

نموذج توصيف مقرر
Course Description Form

Name of College\Faculty : Science العلوم
Name of Department: Biological Sciences اسم القسم العلمي: العلوم البيولوجية

Course Name	Principles of Microbial Pathogenesis مبادئ نشوء الأمراض الميكروبية	اسم المقرر
Course No.	0495-444	رقم المقرر
No. of Credits	3	عدد الوحدات
Theoretical Hours	3	عدد الساعات النظرية
Practical Hours	0	عدد الساعات المحلّية
Course topics		مواضيع المقرر
Introduction to pathogenesis; attachment, entry, and exit of microorganisms; spread of microbes throughout the body; microbe phagocyte interactions; microbial interference with the immune response; mechanisms of cellular and tissue damage; failures of pathogen elimination; host factors influencing susceptibility to disease; control measures; hospital-acquired interactions		
Text book: (Name, Author , Year , Publisher)		عنوان الكتاب : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)
Mim's Medical Microbiology and Immunology (7th edn.), by Richard V. Goering, Hazel M. Dockrell, Mark Zuckerman, and Peter L. Chiodini (2024), Elsevier - or more recent edition		
References: (Name , Author , Year . Publisher)		عنوان المرجع : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)
Mim's Pathogenesis of Infectious Disease (6th edn.), by Anthony A. Nash, Robert G. Dalziel, and J. Ross Fitzgerald (2015), Academic Press - or more recent edition		

Prerequisites				متطلبات المقرر		
Grading	Exams	20	%	20	الاختبارات	
	Quizzes	10	%	10	امتحانات قصيرة	
	H.W. term papers/presentations	25	%	25	واجبات	
	Project (field study)	0	%	0	مشاريع (دراسة ميدانية)	
	Final	45	%	45	الاختبار النهائي	
	100 %					آلية رصد المقرر



أهداف مخرجات المقرر :

الرقم	أهداف مخرجات المقرر :	أمثله من المقرر لتحقيق هذه الأهداف	المستوى المطلوب من عضو هيئة التدريس لتحقيق الهدف :		
			عالي	متوسط	منخفض
1					
2					
3					
4					
5					
			الحقول		
			المهارات		
			منسق المقرر (اسم عضو هيئة التدريس المشرف على توصيف المقرر ، توقيعه ، الختم و الرتبة الأكاديمية)		
			تاريخ إعداد النموذج		
			/ /		

Course objectives

No.	Course Objectives (Learning Outcomes)	Example(s) of relevant (Topics and activities)	Recommended Level to satisfy the objectives		
			High	Medium	Low
1	understand the basic concept of pathogenesis, infection, disease, and virulence, and formulate an overall awareness of infection transmission routes involving organisms from different kingdoms	Define pathogenicity and virulence; understand sequence of infectious cycle; pathogenesis in animal and plant hosts; commensal microbiota localisation in the body		✓	
2	describe the various sites at which pathogens attach to, enter, and exit from the body in addition to their modes of dissemination	Skin, respiratory tract, conjunctiva, urogenital tract, wounds; direct spread; role of lymph nodes; impairment of lymphatic transfer; blood-borne infections; nervous system complications		✓	
3	discuss the complex interplay between pathogenic microbes and phagocytes of the immune system, and the extent of tissue damage microbes incur on the host	Neutrophil defensins and cathelicidins; macrophage ROS generation; NETs; evasion/manipulation of phagocytosis by microbes; pore-forming and binary toxins; hypersensitivity-mediated damage	✓		
4	compare and contrast genetic and non-genetic factors affecting host susceptibility to disease	Mutations in individual receptor genes; HLA-independent factors; isolated populations; age (senescence, infancy); gender; malnutrition; socio-economic implications; warfare; stress	✓		
5	evaluate the importance of epidemiological considerations; review the most common hospital-acquired infections, how and why they occur, and control measures employed to prevent their spread	Reproductive rate (R) of microbial pathogens; influence of behaviour; effect of population density; rational design of vaccines; surgical wound infections; UTIs; MRSA and CA-MRSA; occupational health screening	✓		
Fields	Microbiology; Pathogenesis; Infection and Immunity; Immunology; Host-Pathogen Interactions				
Skills	Reading primary literature; scientific writing; critical appraisal; data analysis				
Coordinator (Name and Rank) :		Dr Mohammed J. A. Haider - Assistant Professor			
Signature and stamp :					
Date:		29/10/2025			