

Jordan University of Science and Technology  
Faculty of Veterinary Medicine  
Department of Basic Veterinary Medical Sciences  
First Semester 2013/2014

Course Information	
Course Title	Veterinary Microbiology and Mycology
Course Number	VM 232
Prerequisites	VM 231
Course Website	E. learning
Instructor	<b>Dr. Yaser Tarazi</b>
Office Location	G-3
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Office Hours	Monday : 11-12 Wednesday: 11-12
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Lab. Assistant	
Course Description	
<ol style="list-style-type: none"> <li>1. An overview of principle knowledge about pathogenic microbes of veterinary importance and discussion of the pathogens public health significance and those cause food poisoning.</li> <li>2. Explain of habitat and distribution of important pathogens and focuses on pathogenicity and pathogenesis.</li> <li>3. Illustrations the antigenic nature and immunity of some important pathogens and importance of treatment and resistance of pathogenic microbes</li> <li>4. Demonstration and practicing of different methods of isolation and morphological, biochemical and serological identifications of important pathogens</li> </ol>	

Text Book	
Title 1	<a href="#">Essentials of Veterinary Microbiology</a>
Author(s)	<a href="#">G R Carter</a> ; <a href="#">M M Chengappa</a> ; <a href="#">A Wayne Roberts</a>
Publisher	Baltimore : Williams and Wilkins
Year	1995
Edition	Fifth
Book Website	<a href="#">Essentials of Veterinary Microbiology</a>

Title 2	<a href="#">Microbiology</a>
Author(s)	<a href="#">Prescott, Harley &amp; Klein</a>
Publisher	McGraw Hill
Year	2008
Edition	7 <sup>th</sup> ed.
Title 3	<a href="#">Diagnostic Microbiology</a>
Author(s)	<a href="#">Baily &amp; Scott</a>
Publisher	Mosby, Elsevier
Year	2007
Edition	12 <sup>th</sup> ed.

Assessment Policy		
Assessment Type	Expected Due Date	Weight
First Exam	5-6 <sup>th</sup> weeks of the course, 2013	25%
Second Exam	10-11 <sup>th</sup> weeks of the course, 2013	25%
Assignments, quizzes, reports, attendance and participations	Through the course time	10%
Final Exam	January, 2014	40%

Course Objectives	Weights
1. To provide students with important knowledge about pathogenic microorganisms of veterinary significance, its virulence and pathogenesis.	60%
2. To make students understand the zoonotic aspects of microbial pathogens.	25%
3. To make students familiar with pathogens that cause food and feed poisoning.	15%

Teaching & Learning Methods		
Theory: Face to face instruction and/or by using power-point, data show, figures and pictures for demonstrations from net		
Text book: <a href="#">Essentials of Veterinary Microbiology</a>		
Learning Outcomes: Upon successful completion of this course, students will be able to		
	Related Objective(s)	Reference (1)
1	Know and retrieve important information about pathogenic microbes of veterinary significant.	Chapters 9 to 35 and handouts
2	Know pathogens that cause zoonotic diseases and its mode of transmission.	Chapters 13, 15, 18, 24, 25, 29, 30, 32, 33, 34, 35 and handouts

3	Know pathogens that cause food poisoning, mechanism of poisoning and mode of transmission.	Chapters 10, 12, 14, 15, 17, 18, 21 and handouts
4	Students will be prepared to infectious disease, food microbiology and zoonotic diseases courses.	

#### Useful Resources

1. Use of other microbiology text books available in the university library, especially Clinical Veterinary Microbiology text book, by [Quinn et al., 1994](#) and Microbiology by [Prescott, Harley & Klein, 2007](#).
2. Use of the periodicals and microbiology internet sites.

#### Course Content

Week	Topics	Chapter in Text (handouts)
1	Host-pathogen Interaction Staphylococcus: habitat, extracellular products, antigenic structure, pathogenicity and pathogenesis, resistance and immunity	Chapter 10
2	Streptococcus: habitat, classifications, pathogenesis, extracellular products, immunity, treatment and public health significance	Chapter 9
3	Corynebacteria: Characteristics, C. diphtheriae, C. pseudotuberculosis, pathogenicity and pathogenesis, antigenic structure and immunity Rhodococcus equi	Chapter 11
4	Listeria: Characteristics, L. monocytogenes: habitat, pathogenicity and pathogenesis, antigenic nature, immunity, treatment and public health significance	Chapter 12
5	Erysipelothrix: Characteristics, E. insidiosa, habitat, pathogenicity and pathogenesis, antigenic nature, immunity, treatment and public health significance	Chapter 13
5	Clostridium: Characteristics, C. chauvoei, C. septicum, C. haemolyticum, C. novyi, C. perfringens, C. tetani, C. botulinum, gas gangrene type diseases, bacillary hemoglobinuria and botulism	Chapter 14
6	Bacillus: Characteristics, B. anthracis: distribution, pathogenesis and pathogenicity, resistant, treatment, immunity and public health significance	Chapter 15
7	Bacterioids (non-spore forming anaerobic bacteria), Fusobacterium and Bacterioids nodosus	Chapter 16, 17

	Enterobacteriaceae: Characteristics, habitat and pathogenicity Escherichia coli; groups, virulence factors and antigenic structure	
8	Continue.... Enterobacteriaceae: Klebsiella, Morganella, Proteus, Salmonellae pathogenicity and important diseases, antigenic structure and public health significance Yersinia pestis, Y. pseudotuberculosis, y. enterocolitica	Chapter 17
9	Pseudomonas aeruginosa Pseudomonas mallei and pseudomallei	Chapter 18
10	Actinobacillus lignieresii, Campylobacter and Helicobacter, Vibrio species	Chapter 18, 20, 21
11	Pasteurella multocida, Mannheimia haemolytica, Mycoplasma	Chapter 19, 30
12	Spirochetes, Rickettsia and Chlamydia	Chapter 27, 29
13	Haemophilus and Tayorella: H. somnus, H. parasuis, H. paragallinarum, T. equigenitalis	Chapter 22
14	Bordetella bronchoseptica, Bordetella avium Moraxella bovis, Actinomyces and Nocardia	Chapter 23, 26
15	Brucella as animals and human disease Mycobacteria bovis, M. avium, M. tuberculosis Mycobacterium paratuberculosis	Chapter 24, 25
16	Fungus infections, Dermatophytosis, Mycosis and Cryptococcosis	Chapter 31-35

Additional Notes	
Exams	Multiple choice, false and true, matching and short essay questions and quizzes are used
Cheating	Cheating students will be reported to the head of the department
Attendance	Its considered as a sort of participations, if attendance is out of university regulations then student will not set for final exam
Graded Exams	First, mid-practical, second and final
Participation	Discussion during the lectures and answers questions are considered
Laboratory	Each student should be dress a white coat, be in time in the lab, no kidding, talking, drinking or feeding during the lab. session, works according to the instructions
Projects	No project at this level

