



جامعة اليرموك
Yarmouk University
كلية الطب
Faculty of Medicine



Document Approval Date	Course Syllabus	Document Code
		AP01-PR05

Department: Basic Medical Sciences	Official Stamp:
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Course Identification	
Course Name: Molecular Genetics	Course Code and Number: MED210
Number of Credit Hours: 3	Semester: First semester
Course Status:	Teaching Language: English
Pre-requisite: -	Course Coordinator: Dr. Zaid Altaany

General Information	
Teaching Method	<input checked="" type="checkbox"/> Face-to-Face <input type="checkbox"/> Online <input type="checkbox"/> Blended
Course Description	This course provides a solid understanding of the chemical nature of genetic material, transcription and the control of gene expression, and DNA cloning and the use of recombinant DNA molecules in modifying gene expression. Furthermore, this course will provide the core information required to understand molecular genetics and will examine the central roles of nucleic acids and proteins in the storage and flow of genetic information, and the role of genetics in cancer development, and the analysis and manipulation of genes at the molecular level.
Course Objectives	This course provides an exhaustive overview of the fundamental principles guiding molecular genetics approaches. Key learning objectives include: - demonstrate knowledge and understanding of the molecular machinery of DNA transcription, expression and translation in living cells. - understanding the concept of inheritance of genetic information and genes action, including dominance, epistasis, environmental factors and their contribution to the manifestation of traits; - understanding the concept of genetic mutations, including types, repair machinery, common diseases related to mutations and types of mutation screening methods. -develop and demonstrate an understanding of the structure and function of genes and the organization of the human genome; the patterns of inheritance and clinical manifestations of genetic diseases; chromosomes, chromosomal abnormalities, and the clinical features of common chromosomal disorders; population genetics; inborn errors of metabolism; and inherited cancer syndromes.



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Course Learning Outcomes (CLOs)

- CLO1:** Gain a comprehensive, detailed understanding of the chemical basis of heredity, and DNA structure.
- CLO2:** Describe the basic aspects of the flow of genetic information from DNA to proteins
- CLO3:** Explain and make deductions about the differences between the core molecular processes of replication, transcription and translation.
- CLO4:** Recognize different kinds of mutations (frameshift, insertions, deletions, point mutations), and predict their effect on amino acid sequence and protein structure.
- CLO5:** Identify interactions among genes, environmental factors, and behaviors, and their roles in health and disease.
- CLO6:** Apply knowledge of genetic principles and genomic technologies to improve quality of health-care through the diagnosis, screening, intervention or prevention of disease and the maintenance of health.
- CLO7:** understand recombinant DNA technology and Its applications





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Mapping Course Learning Outcomes CLOs to Program Learning Outcomes PLOs														
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PLO 13	PLO 14
CLO 1	*													
CLO 2	*		*				*							
CLO 3	*	*												
CLO 4						*								
CLO 5		*												
CLO 6	*	*		*										
CLO 7	*			*	*									

Assessment Methods				
Assessment Type	Date and Time	Assessment Method	Mark (%)	CLOs
Midterm Exam	To be announce according to department schedule	MCQ test	50 %	CLO1 CLO2 CLO3 CLO4
Activities*	Activity (1)			
	Activity (2)			
	Activity (3)			
	Activity (4)			
	Activity (5)			
Final Exam	To be announce according to department schedule	MCQ test	50 %	CLO4 CLO5 CLO6 CLO7

*The instructor must choose at least three activities from the following: quizzes, assignments, projects, videos, discussions, etc.



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Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
Week 1	Gene Interaction	Face-to-face class
Week 2	Human Hereditary Disease and Genetic Counseling	Face-to-face class
Week 3	DNA Structure and Replication	Face-to-face class
Week 4	Molecular Biology of Transcription and RNA Processing	Face-to-face class
Week 5	Molecular Biology of Transcription and RNA Processing	Face-to-face class
Week 6	The Molecular Biology of Translation	Face-to-face class
Week 7	Human Genetic Screening	Face-to-face class
Week 8	Eukaryotic Chromosome Abnormalities and Molecular Organization	Face-to-face class
Week 9	Gene Mutation, DNA Repair, and Homologous Recombination	Face-to-face class
Week 10	Regulation of Gene Expression in Bacteria and Bacteriophage	Face-to-face class
Week 11	Regulation of Gene Expression in Eukaryotes	Face-to-face class
Week 12	Analysis of Gene Function by Forward Genetics and Reverse Genetics	Face-to-face class
Week 13	The Genetics of Cancer	Face-to-face class



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Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
Week 14	Recombinant DNA Technology and Its Applications	Face-to-face class
Week 15	Genomics: Genetics from a Whole-Genome Perspective	Face-to-face class
Week 16	Final Exam Week	

**Instruction method is as follows:

- **Face-to-Face course:** Face-to-face class
- **Online course:** Interactive synchronous or asynchronous
- **Blended course:** Face-to-face or Online (synchronous or asynchronous)

Main Textbook and References	
Main Textbook	<ul style="list-style-type: none">• Genetic Analysis: An Integrated Approach by Mark Sanders and John Bowman (2018) Pearson Publisher
Other References	<ul style="list-style-type: none">• Genetics in Medicine by James S. Thompson and Margaret W. Thompson, 8th Edition (2015)• Genetics: Analysis and Principles 7th Edition by Robert Brooker (2021)

Policies and Instructions***	
Attendance	Attendance is mandatory and you have a professional obligation to attend all scheduled lectures.
Activities	Discussions and exercises in problem solving.
Late Submission	-
Exams	The examination will be conducted in English, 2 MCQ exams (Mid and final), and the final grade will be out of 100. The passing grade is 50
Cheating and Plagiarism	Any Forms of academic dishonesty such as exam cheating, recycling/resubmitting work, fabricating information, or plagiarism is not allowed.

***For more information, please see the student handbook.



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Department: Basic Medical Sciences

Official Stamp:

Course Identification	
Course Name: General Pharmacology	Course Code and Number: M 212
Number of Credit Hours: 3	Semester: 1 st semester – Academic year 2021/2022
Course Status: Face-to-Face course	Teaching Language: English
Pre-requisite: Physiology	Course Coordinator: Dr. Laila M. Matalqah

General Information	
Teaching Method	<input checked="" type="checkbox"/> Face-to-Face <input type="checkbox"/> Online <input type="checkbox"/> Blended
Course Description	Pharmacology in its broadest sense is the study of chemicals on biologic system. This course is designed to provide medical students with the basic knowledge of pharmacology. This course emphasis on drugs group and prototypes rather than repetitive details about individual drugs. A brief introduction on the pathophysiologic states which justify the use of various classes of drugs will be discussed.
Course Objectives	Introduce the students to the basic principles of pharmacology, including pharmacodynamics and pharmacokinetics and to discuss different classes of drugs that act on different body systems such as; autonomic nervous system, cardiovascular system, respiratory system and endocrine system.
Course Learning Outcomes (CLOs)	The student will be able to: CLO1 Describe the basic pharmacological concepts including pharmacokinetics; pharmacodynamics; drug metabolism; and drug-drug interactions; and explain how these properties can influence route of administration, drug action; drug efficacy and potency CLO2 Calculate drug-specific and patient-specific pharmacokinetic parameters and the physiochemical properties that influence rates of drug disposition and clearance in the body, and how these parameters can be used to monitor, design and modify



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	<p>appropriate dosing regimens of drugs in specific patient populations.</p> <p>CLO3 Recognize different pharmacodynamics concepts of drug such as drug agonists and antagonists, affinity, efficacy, tolerance and desensitization</p> <p>CLO4 Categorize the major drugs and drug classes that currently used in medical practice according to their mechanism of action and indication and describe their contraindications, clinical use, pharmacokinetic properties, major adverse effects and clinically significant drug interactions.</p> <p>CLO5 Apply the pharmacological principles of drugs together with both diseases specific and patient-specific factors into clinical decision-making to select the most appropriate medication(s) for the effective pharmacotherapy of a given disease or condition in a specific patient.</p> <p>CLO6 Communicate effectively and work collaboratively together with peers in the small group setting to successfully address problems of pharmacological significance.</p> <p>CLO7 Demonstrate professionalism by behaving in a professional and courteous manner when engaged in course activities or interacting with course faculty and staff, and by being punctual in attendance at required course activities such as small groups, and exams</p>
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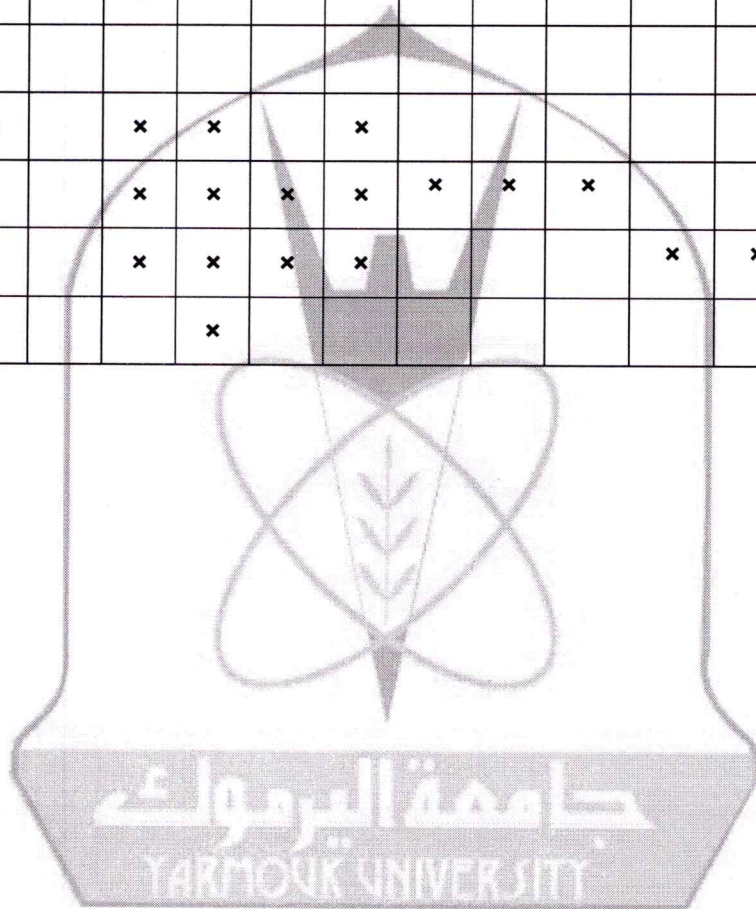


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Mapping Course Learning Outcomes CLOs to Program Learning Outcomes PLOs														
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12	PLO 13	PLO 14
CLO 1	x													
CLO 2	x	x		x										
CLO 3	x													
CLO 4	x	x		x	x		x							
CLO 5				x	x	x	x	x	x	x				
CLO 6				x	x	x	x				x	x	x	x
CLO 7					x									





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Assessment Methods				
Assessment Type	Date and Time	Assessment Method	Mark (%)	CLOs
Midterm Exam		Exam	50%	
Activities*	Activity (1)	1 st Quiz (zero-mark)		
	Activity (2)	2 nd Quiz unmarked		
	Activity (3)	1 st Small groups discussion Case 1		
	Activity (4)	2 nd small groups discussion Case 2		
	Activity (5)	An assignment		
Final Exam		Exam	50%	

*The instructor must choose at least three activities from the following: quizzes, assignments, projects, videos, discussions, etc.

Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
Week 1	Pharmacokinetic concepts Absorption	Face to face classroom lecture
	Pharmacokinetic concepts Distribution	Face to face classroom lecture
Week 2	Pharmacokinetic concepts Metabolism and Excretion	Face to face classroom lecture
	Pharmacodynamics concepts Receptors and drug targets	Face to face classroom lecture
Week 3	Pharmacodynamics concepts Affinity, potency and efficacy	Face to face classroom lecture
	Pharmacodynamics concepts Drug agonist and antagonist	Face to face classroom lecture
Week 4	Principle of antimicrobial therapy Cell wall synthesis inhibitors	Face to face classroom lecture



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Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
	Protein synthesis inhibitor (Tetracyclines Aminoglycosides and Macrolides)	Face to face classroom lecture
Week 5	Protein synthesis inhibitor (Macrolides and others)	Face to face classroom lecture
	Inhibitors of Nucleic Acid Function or Synthesis (Quinolone, Sulfonamides and Trimethoprim)	Face to face classroom lecture
Week 6	antiviral agents	Face to face classroom lecture
	Antifungal agents	Face to face classroom lecture
Week 7	Antiprotozoal and anthelemantics	Face to face classroom lecture
	Midterm Exam	
Week 8	(Pharmacology of Autonomic nervous system (ANS (Introduction) Pharmacology of ANS Cholinergic agonists	Face to face classroom lecture
	Pharmacology of ANS Anticholinergic	Face to face classroom lecture
Week 9	Pharmacology of ANS Adrenergic agonists	Face to face classroom lecture
	Pharmacology of ANS Antiadrenergics	Face to face classroom lecture
Week 10	Pharmacology of CVS Diuretics	Face to face classroom lecture
	Pharmacology of CVS ACEI and ARB	Face to face classroom lecture
Week 11	Calcium Channel blocker CCB	Face to face classroom lecture
	Antihyperlipidemia	Face to face classroom lecture
Week 12	Anticoagulant & Thrombolytic Agents	Face to face classroom lecture
	Pharmacology of respiratory system Asthma	Face to face classroom lecture
Week 13	Histamine and antihistamine	Face to face classroom lecture



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Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
Week 14	Pharmacology of endocrine system Drugs for diabetics	Face to face classroom lecture
Week 15	Antiinflammatory and antipyretics and analgesics (NSAIDs and Paracetamol)	Face to face classroom lecture
Week 16	Final Exam Week	

**Instruction method is as follows:

- **Face-to-Face course:** Face-to-face class
- **Online course:** Interactive synchronous or asynchronous
- **Blended course:** Face-to-face or Online (synchronous or asynchronous)

Main Textbook and References	
Main Textbook	Lippincott's Illustrated Reviews: Pharmacology. 7 th Ed. Lippincotts Williams & Wilkins. 2019
Other References	A Textbook of Clinical Pharmacology and Therapeutics, Fifth edition, By James M Ritter et al., fifth edition, 2020 Principles of Medical Pharmacology. 7th edition. By H. Kalant, D. Grant and J. Mitchell. 2020 Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy. Third Edition By: D. Golan, A. Tashjian, E. Armstrong and A. Armstrong

Policies and Instructions***	
Attendance	Excellent attendance is expected Yarmouk University policy requires assigning ZERO grades (35%) if a student misses 15% of the classes that are not excused This represents missing more than 6 lectures.
Activities	Students should interact actively with lecturer. Small groups' discussions are allowed under supervision of lecturer. Students should comply with the lecture etiquettes and don't interrupt the educational process. Please don't disrupt lectures with conversations or chatting
Late Submission	Please avoid entering lectures late. If you are late more for more than 10 minutes you will be counted absent despite if you have attended the lecture
Exams	Makeup exams should not be given unless there is a valid excuse according to the Yarmouk University policy. I expect documentary evidence



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	regarding all missed exams. You must contact me within 24 hours if you .unable to take an exam at the scheduled time Be noted that all make up exams are essay questions exams, and you are .not allowed to have the same bonus (if given) as other students
Cheating and Plagiarism	Absolutely forbidden

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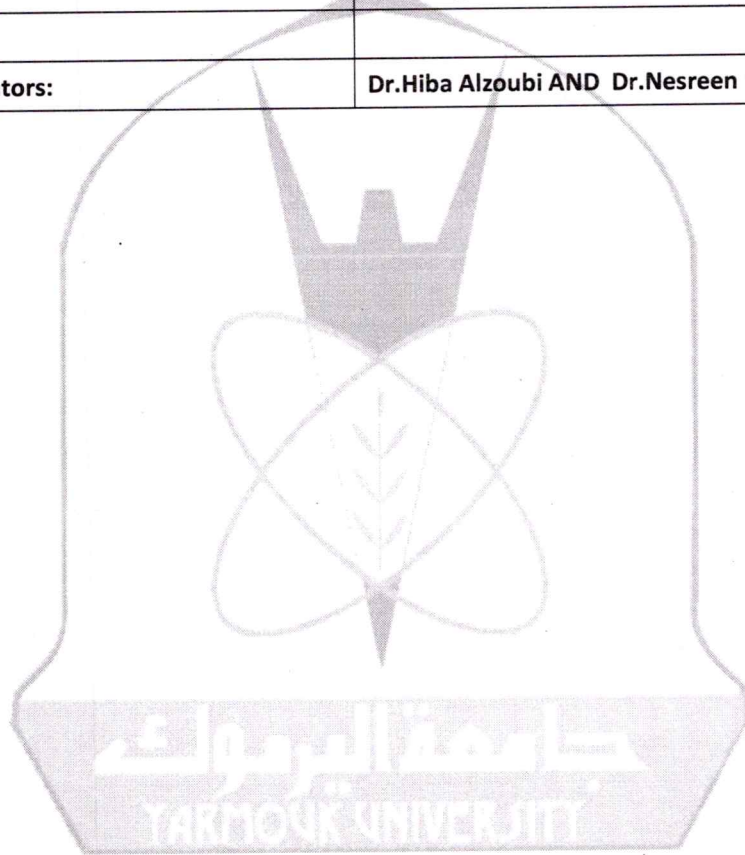


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Department: Basic Medical sciences

Official Stamp:

Course Identification	
Course Name: Pathology	Course Code and Number: MED211/MED211L
Number of Credit Hours: 3	Semester: First 22/23
Course Status:	Teaching Language: English
Pre-requisite:	
Course Coordinators:	Dr.Hiba Alzoubi AND Dr.Nesreen Bataineh



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General Information	
Teaching Method	Blended
Course Description	Pathology is the branch of medicine that deals with the causes and mechanisms of human diseases. Therefore, it is one of main foundations of medicine, and it serves to bridge basic medical disciplines with clinical sciences.
Course Objectives	<ul style="list-style-type: none">- Help the student to use medical terminology and name of the diseases confidently.- Highlighting the practical application of pathological concept in student's life.- Help students to integrate basic pathology to other basic sciences in medicine.- Provide the scientific foundation for the field of medicine
Course Learning Outcomes (CLOs) Upon successful completion of this course students will be able to:	<p>CLO1: Recognize the essential basic pathological processes including cell death and injury, inflammation, thrombosis and neoplasia</p> <p>CLO2: Discuss the relation of these essential basic pathological processes to the pathogenesis of common and important diseases.</p> <p>CLO3: Demonstrate an understanding of the predisposing factors, causes, pathogenesis, morphology and potential complications of such diseases.</p> <p>CLO4: Correlate clinical features with the causes and mechanisms of disease.</p> <p>CLO5: Apply the pathological processes in the investigation, management and prevention of disease.</p> <p>CLO6: Implement the terminology for the field of pathology correctly and contextually.</p> <p>CLO7: Acquire, read, interpret and integrate information from a wide variety of sources in a planned and timely manner.</p> <p>CLO8: Employ the basic knowledge in the recognition of surgical specimen processing and examine wide variety of gross and microscopic morphological features for different diseases.</p> <p>CLO9: Engage in critical thinking and problem-solving</p>



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Mapping Course Learning Outcomes CLOs to Program Learning Outcomes PLOs

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12	PLO13	PLO14
CLO1	x													
CLO2	x													
CLO3	x													
CLO4	x													
CLO5			x	x			x							
CLO6	x		x											
CLO7								x						
CLO8			x											
CLO9								x	x					

Assessment Methods

Assessment Type	Date and Time	Assessment Method	Mark (%)	CLOs
Midterm Exam				
Activities*	Activity (1)			
	Activity (2)			
	Activity (3)			
	Activity (4)			
	Activity (5)			
Final Exam				

*The instructor must choose at least three activities from the following: quizzes, assignments, projects, videos, discussions, etc.



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Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
Week 1 Sun 9/10/2022	Introduction	Face-Face
Tue 11/10/2022	Cellular responses and adaptation to stress	Face-Face
Sat 15/10/2022	Activity	Online (asynchronous)
Week 2 Sun 16/10/2022	Overview of Cell Injury and Cell Death	Face-Face
Tue 18/10/2022	Apoptosis	Face-Face
Sat 22/10/2022	Activity	Online (asynchronous)
	Cellular Pathology Tissue Processing and Microscopy training	
Week 3 Sun 23/10/2022	Mechanisms of cell injury	Face-Face
Tue 25/10/2022	Intracellular accumulation	Face-Face
Sat 29/10/2022	Activity (Intracellular accumulation)	Online (asynchronous)
	Cell Injury Virtual Pathology	
Week 4 Sun 30/10/2022	Acute inflammation 1	Face-Face
Tue 01/11/2022	Acute inflammation 2	Face-Face
Sat 05/11/2022	Activity	Online (asynchronous)
Week 5 Sun 06/11/2022	Acute inflammation 3	Face-Face
Tue 08/11/2022	Chemical mediators 1	Face-Face
Sat 12/11/2022	Activity	Online (asynchronous)
Week 6 Sun 13/11/2022	Chemical mediators 2	Face-Face
Tue 15/11/2022	Chronic inflammation	Face-Face
Sat 19/11/2022	Activity	Online (asynchronous)
Week 7	Tissue Repair	Face-Face



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Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
Sun 20/11/2022		
Tue 22/11/2022	Hemodynamic Disorder 1	Face-Face
Sat 26/11/2022	Activity	Online (asynchronous)
	Inflammation Virtual Pathology	
Week 8		Face-Face
Sun 27/11/2022		
Tue 29/11/2022	MID EXAM	Face-Face
Sat 03/12/2022		Online (asynchronous)
Week 9	Hemodynamic Disorder 2	Face-Face
Sun 04/12/2022		
Tue 06/12/2022	Hemodynamic Disorder 3	
Sat 10/12/2022	Activity	
Week 10	Hemodynamic Disorder 4	Face-Face
Sun 11/12/2022		
Tue 13/12/2022	Neoplasia 1	Face-Face
Sat 17/12/2022	Activity	Online (asynchronous)
	Hemodynamic disorders Virtual Pathology	
Week 11	Neoplasia 2	Face-Face
Sun 18/12/2022		
Tue 20/12/2022	Neoplasia 3	Face-Face
Sat 24/12/2022	Activity	Online (asynchronous)
	Anatomic Pathology Case Study	
Week 12	Holiday	
Sun 25/12/2022		
Tue 27/12/2022	Neoplasia 4	Face-Face
Sat 31/12/2022	Activity (Neoplasia e-Learning based activities)	Online (asynchronous)



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Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
Week 13 Sun 01/01/2023	Holiday	
Tue 03/01/2023	Neoplasia 5	Face-Face
Sat 07/01/2023	Activity	Online (asynchronous)
Week 14 Sun 08/01/2023	Neoplasia 6	Face-Face
Tue 10/01/2023	Neoplasia 7	
Sat 14/01/2023	Activity (General pathology exit survey)	Online (asynchronous)
	Neoplasia Virtual Pathology	
Week 15		
	Final Exam (Provisional date)	
Week 16	Final Exam Week	

**Instruction method is as follows:

- **Face-to-Face course:** Face-to-face class
- **Online course:** Interactive synchronous or asynchronous
- **Blended course:** Face-to-face or Online (synchronous or asynchronous)

Main Textbook and References	
Main Textbook	Kumar, Cotran and Robbins Basic Pathology, 10th edition
Other References	Harsh Mohan, Textbook of Pathology

Policies and Instructions***



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Attendance	Attendance is mandatory and you have a professional obligation to attend all scheduled lectures.
Activities	Discussions and exercises in problem solving
Late Submission	-
Exams	The examination will be conducted in English, 2 MCQ exams (Mid and final), and the final grade will be out of 100. The passing grade is 50
Cheating and Plagiarism	Any Forms of academic dishonesty such as exam cheating, recycling/resubmitting work, fabricating information, or plagiarism is not allowed.

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Department: Basic Medical Sciences	Official Stamp:
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Course Identification	
Course Name: General Microbiology	Course Code and Number: MED 213
Number of Credit Hours: 3	Semester: Second year First semester
Course Status:	Teaching Language: English
Pre-requisite: General biology (Biol 111)	Course Coordinator: Prof Dr. Waleed Al Momani

General Information	
Teaching Method	<input type="checkbox"/> Face-to-Face <input type="checkbox"/> Online <input checked="" type="checkbox"/> Blended
Course Description	This is an introductory course in basic medical microbiology for students, designed mainly to prepare students to understand the microbiology of the modules. It covers basic principles of bacteriology, virology, mycology, immunology and parasitology. Furthermore, basic concepts of infection control in hospitals, sterilization, disinfection, and specimen collection for the clinical microbiology laboratory. The course will cover an overview of the major systemic infections. The laboratory part covers basic techniques in microbiology.
Course Objectives	<ol style="list-style-type: none">1. Learn the morphology & bacterial cell structure.2. Define bacterial spore structure, sporulation, & germination.3. Understand bacterial physiology, growth & metabolism.4. The student will be able to assess treatment strategies including the appropriate use of antimicrobial agents and common mechanisms of antimicrobial action and resistance.5. Understand & learn about genetics including mutation, genetic transfer between bacteria & genetic recombination.6. Define & understand the mechanism of normal flora of human body at different anatomical sites.7. Understand pathogenesis & virulence factors of bacteria.8. Define microbiology of health care facilities9. The student will be able to explain interventions employed to prevent infectious diseases including infection control measure and vaccines10. Understand the mechanism & types of immune systems of the human body.



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	<p>11. Understand microbial systemic infections</p> <p>12. The student will be able to explain general and specific mechanisms by which an infectious agent causes disease.</p> <p>13. The student will be able to recognize and diagnose common infectious diseases from the clinical presentation and associated microbiology</p> <p>14. The student will be able to describe the epidemiology of infectious agents including how infectious diseases are transmitted.</p>
Course Learning Outcomes (CLOs)	<p>CLO1: Describe in details the morphology, the culture, spread, biochemical activities, antigenic characters, pathogenesis, laboratory diagnosis, treatment, prevention & control measures of each bacterium.</p> <p>CLO2: Define the organs commonly involved in the infection.</p> <p>CLO3: Recall the relationship of this infection to symptoms, relapse and the accompanying pathology.</p> <p>CLO4: Explain the methods of microorganisms control, e.g. chemotherapy & vaccines.</p> <p>CLO5: Solve problems in the context of this understanding.</p> <p>CLO6: Demonstrate practical skills in fundamental microbiological techniques.</p> <p>CLO7: Present and interpret results obtained from using these techniques.</p> <p>CLO8: Present information clearly in both written and oral form.</p> <p>CLO9: Understand treatment strategies including the appropriate use of antimicrobial agents and common mechanisms of antimicrobial action and resistance.</p> <p>CLO10: Describe the epidemiology of infectious agents including how infectious diseases are transmitted.</p> <p>CLO11: Recognize and diagnose common infectious diseases from the clinical presentation and associated microbiology.</p> <p>CLO12: Explain interventions employed to prevent infectious diseases including infection control measure and vaccines</p>



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CLO1	X		x											
CLO2	X													
CLO3	X					X								
CLO4	X		x											
CLO5			x											
CLO6	X							X						
CLO7	X		X											
CLO8	X							X						
CLO9	X						X							
CLO10	X		X											
CLO11	X						X							
CLO12	X						X							





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Assessment Methods					
Assessment Type	Date and Time	Assessment Method	Mark (%)	CLOs	
Midterm Exam		MCQ	40	1-5	
Activities*	Activity (1)	Quiz	MCQ	3	1,2,3
	Activity (2)	Assignment	review	2	5&10
	Activity (3)	Research project	report	2	5&6
	Activity (4)	Oral presentation	3 mins talk	3	10&11
Final Exam		MCQ	50	7,8,9,12	

*The instructor must choose at least three activities from the following: quizzes, assignments, projects, videos, discussions, etc.

Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
Week 1	Introduction and history of microbiology	Face to face lecture
	Cell structure and function	Zoom interactive lecture
Week 2	Taxonomy and classification	Face to face lecture
	Diversity of Microorganisms and microbial Techniques- I & II	Zoom interactive lecture
Week 3	Microbial physiology and Growth.	Face to face lecture
	Bacterial genetics	Zoom interactive lecture
Week 4	Sterilization and disinfection	Face to face lecture
	Antimicrobial agents – I.	Zoom interactive lecture
Week 5	Mechanisms of antibiotics resistance- II	Face to face lecture
	Endogenous microbial flora.	Zoom interactive lecture
Week 6	Microbial pathogenesis and virulence	Face to face lecture
	Epidemiology and disease transmission	Zoom interactive lecture
Week 7	Hospital Acquired Infection (Nosocomial infection)	Face to face lecture
	Midterm Examination	Zoom interactive lecture
Week 8	Specimen Handling & collection in Microbiology Laboratory	Face to face lecture
	Importance of hand washing	Zoom interactive lecture
Week 9	Nonspecific immune system	Face to face lecture
	Specific immune response as the third line of Defense	Zoom interactive lecture



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Course Contents, Schedule, and Instruction Methods		
Week	Course Content	Instruction Method**
Week 10	Vaccination.	Face to face lecture
	Eyes, Ears infections	Zoom interactive lecture
Week 11	Super facial and deep wounds	Face to face lecture
	Infectious diseases of the GI tract	Zoom interactive lecture
Week 12	Infections of the GU tract	Face to face lecture
	Blood stream infections	Zoom interactive lecture
Week 13	Respiratory infections	Face to face lecture
	Infection of the oral cavity	Zoom interactive lecture
Week 14	Infection of the CVS and the CNS I	Face to face lecture
	Infection of the CVS and the CNS II	Zoom interactive lecture
Week 15	Reemerging infectious diseases I	Face to face lecture
	Reemerging infectious diseases II	Zoom interactive lecture
Week 16	Final Exam Week	

**Instruction method is as follows:

- **Face-to-Face course:** Face-to-face class
- **Online course:** Interactive synchronous or asynchronous
- **Blended course:** Face-to-face or Online (synchronous or asynchronous)

Main Textbook and References	
Main Textbook	Burton's Microbiology for the Health Sciences, Tenth Edition, by Paul G. Engelkirk and Janet Duben- Engelkirk. (2015)
Other References	Prescott's Principles of Microbiology 2 nd Edition, By Joanne Willey and Kathleen Sandman (ISBN10: 126025903X) (2021)

Policies and Instructions***	
Attendance	Attendance and participation are extremely important, and the usual University rules will apply. Attendance will be recorded for each class. Absence of 10% will result in a first written warning. Absence of 15% of the course will result in a second warning. Absence of 20% or more will result in forfeiting the course and the student will not be permitted to attend the final examination. Should a student encounter any special circumstances (i.e. medical or personal), he/she



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	is encouraged to discuss this with the instructor and written proof will be required to delete any absences from his/her attendance records
Activities	Clinical lab visit, Discussion, Microbiology science day
Late Submission	
Exams	Midterm exam, Final exam and activities
Cheating and Plagiarism	Cheating and plagiarism may cause you to be expelled and your exam results to be annulled.

***For more information, please see the student handbook.

