### SYLLABU

## Course: Microbiology in Health and Disease

# FALL 2011 BIPIN PATEL

Office Hours: Before or after Class or by appointment

2900 D 4.00	Microbiology in Health/Disease	Main Campus	
LECTURE LAB 22801 BIOL	MON-TUES 05:30 pm - 06:45 pm MON-TUES - 06:55 pm - 08:20 pm	BC 1025LECTURE BC 2068LAB	

#### COURSE OBJECTIVES:

With a focus on healthcare majors, the objectives of this course are:

- (a) To introduce students to microbiology and the vital role microorganisms play in the well-being of higher forms of life, as well as in causing diseases, mostly as opportunists,
- (b) To learn various groups of microorganisms and what makes them infectious,
- (c) To learn most common infections caused by microorganisms, and
- (d) To learn the preventive and curative measures against common infections.

- Students are advised to consult the VSU Student Handbook, Undergraduate Catalog, Semester Calendar, Schedule of Classes, & Registration Guide for information about VSU policies and procedures regarding registration, drop/add, and withdrawal. Students are not permitted to withdraw after midterm except in cases of hardship.
- 3. Students requesting classroom accommodations or modifications because of a documented disability should contact the Access Office for Students with Disabilities, 1115 Nevins Hall.
- 4. Cell phones are to be turned off during classes and examinations.
- 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.
- Make-up examination or quiz WILL NOT BE OFFERRED, except under 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 tests, a mid-term examination and a final examination. Tests 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, tests and examinations.
- (4) Lab. portion of testing will be merged with lectures.
- (5) Tests will be worth a total of 150 points.
- (6) Mid-term examination will be worth 150 points.
- (7) Special projects or presentations will be worth 50 points.
- (8) Final examination will be worth 250 points.

#### GRADING SCALE:

Grade A = 90 -100% or between 540 and 600 points Grade B = 80 - 89% or between 480 and 539 points Grade C = 70 79% or between 420 and 479 points Grade D = 60 69% or between 360 and 419 points Grade F = Less than 60% or 359 or less points

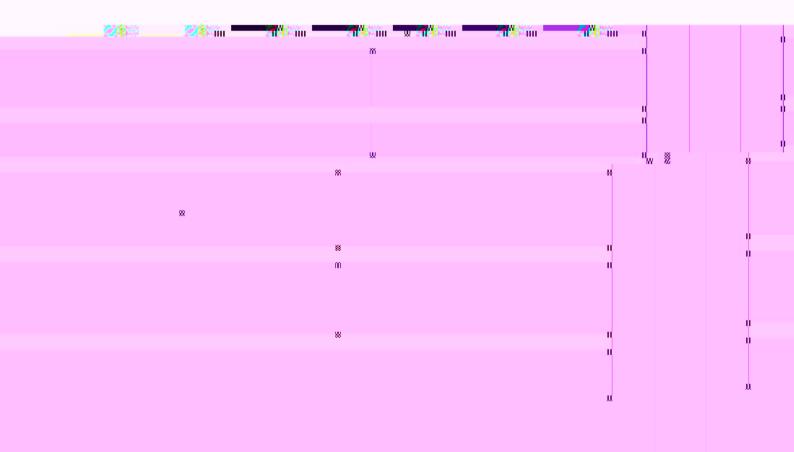
Week 1	N
Subject(s) General course information Introduction to Microbial World Introduction to Microscopy Personal and patient safety in healthcare environment	Learning Objectives History of Microbiology, role of microbes in nature, well-being of other living things, science, health and diseases. Introduction to Microbiology Laboratory Safety, hand hygiene
Safety in microbiology laboratory Week 2	Proper handling and use of microscope
The Molecules of Life Microscopy and Cell Structure Use of Microscope, Practice of focusing on human blood components Practice of using oil immersion lens	Characteristics of prokaryotic and eukaryotic cells Principles of microscopy, use of microscopes Distinction of various groups of bacteria
Week 3	
Microbial Metabolism, Physiology and Genetics Examination of microscopic life in pond water - Protozoa, Algae, Cyanobacteria Culture of normal environmental and body flora	How microbes live and multiply Study of higher forms of microbial life What grows where?
week 4	
Host Defense Mechanisms Role of normal flora and physical barriers to infections Natural and Acquired Immunity Study of growth acquired from environmental and body flora Colony characteristics and simple stain of recovered bacteria	How physical make-up of human body defend against infections What are natural, acquired and artificial means of combating infections Are our counters, keyboards, drains, toilet seats, door handles AND our mouths, skin and noses STERILE? What do they grow?
Week 5	<b></b>
FIRST TEST Infectious Disease Process How Microbes survive host defenses and cause infection	Organism mutation, virulence, drug resistance, avoidance of phagocytosis Gram Stain as an important diagnostic tool

88

- 333

Week 6	· · · · · · · · · · · · · · · · · · ·	N 380
	Levels of sanitization, disinfection, and sterilization under various situations	
Week 7 nods for in a ; or ED	What is available at the disposal of clinicians to diagnose infectious diseases?	
Week 8		
Wook o	Treatment of microbial infections Introduction to Staphylococci, and their impact on humans	
Week 9		
	Treatment of microbial infections	
Week 10		
	Week 7 nods for in a or ED Week 8 Week 9	Week 6       Levels of sanitization, disinfection, and sterilization under various situations         Week 7       What is available at the disposal of clinicians to diagnose infectious diseases?         For ED       Week 8         Week 8       Treatment of microbial infections Introduction to Staphylococci, and their impact on humans         Week 9       Treatment of microbial infections

A. 16



×