

## Course Description Form

1. Course Name:	
Medical Microbiology I (Theoretical+ Practical)	
2. Course Code:	
Phcls23_212--	
3. Semester / Year:	
1 <sup>st</sup> Semester/2 <sup>nd</sup> year	
4. Description Preparation Date:	
01/9/2023	
5. Available Attendance Forms:	
Students' signature on attendance sheet	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3 hours Theoretical + 2 hours Practical (75 total) /4 units	
7. Course administrator's name	
Theoretical	
Name: Assist. Prof Dr. May Atallah Aljammas Email: <a href="mailto:mamj535@uomosul.edu.iq">mamj535@uomosul.edu.iq</a> Assist. Prof Dr. Karam Amer Aldabbagh Email: <a href="mailto:Karam.aldabbagh@uomosul.edu.iq">Karam.aldabbagh@uomosul.edu.iq</a> Assist. Prof. Dr. Zahraa Amer Hashim Email: <a href="mailto:hashimz@uomosul.edu.iq">hashimz@uomosul.edu.iq</a> Lec. Dr. Thekra Sedeeq Email: <a href="mailto:thekra.siddeq@uomosul.edu.iq">thekra.siddeq@uomosul.edu.iq</a>	
Practical	
Assist. Prof Maimonah Qasim Yahya Email: <a href="mailto:pharm.maymona@uomosul.edu.iq">pharm.maymona@uomosul.edu.iq</a> Dr. Esraa Mohammed Adel Shareef Email: <a href="mailto:Hakam.22@uomosul.edu.iq">Hakam.22@uomosul.edu.iq</a> Lecturer. Zahraa Sedeeq Qasim Email: <a href="mailto:Pharm.zahraa@uomosul.edu.iq">Pharm.zahraa@uomosul.edu.iq</a> Assist Lec. Islam khalid kamal Email: <a href="mailto:Islam.khalid@uomosul.edu.iq">Islam.khalid@uomosul.edu.iq</a> Assis. Lec. Ghaith Rabie Mohammed Email: <a href="mailto:Ghaith.Rabee@uomosul.edu.iq">Ghaith.Rabee@uomosul.edu.iq</a>	
8. Course Objectives	
<p><b>Course Objectives</b></p> <p>Identify the most common pathogenic bacteria, Knowing mode of transmission, Virulence factors, Pathogenesis and clinical significance Diagnosis, Treatment and Prevention</p>	<ul style="list-style-type: none"> <li>The basics of bacteria in terms of shape, composition, dyes, cultivation and microscopic phenomena.</li> <li>The identification and genetics products of bacteria, in addition to sensitivity testing, sterilization, and characterization of the detection of bacterial diseases.</li> </ul>
9. Teaching and Learning Strategies	
<b>Strategy</b>	<p>Lecturing</p> <p>External resources via classroom</p> <p>Seminars</p> <p>Homework</p> <p>Quiz</p> <p>Practical laboratory demonstrations, microscopic slides and Lab book catalogues</p>

### 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3+2	Importance and History of microbiology  Anatomy of bacteria: Cell wall of Gram positive & Gram negative bacteria	Introduction to Medical Microbiology	Theoretical lectures.  Laboratory experiments	Paper-based exams
2	3+2	Bacterial physiology: growth curve and bacterial reproduction. Bacterial genetics	Introduction Medical Microbiology	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
3	3+2	Recombinant DNA biotechnology  Sporulation and germination	Introduction Medical Microbiology	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
4	3+2	Sterilization (chemical + physical Methods) Chemotherapy	Introduction Medical Microbiology	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
5	3+2	Morphology of Bacteria. Staining and Classification. Normal flora and pathogenicity	Introduction Medical Microbiology	Theoretical lectures.  Laboratory experiments.	Paper-based exams
6	3+2	Staphylococcus species Streptococcus pyogenes Streptococcus pneumoniae	Systemic medical microbiology:  Gram positive bacteria	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
7	3+2	Non spore forming C. diphtheriae  Spore-forming bacteria Bacillus species (B. anthracis, B. subtilis, B. cereus).  Clostridium species	Systemic medical microbiology:  Gram positive bacteria	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
8	<b>Mid-term exam</b>				
9	3+2	Propionibacterium acnes, Listeria	Systemic medical microbiology:	Theoretical lectures.	Paper-based exams

			Gram positive bacteria	Laboratory demonstration.	
10	3+2	Mycobacterium tuberculosis; M. leprae Actinomycetes Nocardia Chlamydiae	Systemic medical microbiology:  Gram positive bacteria	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
11	3+2	Identification & classification of Gram negative bacteria  Enterobacteriaceae: E. coli; Klebsiella species .; Citrobacter , Sertalia, Hafmia, Enterobacter	Systemic medical microbiology:  Gram negative bacteria	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
12	3+2	Shigella species; Salmonella species; Proteus species, Pseudomonas species	Systemic medical microbiology:  Gram negative bacteria	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
13	3+2	Vibrio Cholerae; Brucella species ; Haemophilus species ; Campylobacter species .	Systemic medical microbiology:  Gram negative bacteria	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
14	3+2	Helicobacter species ; Bordetella pertussis; Treponema pallidum (Spirochetes); Yersinia pestis; Pasteurella multocidae.	Systemic medical microbiology:  Gram negative bacteria	Theoretical lectures.  Laboratory demonstration.	Paper-based exams
15	<b>Students' seminars</b>				
<b>11. Course Evaluation</b>					
<ul style="list-style-type: none"> <li>• 20 M Theoretical assessment; (paper-based mid-term exam + quiz + attendance + seminar)</li> <li>• 20 M practical assessment (attendance + quiz + practice)</li> <li>• 60 M paper-based theoretical final exam</li> </ul> <hr style="width: 20%; margin-left: 0;"/> <p style="margin-left: 40px;">100 M total</p>					
<b>12. Learning and Teaching Resources</b>					
Required textbooks			1. Brooks GF, Carroll KC, Butel JS, Morse SA. Jawetz, Melnick, and Adelberg's Medical Microbiology, 24 <sup>th</sup> edition, MCGraw-Hill, 2007.		

	2. Brwn AE. Benson's Microbiological Application, MCGraw-Hill.
Main references (sources)	<ol style="list-style-type: none"> <li>1. Hugo and Russell's - Pharmaceut Microbiology 8th edition</li> <li>2. Lippincott illustrated rev microbiology 2nd ed. By Harvey</li> </ol>
Electronic References, Websites	<a href="https://www.who.int/">https://www.who.int/</a> <a href="https://www.cdc.gov/index.htm">https://www.cdc.gov/index.htm</a>