



A- COURSE TITLE, CODE, ACADEMIC YEAR:

Medical Bacteriology, MLT 325, 2017 - 2018

B- COURSE INFORMATION:

Course Code	Course Title	Credit Units			Study Level	Pre-requisites
		Total	Theory	Practical		
MLT325	Medical Bacteriology	3	2	1	5 th level	MLT 222
Course Coordinator		Extension			Email Address	
Dr. Mogahid Mohamed Elhassan					mmemam@taibahu.edu.sa	

C- COURSE DESCRIPTION:

The course will introduce students to the pathogenic bacteria by shading the light on different aspects of their properties such as their classification, identification, pathogenesis, diagnosis and treatment. Also, the course should provide adequate opportunities for students to link between the theoretical and practical sides of knowledge as well as improve student's skills particularly in diagnosis, observation and scientific thinking in practical classes.

D- COURSE OBJECTIVES:

- 1- Use proper criteria to classify and identify pathogenic bacteria in particular those who cause common infections such as *Staphylococci*, *Streptococci*, *Enterobacteriaceae* and others.
- 2- List the properties of the pathogenic bacteria such as common specific biological, physiological and biochemical characteristics.
- 3- Understand the mechanisms of pathogenesis in these organisms including the role of their virulence factors in development of infections.
- 4- State the clinical manifestations of the diseases, mode of transmission, control measures and their laboratory identification.
- 5- Understand the means used to treat infections caused by pathogenic bacteria (antibiotics susceptibility).
- 6- Write a proper clinical laboratory report for bacterial identification and antibiotic susceptibility.

E- THEORY TOPICS:

Week	Theory Topic	Contact Hours
1	- <i>Staphylococci and Micrococci</i> - <i>Streptococci and Enterococci</i>	2



2	- <i>Corynebacteria</i> - <i>Bacillus</i>	2
3	- <i>Listeria, Erysipelothrix</i> - <i>Neisseriae</i>	2
4	- <i>Haemophilus</i> - <i>Bordetella, Brucella</i>	2
5	- <i>Francisella</i> - <i>Pasteurella</i>	2
6	- <i>Pseudomonas</i> - <i>Burkholderia and Stenotrophomonas</i>	2
7	- <i>Vibrio</i> - <i>Aeromonas and Plesiomonas.</i>	2
8	- <i>Campylobacter</i> - <i>Helicobacter</i> Midterm examination (written)	2
9	<i>Enterobacteriaceae:</i> - <i>E. coli</i> - <i>Klebsiella, Enterobacter</i> - <i>Proteus, Yersinia, Morganella</i> - <i>Salmonella</i> - <i>Shigella</i>	3
10	Classification of antibiotics and mechanisms of resistance	1
11	Anaerobic bacteria and <i>Clostridium</i>	2
12	<i>Mycobacterium and Nocardia</i>	2
13	<i>Chlamydiae -Rickettsia- Spirochaetales and Mycoplasma</i>	2
14	-Molecular microbiology -Automated machines (eg, Phonex- Bactec)	2
15	Revision	2

F- PRACTICAL SESSIONS:

Week	Practical Session	Contact Hours
1	Orientation of pathogenic bacteria, culture media and safety.	2



2	Staphylococci and Micrococci	2
3	Streptococci and Enterococci	2
4	Corynebacteria, Bacillus, Listeria and Erysipelothrix	2
5	Haemophilus and Neisseriae	2
6	Bordetella, Brucella, Francisella and Pasteurella	2
7	Aeromonas, Plesiomonas, Campylobacter and Helicobacter	2
8	Pseudomonas, Burkholderia and Stenotrophomonas	2
9	Enterobacteriaceae	2
10	Enterobacteriaceae	2
11	Enterobacteriaceae	2
12	Anaerobic bacteria and Closteridia	2
13	Mycobacteria	2
14	Sensitivity test	2
15	Revision	2

G- ASSESSMENT TASKS:

#	Type of assessment task	Week	Total Grades
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1	Continuous assessment	Weeks 1-13	10%
2	Midterm examination (written)	Week 8	15%
3	Assignment submission	Week 10	5%
4	Final practical exam	Week 16	30%
5	Final written examination	Week 17-18	40%

H- LEARNING RESOURCES:

1- Required textbook:

- 1 -Murray P. R., Rosenthal K. S., and Pfaller M. A. (2012). Medical Microbiology. 7th edition. Elsevier Saunders
- 2- Cheesbrough, M. (2005). District Laboratory Practice in Tropical Countries, Part 1 and 2 Cambridge University Press; Se cond Edition.

2- Essential references:

- 1-Murray P. R., Rosenthal K. S., and Pfaller M. A. (2012). Medical Microbiology. 7th edition. Elsevier Saunders.
- 2- Cheesbrough, M. (2005). District Laboratory Practice in Tropical Countries, Part 1 and 2 Cambridge University Press; Se cond Edition.
- 3- Brooks, G.F.; Butel, J.S. and Morse, S.A. (2012). Jawetz, Melnick and Adelberg’s Medical Microbiology. 26th Edition. McGraw-Hill Education.
- 4- Greenwood, D.; Slack, R.; Peutherer, J and Barer, M. (2007). Medical Microbiology. 17th Edition. Churchill Livingstone Elsevier

Notes:

- Assignments topics and requirements shall be announced by the end of Week-1, the deadline for submission is 12pm Thursday of Week-10 (each semester).
- Assignments and written assessment tasks must be verified against plagiarism, the maximum acceptable percentage is determined by the department (according to each level).
- Continuous assessments may include quizzes, internet searches, home-works, exercises, class activity, scratch cards, presentations, group work, etc.
- Practical exams may contain hands-on experiments, laboratory work, simulations, or demonstrations.
- Written exams will include multiple-choice questions (MCQ), short essay questions, and long essay questions.