BIO 1320 - The Microbial World with Lab

Lecture and Lab Syllabus
Fall 2005

Laboratory: Tues. 9.30-11:20 am MP 2.202

Lecture: Thurs. 9:30-11:20 am, MP 2.214

Instructor: Dr. Suma S Robinson; e-mail: dr.suma.robinson@gmail.com Ph: ext 4588

Office: FN 3.104. Office hours: By appointment and between 8:30 and 9:15 am on T, R

In this course, we will explore microorganisms and how they affect the biochemical processes that influence Earth as an ecosystem as well as human life. This will include a general overview of microbiology and an introduction to the diversity of microbial life. In the accompanying laboratory, hands-on experimentation will introduce the student to the microbial world and demonstrate the versatility of these organisms. As with any laboratory, attendance is essential to successful completion of this course. The course and laboratory schedule below may be changed with notice at the discretion of the instructor.

Text: *Microbiology, Principles and Explorations* by J.G. Black (5th edition, 2001)

Laboratory Manual (optional) *Lab Exercises in Microbiology by Robert A. Pollack, Lorraine Findlay, Walter Mondschein, R. Ronald Modesto Paperback, January 2000*

Date	Lecture	Lab	Topic
Aug 18, Th	X		Ch 1 (pages 4 to 25) and Chapter 2 (pages 28- 47)
Aug 23, T		X	*Introduction; Safety,*
Aug 25, Th	X		Ch 3 (pages 50-63) and Chap 4 (73-101)
Aug 30, T		X	*Light microscopy, observation of prokaryotic and eukaryotic prepared slides*
Sept 1, Th	X		**LECTURE EXAM -I (FIRST HOUR)** Growth and culture of microorganisms, Ch 6
Sept 6, T		X	*Culture Media and Aseptic Technique*
Sept 8, Th	X		Microbial Diversity: Bacteria; Ch. 9; Chapter 3 (pages 63 to 68)
Sept 13, T		X	*Observing Bacteria: Stains*
Sept 15, Th	X		Microbial Diversity: Fungi, Algae, Protozoa; Ch. 11 (pages 285-300)
Sept 20, T		X	*Survey of Organisms: Fungi, Algae, Cyanobacteria and Protozoa*
Sept 22, Th	X		**LECTURE EXAM –II** (1st hour); Chap 14 (pages 370 – 389)
Sept 27, T		X	***FIRST LABORATORY PRACTICAL EXAM***
Sept 29, Th	X		Epidemiology Chap 15 (pages 393 – 419)
Oct 4, T		X	*Epidemiology*
Oct 6, Th	X		Sterilization and Disinfection, Ch 12 (pages 314 – 331) ; Ch 13 (pages 336 – 348)
Oct 11, T		X	*Antiseptics, Disinfectants, and Antibiotics*
Oct 13, Th	X		Basic principles of immunology, chap 17 **(**pages 446 – 474**)**
Oct 18, T		X	*Serology*
Oct 20, Th	X		**LECTURE EXAM-III** (First hour) Microbes and the

			~~Environment, water microbiology Ch 25~~
Oct 25, T		X	*Microorganisms in Soil and water*
Oct 27, Th	X		Applied microbiology, chap 26 (pages 754 – 759) Biotechnology Chapter 8 pages 208-217
Nov 1, T		X	*Applied microbiology experiment*
Nov 3, Th	X		Food Microbiology; Ch. 26 (pages 734-754)
Nov 8, T		X	*Microorganisms in Food/Food Microbiology*
Nov 10, Th	X		Microbial genetics Chapter 7
Nov 15, T		X	*Genetics experiment*
Nov 17, Th	X		Virology (pages 255 to 280)
Nov 22, T		X	*Phage growth and enumeration*
Nov 24, Th			*NO CLASS- Thanksgiving Holiday*
Nov 29, T	X		**FINAL LAB EXAM AND FINAL LECTURE EXAM (8:00-11:00 AND 11:00-2:00)**

Points.

First lecture exam: 50	First lab exam: 50
Second lecture exam: 50	Final lab exam: 50
Third lecture exam: 50	Lab reports (5 points each lab): 65
Final lecture exam: 50	
Total: 200	Total: 165

Your final grade will be calculated based on the points made out of 365 points, grades are calculated according to the and scale (for example, 90% and above is an A; 90-93% is an A-, 94-96% is an A and above 96% is an A+).

1. Exams will be a combination of multiple choice and essay type questions which will be based on material covered up to the last lecture before the exam.
2. Lab exam will be based on techniques learned up to the last lab before the exam.
3. Students are expected to read lecture chapters and laboratory exercises prior to class.
4. Unless specifically instructed otherwise, each student is expected to work independently on all assignments.
5. Academic dishonesty in any form will not be tolerated and will be handled according to the rules and procedures of the University of Texas at Dallas.
6. As this class is taught as an independent course, make up labs are difficult to arrange; your presence in the lab during normal scheduled hours is therefore very important. Unless there is a documented medical emergency, no make up labs or exams or quizzes will be possible.