراحة- كلية الطب	2	Introduction to medical research	MED1302	مدخل الأبحاث الطبية	
قسم الدعوة والثقافة الاسلامية- كلية الدعوة وأصول الدين	2	culture Islamic 1	ICC1201	ثقافة إسلامية ١	

First-Year Course Specification

A. First Semester Courses

1.1- Course Title: Scientific and Academic Learning Skills (MED1301)

A. Course Description and Objectives

1. Course Description

This course will have four main themes. First, to develop basic learning skills required for successful learning in medical schools, including but not limited to: self-learning, goal orientation, stress and time management, teamwork, test-taking strategies, learning styles, reading skills, textbook usage, dictionary skills, and effective communication. The second theme is knowing the teaching and learning methods and how to prepare, engage, and study in these different methods effectively. Furthermore, the third theme will cover essential academic thinking and writing skills, including reading, and looking for information in references, note-taking and brainstorming, summarization skills, and effectively utilizing the different digital platforms in these themes. The fourth theme is concentrated on learning and development of basic medical vocabulary, to build a strong bank of medical terms and pronounce and use it properly.

2. Course Main Objective

- Use different kinds of dictionaries effectively.
- Understand the methods of self-learning and how it can be used to improve learning and professional development
- Develop the skills of professional and proper scientific communication to improve personal and team skills
- Build the skills and techniques of scientific thinking and to use this skill to make correct decisions and construct proper scientific questions
- To apply academic and scientific English writing skills effectively
- Building a foundation for medical terminology and how to spell and pronounce it

B. Course Content

No	List of Topics
1	How to prepare and engage in different teaching methods effectively <ul style="list-style-type: none"> • Types of teaching methods • Learning styles • How to interact and get the maximum benefit from learning in class • Test taking strategies
2	Understanding professional development for beginners <ul style="list-style-type: none"> • What is professional development • How to evaluate professional skills and use feedback to improve performance
3	Self-learning for medical students <ul style="list-style-type: none"> • The characteristics of supportive learning environment to enhance learning • Assessing personal learning skills strengths and weaknesses • Effectively utilizing technology for learning and research
4	The importance of Goal orientation in professional development
5	Stress management during medical school life and professional career
6	Effective communication and Teamwork <ul style="list-style-type: none"> • How to build harmony into team • Understand and evaluate web browsers and emails as research and communication tools
7	Principle of Academic Writing I and II
8	The art of reading and looking for information in various materials

	<ul style="list-style-type: none"> Improve your reading comprehension and retention in science reading to learn by reading Develop computer and internet skills and ability to retrieve, manage, and evaluate digital information
9	<p>Note-taking and summarization skills</p> <ul style="list-style-type: none"> Understand how effective arrangement and presentation of information can enhance written reports
10	<p>Medical Vocabulary</p> <ul style="list-style-type: none"> ➤ Level 1 <ul style="list-style-type: none"> Identify and utilize anatomical positions and directional terms Demonstrate what anatomical positions are and how to use it to refer to the human body Apply directional terms to their location on the human body Compare and contrast various movements of the body and their counter-movements ➤ Level 2 <ul style="list-style-type: none"> Explain the purpose of medical terminology Define the terms roots, suffix, and prefix Explain what combining forms are and why are they used ➤ Level 3 <ul style="list-style-type: none"> Pronounce words according to the pronunciation guide used in medical terminology Differentiate an acronym, eponym, and abbreviation ➤ Level 4 <ul style="list-style-type: none"> Build medical terms for given definitions Medical terms related to organ systems practice

C. Assessment Tasks for Students

#	Assessment task*	Percentage of Total Assessment Score
1	End of course written exam	50%
2	Essay	20%
3	Online assignment	30%

D. Learning Resources

Required Textbooks	1- Basic medical language 2- Longman Academic Writing Series 5 Essays to research papers, Meyers, 2013
Essential References Materials	1- Manual for writers of research papers, theses, and dissertations, Turabian, 2018 2- Critical Thinking Skills for Healthcare 1 st Edition
Electronic Materials	http://www.merckmanuals.com/home/pronunciations http://www.merckmanuals.com/professional/index.html https://www.merriam-webster.com/browse/medical/a https://medlineplus.gov/webeval/webeval.html
Other Learning Materials	https://scholar.google.com/ http://www.hemingwayapp.com/ https://www.grammarly.com/

1.2. Course Title: Physics For Medicine and Health Science (PHY1114)

A. Course Description and Objectives

1. Course Description

This course aims to provide students in medicine and health science with the basic theoretical and practical concepts of classical and modern physics. The course covers a wide range of topics related to medical physics such as the laws of motion, the application of the laws of fluid mechanics to the circulatory system, the calculation of forces on muscles and joints, the calculation of mechanical advantage in human body levers, the study of imaging systems, the application of lenses to correct the human eye defects. Concepts of temperature and heat transfer, elements of nuclear physics, radioactive decay and ionizing radiation will be also investigated.

2. Course Main Objective

- ✓ Help students to realize the connection between physics and medicine.
- ✓ Recognize the role of physics in diagnosis and therapy through the investigation of some techniques such as X-rays, MRI, endoscopes, ...
- ✓ Help students to understand how work some parts of the human body systems.
- ✓ Apply physics modeling to some parts of the human body
- ✓ Learn how to solve physics problems.
- ✓ Develop problem-solving and critical-thinking skills.

B. Course Content

No	List of Topics- Theoretical Part
1	Measurements <ul style="list-style-type: none"> • Measuring things • The International System of Units • Changing units <ul style="list-style-type: none"> • Length • Time • Mass • Vectors <ul style="list-style-type: none"> • Adding vectors • Components of vectors
2	Kinematics – motion in one and two dimensions <ul style="list-style-type: none"> • Distance and displacement • Speed and velocity • Acceleration • Average velocity or speed • Change in displacement under constant acceleration • The Acceleration due to gravity • Independence of motion in two dimensions
3	Force and Newton's laws of motion <ul style="list-style-type: none"> • The concept of force <ul style="list-style-type: none"> • Newton's first law • Newton's second law • Weight and mass

	<ul style="list-style-type: none"> • Forces are vectors • Newton's third law • Kinds of force • Fundamental Forces • Derived Forces • Tension • The normal force and friction • Drag forces • Newtonian gravity
4	<p>Statics</p> <ul style="list-style-type: none"> • Equilibrium • Torque • Principle of Moments • Centre of gravity/ centre of mass • Stability
5	<p>Mechanics of non-viscous fluids</p> <ul style="list-style-type: none"> • Pressure • Density • Pascal's principle • Measurement of pressure • Pressure and human body • The buoyant force • Archimedes' principle • Surface tension • Capillarity • Definitions of some key terms • The equation of continuity <ul style="list-style-type: none"> • Volume flow rate • Continuity of flow • Bernoulli's equation • Application of Bernoulli's equation
6	<p>Fluid dynamics of viscous fluids</p> <ul style="list-style-type: none"> • Viscosity <ul style="list-style-type: none"> • Poiseuille's law • Blood viscosity • Turbulence
7	<p>Optics and imaging system</p> <ul style="list-style-type: none"> • Electromagnetic wave • Reflection • Refraction • Dispersion • Ray diagrams • Plane mirrors • Spherical mirrors • Magnification • Lenses

8	<p>Nuclear physics</p> <ul style="list-style-type: none"> • Parts of the atom • Structure and properties of nucleus • Nuclear decay and stability • Radioactivity • Radiation therapy • Medical imaging
9	<p>Production of ionizing radiation</p> <ul style="list-style-type: none"> • The interaction of radiation with matter • The radiation units • Measurement of radiation (Dosimetry) • Exposer and absorbed doses • Detection of radiation • Radiation protection
10	<p>Practical Part at the Laboratory of Physics</p> <ul style="list-style-type: none"> • In the physics lab, the student conducts several experiments in order to verify some of the laws of physics that he studies in the lectures, as well as to determine some physical quantities. In addition, the student will collect data, then represent this data as a figure and/or table, then analyse the data to estimate the physical quantity and determine its accuracy, and finally write a report on the experiment.

C. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignments	End of each chapter	10%
2	Midterm Exam	6 th	20%
3	Lab	Every week	20%
4	Final Exam	End of the semester	50%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

D. Learning Resources

Required Textbooks	1- Introduction to Biological Physics for Health and Life Sciences by Kristen Franklin, 2 nd Edition (Wiley 2019)
Essential References Materials	<p>[1]- General Physics, 2nd Edition, Morton M. Sternheim, and Joseph W. Kane, Wiley, (1991).</p> <p>[2]- Physics for Scientists & Engineers with Modern Physics 4th Edition by Douglas Giancoli, 4th Edition (2014).</p> <p>[3]- Halliday & Resnick, Jearl Walker, "Fundamentals of Physics" 10th Edition (2018).</p> <p>[4]- Physics for biology and medicine, Paul Davidovits, Third Edition, Elsevier Academic Press.</p>
Electronic Materials	Blackboard Platform
Other Learning Materials	<p>https://phet.colorado.edu/</p> <p>https://www.myphysicslab.com/</p> <p>https://onlinelabs.in/physics</p> <p>https://www.omnicalculator.com/physics</p>

1.3. Course Title: Basic of Biochemistry (MED1103)

A. Course Description and Objectives

1. Course Description

- The course is one semester course of 4 credit
- The lectures are provided to the students, covering the biochemistry principles; structure, classification, and medical significance of macromolecules, Carbohydrates, lipids, proteins, vitamins, and minerals.
- Skills of basic laboratory safety-instruction, lab code, and common analytical-methods in diagnostics are included in the course through number of practical sessions for all groups.

2. Course Main Objective

This course aims to:

- consolidate a general background in biochemistry by putting biochemical structure concepts into a medical sciences context.
- provide the basic concepts of biochemical structure, classification, and medical significance of bio macromolecules, carbohydrates, lipids, proteins, vitamins, and minerals.
- Understand the bioenergetics of the cells to perform its physiological functions.

B. Course Content

No	List of Topics (theory/practical)
1	Student orientation: Course Guide: (scope, objectives, teaching strategy, tables, and assessment)
2	Biochemical Aspects of Carbohydrates
3	Biochemical Aspects of Lipids
4	Biochemical Aspects of proteins
5	Biochemical Aspects of Vitamins
6	Biochemical Aspects of Minerals
7	Introduction to Metabolism and medical significance
8	Enzymes: structure, classification, mode of action, regulation, and use in medicine
9	Bioenergetics: cellular transformation of energy and respiratory chain
10	Practical Part at the Laboratory of Biochemistry In the Biochemistry lab, the student conducts several experiments in order to verify some of the skills of basic laboratory safety-instruction, lab code, and common analytical-methods in diagnostics and medical solutions and buffers preparations.

C. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	End of term exam	Week-12	40
2	OSPE exam	Week-11	20
3	Comprehensive MCQ exam (End of year)	Week -(Univ calender)	40

D. Learning Resources

Required Textbooks	<ul style="list-style-type: none"> ▪ Text book of Biochemistry with Clinical Correlations, Seventh ed. Devlin TM (2010). Ed. Wiley -LissNew York ▪ Principles of Biochemistry, A.L. Lehninger. D.L.Nelson and M.M. Cox, (2008) Worth Publication s. New York.
Essential References Materials	<ul style="list-style-type: none"> ▪ Harper's Illustrated Biochemistry, 28edition (2006) Robert K. Murray, David A Bender, Kathleen, M. Botham , Peter J. Kennelly, Victor W., Rodwell , P. Anthony Weil, Publishers The McGraw-Hill Companies. ▪ Instant Notes Biochemistry , Second Ed (2007) by B.D. Hames & N.M. Hooper
Electronic Materials	<ul style="list-style-type: none"> • Biochemical Society, www.biochemistry.org • Association for Clinical Biochemistry (ACB), www.acb.org.uk • Biochemistry website, www.bio.net/bionet • The ChemWeb Chemistry Portal, www.chemweb.com • Medscape, www.medscape.com • Biomedical central, www.biomedcentral.com/bmcpublichealth • www.kumc.edu/biochemistry/resource.html • www.medlib.iupui.edu/ref/biochem.htm • www.aq.unr.edu/shintani/bch400-600/Chapter%20notes%20current.htm • www.medicaleducationonline.org/component/option,com_docman/task_cat_view/qid,101/Itemid,37/
Other Learning Materials	PDF colored notes for all lecture presentations will be delivered to students to help description topics and subtitles.

1.4. Course Title: English language 1(ELCM1101)

For course specifications and details, please visit the below link from English Language Centre

<https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:b35b7674-9640-31ae-8ee5-a95ea8fa5230#pageNum=1>

1.5. Course Title: Digital Technology (DS1101)

For course specifications and details, please visit the below link

<https://docdro.id/du8IQDi>

First-Year Course Specification

B. Second Semester Courses

2.1. Course Title: Medical genetics (MED1102)

A. Course Description and Objectives

1. Course Description

The Genetics course considers aspects of medical genetics including genetic variation, mutation, and pattern of inheritance.

In addition, it provides core knowledge in genetics like DNA replication, gene structure, function and the organization of the human genome.

2. Course Main Objective

Principle of Human Medical Genetics is one of the basic science courses that comprise the preclinical curriculum of the first three years of medical school. The overall goal of this course is to provide students with the knowledge and understanding of the scientific principles that are the basis of current approaches to the diagnosis and management of disease.

The application of these scientific principles and knowledge to the practice of medicine including the development of life-long learning and problem solving Skills is emphasized.

This goal is consistent with the objectives of the United States Medical Licensing Examination (USMLE), Step 1.

The Medical Genetic course consists of 12 lectures and covers topics that are basic principal of human genetics.

Lecturers from both basic science and clinical disciplines teach the fundamental principles of genetic and how these principles apply to the diagnosis and treatment of these diseases.

B. Course Content

No	List of Topics
1	DNA, RNA & gene Structure
2	Genetic code, Cell cycle and DNA replication
3	Transcription
4	Translation
5	Chromosomes Structure and Organization
6	Cell division – Mitosis & Meiosis

7	Types of mutations I
8	Types of mutations II (TBL)
9	Pattern of inheritance I
10	Pattern of inheritance II (TBL)
Lab	
1	Principle of DNA extraction I
2	DNA measurement
3	Principle of gel electrophoresis
4	Principle of vertical gel electrophoresis
5	Principle of RNA extraction
6	Principle of Karyotype I
7	Principle of Karyotype II
8	Principle of PCR
9	Principle of DNA Sequencing interpretation I
10	Principle of DNA Sequencing interpretation II

C. Assessment Tasks for Students

#	Assessment task*	Percentage of Total Assessment Score
1	Assignment (Lab)	10%
2	Mid theoretical exam	40%
3	Final theoretical exam	50%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

D. Learning Resources

Required Textbooks	1- Emery's Elements of Medical Genetics: With Student CONSULT Online Access (Paperback) by Peter Turnpenny and Sian Ellard 2- Human molecular genetic by tom Strachan and Andrew Read
Other Learning Materials	At the end of many lectures. Students been supplied with website links for video animations to improve understanding molecular mechanisms

2.2. Course Title: Cell physiology (MED1101)

A. Course Description and Objectives

1. Course Description

Introduction to Human Physiology with special emphasis to structure and function of human Cell including nucleus, cytoplasm and cell membrane. Organelles covered by membrane including endoplasmic reticulum, Golgi apparatus, lysosomes, secretory vesicles, peroxisome and mitochondria. Organelles not covered by membrane including ribosome, centriole, centrosome and microtubules. Cytoskeleton and their physiological role in human cell.

Relationship between cilia and flagella in the cell. Membrane junctions, their location and specific functions. Functional classes of cell receptors, general types of signal transduction cascades and intracellular second messenger system. Biological membranes, integral and peripheral proteins, glycolipids and glycoproteins of biological membranes. Cell Cycle, cellular development and cell death. Ionic basis of action potential and concept of threshold of membrane excitation. Types of movements across the cell membrane including diffusion, osmosis, active transport and vesicular transport. Homeostasis, positive and negative feedback mechanisms, types of cell immunity and cell death. Normal and abnormal composition of human body. Types of edema. Basal metabolic rate and regulation of human body temperature.

2. Course Main Objective

- At the completion of the cell physiology course, students are expected to be able to:
- To identify and describe basic cellular components to be able to characterize their roles in the structure and function of human cells
- To integrate a basic understanding of cellular processes to articulate how human cells interact with their environment
- To recognize key principles of human cell function in order to understand the cellular basis of health and disease
- To recognize how cells, tissues, organs and systems work together in order identify and explain the mechanisms through which the body maintains homeostasis

B. Course Content

No	List of Topics
1	Introduction to Human Physiology, Structure and Function of Human Cell
2	Specialized organelles and their function
3	Cytoskeleton
4	Biological Membrane
5	Cell junctions and cell receptors
6	Ionic basis of action potential
7	Movement across cell Membrane
8	Cell defense and immunity/ homeostasis
9	Cell signaling events, cell cycle and programmed cell death
10	Basal Metabolic Rate (BMR), Body Temperature Regulation and Skin Physiology

C. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Continuous Assessment	7	30 %
2	Practical / Laboratory skill Assessment	13	20 %
3	Assignments	15	10 %
4	Final Assessment	16	40 %

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

D. Learning Resources

Required Textbooks	<p>Essentials of Human Anatomy & Physiology (12th Edition, 2017) by Elaine N. Marieb and Suzanne M. Keller ISBN: 978-01343 395326 Publisher: Pearson Education.</p> <p>Principles of Anatomy & Physiology (15th Edition, 2016) by Gerad J. Tortora & Bryan H. Derrickson ISBN: 978-1119329398 Publisher: John Wiley.</p> <p>Hole's Human Anatomy and Physiology (15th Edition, 2018) by David Shier, Jackie Butler, Ricki Lewis ISBN: 978-1259864568 Publisher: Mc Graw- Hill.</p>
Essential References Materials	<p>Ross and Wilson Anatomy and Physiology, in health and illness (13th Edition, 2018) by Anne Waugh & Allison Grant ISBN: 978-0702072772 • Publisher: Churchill Livingstone.</p> <p>Principles of Anatomy and Physiology by Tortora GJ & Anagnostakos NP., Text Book of Medical Physiology by Guyton AC.</p>
Electronic Materials	<p>https://www.cellsalive.com/toc_cellbio.htm https://www.nature.com/ncb/ PubMed, Google-scholar</p>
Other Learning Materials	<p>Interactive CD series on physiology of different body systems. Computer simulation of general physiology. Human Physiology: From Cells to Systems (with CD-ROM and InfoTrac)</p>

2.3. Course Title: Medical biochemistry (MED1105)

A. Course Description and Objectives

1. Course Description

- The course is one semester course of 5 credit
- The lectures are provided to the students, covering the medical biochemistry principles of intracellular metabolism of carbohydrates, lipids, and proteins.
- Different skills -including Interpersonal skills and team work- are included in the course through scored seminars which prepared and presented by 7-10 students/group and may integrated with physiology and (OR) genetics accordingly.

2. Course Main Objective

This course aims to:

- Elucidate the basic metabolic concepts underlying normal and abnormal cell behavior.
- Describe the medical significance of the metabolism of different biomolecules; carbohydrates, lipids, and proteins in an integrated manner.
- Provide the basic metabolic basics of hormones and its mode of action.
- The course enables students exploring the intracellular biochemical mechanisms of different tissues in different physiological conditions as part of the preparation to MBBS program. The course also insisted to build self-directed learning and interpersonal skills.

B. Course Content

No	List of Topics (theory/practical)
1	Metabolism of carbohydrates : Glycolysis, TCA cycle, Gluconeogenesis, PPP, Glycogen Metabolism
2	Metabolism of lipids (<i>Biosynthesis, Oxidation, Cholesterol, Bile met., KB</i>)
3	Metabolism of proteins : Nitrogen balance, Transamination, deamination, Urea cycle
4	Amino acid metabolism (<i>Overview</i>)
5	Metabolic Integration : Metabolic Regulation (<i>Hormonal and non-hormonal</i>) – Metabolic integration (<i>Liver, muscles, brain, adipose tissues</i>)
6	Hormones : Biochemical structure, classification, and mode of action
7	Hormones: Biochemistry of Thyroid hormones
8	Hormones: Biochemistry of catecholamines
9	Signal transduction
10	Biochemistry of connective tissues
	Seminars : Pathophysiology of metabolic disorders (<i>Biochemical view</i>) <i>Diabetes – Fatty liver – Glycogen storage disorders – lactose intolerance – Fructose related disorders – Obesity and metabolic syndrome and life style – Amino acid disorders - Malnutrition – lipoprotein related disorders....</i>
	Tutorial and seminar preparation (Discussion)

C. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	End of term exam	Week-12	40
2	Oral presentations (Seminars)	Week-10/11	25
3	Comprehensive exam (End of year exam)	Univ calendar (<i>Final year exams</i>)	35

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

D. Learning Resources

Required Textbooks	<ul style="list-style-type: none"> ▪ Text book of Biochemistry with Clinical Correlations, Seventh ed. Devlin TM (2010). Ed. Wiley -LissNew York ▪ Principles of Biochemistry, A.L. Lehninger. D.L.Nelson and M.M. Cox, (2008) Worth Publication s. New York.
Essential References Materials	<ul style="list-style-type: none"> ▪ Harper's Illustrated Biochemistry, 28edition (2006) Robert K. Murray, David A Bender, Kathleen, M. Botham , Peter J. Kennelly, Victor W., Rodwell , P. Anthony Weil, Publishers The McGraw-Hill Companies. ▪ Instant Notes Biochemistry , Second Ed (2007) by B.D. Hames & N.M. Hooper
Electronic Materials	<ul style="list-style-type: none"> • Biochemical Society, www.biochemistry.org • Association for Clinical Biochemistry (ACB), www.acb.org.uk • Biochemistry website, www.bio.net/bionet • The ChemWeb Chemistry Portal, www.chemweb.com • Medscape, www.medscape.com • Biomedical central, www.biomedcentral.com/bmcpublichealth • www.kumc.edu/biochemistry/resource.html • www.medlib.iupui.edu/ref/biochem.htm • www.ag.unr.edu/shintani/bch400-600/Chapter%20notes%20current.htm • www.medicaleducationonline.org/component/option,com_docman/task,cat_view/gid,101/Itemid,37/
Other Learning Materials	<ul style="list-style-type: none"> • PDF colored notes for all lecture presentations will be delivered to students to help description topics and subtitles.

2.5. Course Title: Holy Quraan 1 (QR1101)

For more details, please visit the below link

<https://uqu.edu.sa/qurdwhmm/50125>

First-Year Course Specification

C.Third Semester Courses

3.1. Course Title: Physiology of body systems (MED1104)

A. Course Description and Objectives

1. Course Description

Body fluid compartments, composition of intra and extracellular fluids; positive and negative water balance, clinical significance of body fluids.
Components of blood and physiological role of formed elements in human body, hemostasis, blood groups, ABO and Rh systems.
Conducting system of heart, cardiac cycle, ECG, regulation of blood pressure, physiological abnormalities associated with cardiovascular system.
Respiratory volumes and capacities; regulation of respiration, physiological abnormalities associated with respiratory system.
Functional organization and motor control of nervous system, Reflex arc, sympathetic and parasympathetic nervous system, neurotransmitters.
Membrane potential, types and functions of muscles in the body.
Role of gastrointestinal tract in the process of digestion and absorption of food, physiological abnormalities associated with digestive system.
Functional anatomy of nephron, composition of healthy urine, micturition reflex, and physiological abnormalities associated with urinary system.
Mechanism of action of hormones on different body systems, physiological abnormalities associated with hormone release.
Organs of male and female reproductive system, mode of action of testicular and ovarian hormones, physiological abnormalities associated with male and female reproductive system.

2. Course Main Objective

At the completion of the physiology course, students are expected to be able to:

- Recognize the role and basic underlying principles of the different body systems in regulating the internal environment. The contents of environmental exchange include hemopoietic, cardiovascular, respiratory, gastrointestinal, urinary, endocrine and reproductive systems to understand the mechanisms involved in maintaining the internal stability by absorbing or secreting fluids or dissolving materials.
- Explain how different body systems achieve their functions and how these functions are regulated and interrelated.
- List the normal values of important physiological parameters and interpret such values when given.
- Predict the effects of disease processes on the normal functions and how the body responds & compensates for such disturbances.
- Acquire preliminary skills in using laboratories techniques commonly encountered in pre-clinical practice.

B. Course Content

No	List of Topics
1	Introduction To Human Body Fluids and Blood
2	Introduction To Cardiovascular System
3	Introduction To Respiratory System
4	Introduction To Central and Peripheral Nervous System
5	Introduction To Autonomic Nervous System and Neuromuscular System
6	Introduction To Digestive System
7	Introduction To Excretory System and Acid-Base Balance
8	Introduction To Endocrine System
9	Introduction To Male Reproductive System
10	Introduction To Female Reproductive System

C. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Continuous Assessment	7	30 %
2	Practical / Laboratory skill Assessment	13	20 %
3	Assignments	15	10 %
4	Final Assessment	16	40 %

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

D. Learning Resources

Required Textbooks	<p>Essentials of Human Anatomy & Physiology (12th Edition, 2017) by Elaine N. Marieb and Suzanne M. Keller ISBN: 978-01343 395326 Publisher: Pearson Education.</p> <p>Principles of Anatomy & Physiology (15th Edition, 2016) by Gerard J. Tortora & Bryan H. Derrickson ISBN: 978-1119329398 Publisher: John Wiley.</p> <p>Hole's Human Anatomy and Physiology (15th Edition, 2018) by David Shier, Jackie Butler, Ricki Lewis ISBN: 978-1259864568 Publisher: Mc Graw- Hill.</p>
Essential References Materials	<p>Ross and Wilson Anatomy and Physiology, in health and illness (13th Edition, 2018) by Anne Waugh & Allison Grant ISBN: 978-0702072772 • Publisher: Churchill Livingstone.</p> <p>Principles of Anatomy and Physiology by Tortora GJ & Anagnostakos NP. Text Book of Medical Physiology by Guyton AC.</p>
Electronic Materials	<p>https://www.cellsalive.com/toc_cellbio.htm https://www.nature.com/ncb/ PubMed, Google-scholar</p>
Other Learning Materials	<p>Interactive CD series on physiology of different body systems. Computer simulation of general physiology. Human Physiology: From Cells to Systems (with CD-ROM and InfoTrac)</p>

3.2. Course Title: Basics of microbiology (MED1106)

A. Course Description and Objectives

1. Course Description

Basic Microbiology is a five-credit course with 4 hours lectures and 2 hours practical sessions per week. The course is designed for students with some background in biology whose career path intersect or involve dealing with microbes. This course introduces the basic principles of microbiology, examining the microbes that inhabit our planet and our body and their effects on the individuals' health. Students will analyze the impact of microbiology on our life and means to control and understand about microbial growth and spread.

Class participation using an electronic device with internet connection will be a component of the course grade and used in every lecture to encourage participation and interaction.

2. Course Main Objective

1. Introduced to Microbiology, classification and impact of Microorganisms on our life.
2. Understand the significance of controlling microorganisms growth and spreading.
3. Understand the microbial structure and importance of each part in its pathogenicity.
4. Introduced to Epidemiology and infection spreading in community and healthcare sets.
5. Introduced to host immunity and response to infections.
6. Develop a basic knowledge about some of the basic diagnostic methods used in clinical Microbiology.
7. Introduced to some essential antimicrobial agents and antibiotic resistance and how they occur.

B. Course Content

No	List of Topics	Lecture L Practical P
1	Introduction to Microbiology and Microbial Taxonomy & Classification Safety rule in Microbiology and Parasitology laboratory, instruments & media	L P
2	Control of Microbial growth and spread Sterile and aseptic techniques	L P
3	Basic nutritional, Chemical and physical requirements Microbial Structure Isolation of pure culture, Gram staining and Microscopy.	L L P
4	Normal Flora of human body & opportunistic pathogen Microbial pathogenicity Special stain & Biochemical tests	L L P
5	Viral structure and pathogenicity Viral infection identification	L P
6	Mycology and Mycoses General Concepts of Parasitology: Medical Terminology for Parasitology Isolation and Identification of fungi	L P
7	Morphology and life cycle of Helminths Epidemiology, Pathogenesis, Clinical pictures and Prevention measures of Helminths	L

	Laboratory isolation and Examination of Helminths	P
8	Morphology and life cycle of Enteric, Blood and Tissue Protozoa Epidemiology, Pathogenesis and clinical pictures, prevention measures for enteric, blood and tissue protozoa	L
	Laboratory isolation and Examination of Protozoa	P
9	Antimicrobial agents and resistance	L
	Antibiotic Susceptibility Test and resistance	P
10	How infection spread?	L
	Vector-borne disease spread	
	Practical Final exam	P

C. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Mid-term theory exam	6 th	20%
2	Lab continuous assessment (Reports & Lab assessment)	1 st - 10 th	15%
3	Course works (Quizzes)	Weekly	5%
4	Practical Final exam	11 th	15%
5	Theory exam	13 th	45%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

D. Learning Resources

Required Textbooks	<p>a. Harvey, R.A. AND Cornelissen, C.N. (2012). Microbiology, 3rd edition. Lippincott Williams and Wilkins.</p> <p>b. Murray et al. Manual of Clinical Microbiology, 8th edition. American Society for Microbiology, WashingtonDC, 2003 .ISBN 1555812554.</p> <p>b. Parasitology for Medical and Clinical Laboratory Professionals (Medical Lab Technician Solutions to Enhance Your Courses!) 1st Edition by John W. Ridley, Ph.D.</p>
Essential References Materials	<p>a. Practical Handbook of Microbiology; By Goldman E, 2004.</p> <p>b. Brooks, G.F., Butel, J.S. and Morse, S.A. (2001). Medical Microbiology. Twenty second edition.</p> <p>c. Lange Medical Books/McGraw-Hill. Medical Publishing Division.</p> <p>d. Diagnostic Medical Parasitology, 6th Edition by <u>Lynne Shore Garcia</u></p>
Electronic Materials	Saudi Digital Library (SDL)
Other Learning Materials	Blackboard software

3.3. Course Title: Introduction to medical research (MED1302)

A. Course Description and Objectives

1. Course Description

This course aims to introduce medical students to basic concepts of medical research. The course will cover the following concepts: 1- Basic epidemiological and scientific research definitions and the differences between them. 2-Introduction to medical research skills, including using essential Boolean search elements in research engines and the difference between the types of research writing (thesis, report, essay, proposal ...etc.), medical research ethics and research gap.

2. Course Main Objective

- Basics Definitions and terminology of medical epidemiology
- Understand the Boolean Tools and Online libraries
- Advanced Academic Writing skills
- Understand of the purpose of ethical review, review process, research governance
- Identify the research gap
- Understand and apply the scientific approach of thinking

B. Course Content

No	List of Topics
1	An introduction to research: What is Research?
2	The art of reading and looking for information in various materials I <ul style="list-style-type: none"> • Improve student reading comprehension and retention in scientific reading
3	The art of reading and looking for information in various materials II <ul style="list-style-type: none"> • Develop computer and internet skills and ability to retrieve, manage, and evaluate digital information
4	Advanced academic English writing and reading skills I <ul style="list-style-type: none"> • Formulate an appropriate research question on clinical observation
5	What is medical ethics and why is it important? <ul style="list-style-type: none"> • Characteristics of medical ethics
6	Advanced academic English writing and reading skills II <ul style="list-style-type: none"> • Formulation of aims and objectives
7	What is scientific research? <ul style="list-style-type: none"> • Identification of Gap of knowledge
8	What is scientific research? <ul style="list-style-type: none"> • How research a question
9	Advanced academic English writing and reading skills III <ul style="list-style-type: none"> • Discussion and formulating arguments in academic setting
10	Sources of information for research

C. Assessment Tasks for Students

#	Assessment task*	Percentage of Total Assessment Score
1	End of course written exam	50%
2	Essay	30%
3	Online assignment	20%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

D. Assessment Tasks for Students

Required Textbooks	2. Basic medical language 3. Longman Academic Writing Series 5 Essays to research papers, Meyers, 2013
Essential References Materials	3- Manual for writers of research papers, theses, and dissertations, Turabian, 2018 4- Critical Thinking Skills for Healthcare 1 st Edition
Electronic Materials	http://www.merckmanuals.com/home/pronunciations http://www.merckmanuals.com/professional/index.html https://www.merriam-webster.com/browse/medical/a https://medlineplus.gov/webeval/webeval.html
Other Learning Materials	https://scholar.google.com/ http://www.hemingwayapp.com/ https://www.grammarly.com/

3.4. Course Title: Islamic culture 1 (ICC1201)

For more details, please visit the below link

<https://docdro.id/683Rakj>

Supporting, questions and suggestions

Student support unit

About student support unit:

<https://uqu.edu.sa/colmedsc/90033>

Direct link:

<https://uqu.edu.sa/colmedsc/App/Forms/Show/24417>

Questions and suggestions – E- Ticket

Direct link: <https://uq.sa/0jxopW>

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