SYLLABUS BIOL 2900 SECTION "C" Fall, 2012

Course: Microbiology in Health and Disease CRN: 80566

Instructor: Prafull C. Shah **Office Hours: Before or after Class or by appointment**

Semester Begins on August 13, 2012 and ends on December 3, 2012						
80566	BIOL	2900	C	4.00	Microbiology in Health/Disease	Main Campus

5. Students are responsible for reading and following the Biology Department policy on plagiarism.
6. **Since important concepts are explained in the classroom, missing classes may seriously impact grades.**
7. Make-up examination or quiz WILL NOT BE OFFERRED, except under **verifiable** exceptional and unavoidable circumstance. If offered, it will be at the discretion of the Instructor, AND will not carry full earned points.
8. Changes to this syllabus may be made during the Semester.

GRADES:

(1) There will be periodic quizzes, a mid-term examination and a final examination. Quizzes and exams typically consist of multiple choice, matching, fill-in blanks type of questions, including some open book. However, students may be challenged with questions that may require creative thinking and true understanding of concepts in order to answer them correctly.
(2) In addition, there may be special assignments and projects which will be announced in the class.
(3) Vocabulary, spelling and pronunciation of medical terms may be important parts of assignments, quizzes and examinations.
(4) Lab. portion of testing will be merged with lectures.
(5) Periodic quizzes will be worth a total of 350 points.
(6) Mid-term examination will be worth 150 points.
(7) Special projects or presentations will be worth 50 points.

Week 1

Week 6	
Control of Microbial Growth – Disinfection and Sterilization Demonstration of Steam sterilization and Sterility Check Gram Stain of common pathogenic bacteria	Levels of sanitization, disinfection, and sterilization under various situations
Week 7	
Diagnosis of Infectious Diseases in clinical Laboratory - Methods for the direct and indirect, rapid and slow techniques employed in a clinical Microbiology laboratory Demonstration of rapid diagnostic techniques used in a POC or ED laboratory	What is available at the disposal of clinicians to diagnose infectious diseases?
Week 8	
MID-TERM EXAMINATION Introduction to Antimicrobial Agents Aerobic Gram Positive Cocci and their clinical significance Differentiation of Gram Positive Cocci in a laboratory	Treatment of microbial infections Introduction to Staphylococci, and their impact on humans
Week 9	
Continuation of Antimicrobial Agents Continuation of Aerobic Gram Positive Cocci Differentiation of Gram Positive Cocci in a laboratory	Treatment of microbial infections
Week 10	
Antimicrobial Susceptibility testing – Principles, procedures, and results Clinically significant aerobic Enteric Gram Negative bacteria – Escherichia, Salmonella, Shigella	How antimicrobial treatment parameters are determined Introduction to Enterobacteriaceae, and their impact on humans
Week 11	
THIRD QUIZ Antimicrobial Susceptibility Results – Their Interpretation and Applicability to patient care Clinically significant aerobic Non-Enteric Gram Negative bacteria – Pseudomonas, Acinetobacter, Haemophilus	How the results from a Microbiology laboratory may be applied in patient treatment Introduction to non-enteric aerobic bacteria, and their impact on humans

Week 12	
Clinically significant: Gram Negative diplococci – Neisseria, Moraxella Gram Positive Bacilli - Bacillus, Listeria Spiral bacteria – Treponema, Leptospira	Introduction to Neisseria, Bacillus, and Spirochaetes, and their impact on humans
Week 13	
FOURTH QUIZ Clinically significant anaerobic bacteria – Clostridium, Bacteroides	Introduction to