



**Jordan University of Science and Technology**  
**Faculty of Applied Medical Sciences**  
**Department of Applied Dental Sciences**  
**2<sup>nd</sup> Semester 2016-1017**  
**Course Syllabus**

<b>Course Information</b>	
<b>Course Title</b>	<b>Oral Microbiology</b>
<b>Course Code</b>	<b>Ads 212 - ADS 220</b>
<b>Prerequisites</b>	<b>Med 218</b>
<b>Course Website</b>	<b>----</b>
<b>Instructor</b>	<b>Lecturer : Yasmin Al-Shboul</b>
<b>Office Location</b>	<b>M1 L -2 Next to Pathology Lab</b>
<b>Office Phone #</b>	<b>23705</b>
<b>Office Hours</b>	<b>To be announced</b>
<b>E-mail</b>	<b>Yashboul@just.edu.jo</b>
<b>Teaching Assistant(s)</b>	<b>None</b>
<b>Course Description</b>	
<p><b>This course emphasizes the microbiological and immunological factors impacting not only the oral environment but the entire human body. Emphasis is placed on aspects of microbiology and immunology clinical application which will include some laboratory experiences</b></p>	

<b>Textbook</b>	
<b>Title</b>	Essential Microbiology for Dentistry.
<b>Author(s)</b>	Samaranayake, L.
<b>Publisher</b>	Churchill Livingstone
<b>Year</b>	2003
<b>Edition</b>	2nd. Edition
<b>Other references</b>	<p>Comprehensive Periodontics for the Dental Hygienist. Weinberg, MA et al, 2001 Prentice Hall, Inc. 1st Edition.</p> <p>Oral Microbiology and Immunology, 2nd Edition Newman and Nisengard, W.B. Saunders, 1994. Reprinted from Oral Microbiology and Immunology, 2nd Edition Newman and Nisengard, Chapters, 5, 6, 25, 26 1994, with permission from Elsevier.</p>

<b>Assessment</b>		
<b>Assessment</b>	<b>Expected Due Date</b>	<b>Percentage</b>
<b>First Exam</b>	Week 6	25%
<b>Second Exam</b>	Week 11	25%
<b>Final Exam</b>	Week 16	40%
<b>Assignments</b>	none	
<b>Participation</b>	Encouraged	
<b>Attendance</b>	Mandatory	10%

<b>Course Objectives</b>	<b>Percentage</b>
<b>1. Describe microbial structure and function</b> <b>2. Discuss bacterial structure and function</b> <b>3. Identify viral structure and function</b>	<b>20%</b>
<b>4. Understand the role of pathogens causing disease</b> <b>5. Develop a working vocabulary of the basic groups of microorganisms</b> <b>6. Explain basic principles of immunology</b>	<b>25%</b>
<b>7. Apply all clinical applications of immunology</b> <b>8. Identify the major role species of micro-organisms that constitute the normal indigenous flora of the respiratory passages and oral cavity and categorize according to location.</b>	<b>15%</b>
<b>9. List microbial diseases of specific organ systems</b> <b>10. Describe the ecology of the oral environment, including all types of flora.</b>	<b>20%</b>
<b>11. Describe the stages of plaque formation and relate changes in microbiota to colonization factors</b> <b>12. Identify and explain the use of antimicrobial, antifungal and antibiotic therapy in the suppression or destruction of microorganisms.</b>	
<b>13. Explain the contamination of Dental Unit Water Lines (DUWL).</b> <b>14. Identify the microbiological tests used in accordance with North Carolina OSHA guidelines.</b>	<b>10%</b>

<b>Teaching &amp; Learning Methods</b>
<ul style="list-style-type: none"> <li>• Lectures, reading and group discussion.</li> </ul> <p><b>Teaching duration:</b></p> <ul style="list-style-type: none"> <li>• <b>Duration: 16 weeks</b></li> <li>• <b>Lectures: 15 lecture, 1 hour 40 minutes each, including 2 hours first &amp; second examination</b></li> <li>• <b>Laboratory: 2 labs.</b></li> </ul>

<b>Learning Outcomes: Upon successful completion of this course, students will be able to</b>	<b>Reference(s) Handouts</b>
1-6: Develop a working vocabulary of the basic groups of microorganisms	<b>Handouts</b>
7-8: Discuss requirements for microbial growth and principles of antimicrobial agents	<b>Handouts</b>
9-10: Identify the microbiological make-up of the following: plaque, calculus, saliva, caries, periodontal disease, and the inflammatory response	<b>Handouts</b>
11-12: Demonstrate a working knowledge of infection control in the dental office and the practice of dental hygiene.	<b>Handouts</b>
13: Demonstrate a working knowledge of OSHA guidelines as they apply to sterilization, infection control and prevention of cross contamination	<b>Handouts</b>

<b>Useful Resources</b>
JUST Library

<b>Course Content</b>		
<b>Week</b>	<b>Topics</b>	<b>Chapter in Textbook (handouts)</b>
<b>1</b>	<b>Course Introduction, Microbiology of the Oral Cavity</b>	<b>Handouts</b>
<b>2</b>	<b>Microbiology of Oral and Nasal Respiratory Passages</b>	<b>Handouts</b>
<b>3</b>	<b>Potential for Disease Transmission in the Dental Environment, Disinfection and Sterilization</b>	<b>Handouts</b>
<b>4</b>	<b>Response of Bacteria and Viral Invasion</b>	<b>Handouts</b>
<b>5</b>	<b>Microbiology of Dental Plaque, Plaque control mechanisms and Caries, Immunology</b>	<b>Handouts</b>
<b>6</b>	<b>1<sup>st</sup> Exam</b>	<b>Handouts</b>
<b>7</b>	<b>Microbiology and Host Responses in Periodontal Disease</b>	<b>Handouts</b>
<b>8</b>	<b>Microbiology and Host Responses in Periodontal Disease (continued)</b>	<b>Handouts</b>
<b>9</b>	<b>Review Laboratory Procedures</b>	<b>Handouts</b>

10	Lab Session Number One	Handouts
11	2 <sup>nd</sup> Exam	Handouts
12	Microbiology and Antibiotic Therapy for Orofacial Infections	Handouts
13	Lab Session Number Two	Handouts
14	Lab Session Number Two	Handouts
15	Microbiology of Dental Caries	Handouts
16	Final Exam	
<b>Additional Notes</b>		
<ul style="list-style-type: none"> <li>▪ Students are expected to attend all more than 90% of lectures.</li> <li>▪ Each student is expected to sit in his numbered seat</li> <li>▪ Empty seat will be counted as absent</li> <li>▪ All absences will be entered electronically into the University site</li> <li>▪ If absence is more than 10% student will be banned from the course after electronic notification from the university through student e-mail.</li> </ul>		

Week	Title of the Lecture	Lecturer
1	Course Introduction, Microbiology of the Oral Cavity	Y.Shboul
2	Microbiology of Oral and Nasal Respiratory Passages	Y.Shboul
3	Potential for Disease Transmission in the Dental Environment, Disinfection and Sterilizat	Y.Shboul
4	Response of Bacteria and Viral Invasion	Y.Shboul
5	Microbiology of Dental Plaque, Plaque control mechanisms and Caries, Immunology	Y.Shboul
6	1 <sup>st</sup> Exam	Y.Shboul
7	Microbiology and Host Responses in Periodontal Disease	Y.Shboul
8	Microbiology and Host Responses in Periodontal Disease (continued)	Y.Shboul
9	Review Laboratory Procedures	Y.Shboul
10	Lab Session Number One	Y.Shboul
11	2 <sup>nd</sup> Exam	Y.Shboul
12	Microbiology and Antibiotic Therapy for Orofacial Infections	Y.Shboul
13	Lab Session Number Two	Y.Shboul
14	Lab Session Number Two	Y.Shboul

15	<b>Microbiology of Dental Caries</b>	<b>Y.Shboul</b>
16	<b>Final Exam</b>	<b>Y.Shboul</b>