

BIO 1320 - The Microbial World with Lab

Lecture and Lab Syllabus
Fall 2006

Laboratory: Tues. 9.00-10:50 am MP 2.202

Lecture: Thurs. 9:00-10:50 am, CB 1.102

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 11:00 and 12:00 on T and Th

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 17	X		Ch 1 (pages 4 to 25) and Chapter 2 (pages 28- 47)
Aug 22		X	<i>Introduction; Safety</i>
Aug 24	X		Ch 3 (pages 50-63) and Chap 4 (73-101)
Aug 29		X	<i>Light microscopy, observation of prokaryotic and eukaryotic prepared slides</i>
Aug 31	X		LECTURE EXAM -I (FIRST HOUR) Growth and culture of microorganisms, Ch 6
Sept 5		X	<i>Culture Media and Aseptic Technique</i>
Sept 7	X		Microbial Diversity: Bacteria; Ch. 9; Chapter 3 (pages 63 to 68)
Sept 12		X	<i>Observing Bacteria: Stains</i>
Sept 14	X		Microbial Diversity: Fungi, Algae, Protozoa; Ch. 11 (pages 285-300)
Sept 19		X	<i>Survey of Organisms: Fungi, Algae, Cyanobacteria and Protozoa</i>
Sept 21	X		LECTURE EXAM –II (1st hour); Chap 14 (pages 370 – 389)
Sept 26		X	FIRST LABORATORY PRACTICAL EXAM
Sept 28	X		Epidemiology Chap 15 (pages 393 – 419)
Oct 3		X	<i>Epidemiology</i>
Oct 5	X		Sterilization and Disinfection, Ch 12 (pages 314 – 331) ; Ch 13 (pages 336 – 348)
Oct 10		X	<i>Antiseptics, Disinfectants, and Antibiotics</i>
Oct 12	X		Basic principles of immunology, chap 17 (pages 446 – 474)

Oct 17		X	<i>Serology</i>
Oct 19	X		LECTURE EXAM-III (First hour) Microbes and the Environment, water microbiology Ch 25
Oct 24		X	<i>Microorganisms in Soil and water</i>
Oct 26	X		Applied microbiology, chap 26 (pages 754 – 759) Biotechnology Chapter 8 pages 208-217
Oct 31		X	<i>Applied microbiology experiment</i>
Nov 2	X		Food Microbiology; Ch. 26 (pages 734-754)
Nov 7		X	<i>Microorganisms in Food/Food Microbiology</i>
Nov 9	X		Microbial genetics Chapter 7
Nov 14		X	<i>Genetics experiment</i>
Nov 16	X		Virology (pages 255 to 280)
Nov 21		X	FINAL LAB EXAM AND FINAL LECTURE EXAM (8:00-11:00 AND 11:00-2:0)

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 following scale: 90% and above is an A; 90-93% is an A minus, 94-96% is an A and above 96% is an A plus

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.