Parkland College

Biology Courses

Natural Sciences Courses

2015

Biology 123 Microbiology Spring 2015

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MICROBIOLOGY: A COURSE OVERVIEW

SPRING 2015

Welcome to Microbiology! We look forward to a fun and productive semester. Please keep this copy of the syllabus handy throughout the semester. It includes information on due dates, deadlines, point values, and our expectations and policies. Remember that our staff is always available to help ensure your success in this course.

Biology 123 – Microbiology is a transfer level survey course designed to examine a broad spectrum of the microbial world. Special attention is given to the study of bacteria and viruses with emphasis given to structure, physiological processes, physical and chemical control, immune mechanisms, disease processes and practical applications. Required laboratory exercises stress basic techniques for handling, examining, and identifying microbial specimens.

INSTRUCTORS:	Vikki Crnekovic	Office - L 233	Phone - 373.3731
	Tiffany Gibson	Office – L 240	Phone – 351.2285
	Jennifer Joesting	Office - L 129	Phone - 351.2285

TEXTBOOK: Microbiology with Diseases by Body System; Robert W. Bauman; Pearson/Benjamin Cummings; San Francisco, CA 2008 or 4th Custom Edition for Parkland College

LAB MANUAL: Techniques in Microbiology: A Student Handbook; Custom Edition for Parkland College; Pearson/Benjamin Cummings; San Francisco, CA 2007

Either shrink wrapped with the text, or purchased separately – required.

OBJECTIVE MANUAL: Stipes Publishing

SAFETY GOGGLES: **Required by ALL** students, may be purchased at a nominal fee at the Parkland College Bookstore.

TESTS:

A. **Type of Tests:**

Lecture materials will be evaluated using a series of objective quizzes. These objective quizzes may be repeated **once**, after consultation with an instructor or lab monitor.

Laboratory exercises are evaluated using a series of practical examinations and a separate laboratory write- up for each exercise. These procedures may **not** be repeated.

A synthesis examination (Final) is required and is given **only** during the final examination period. This test **cannot** be repeated.

B. **Grading Criteria:**

Module C-1 through C-14 Written Examinations	275
Synthesis Examination (Final)	75
Lab Practical 1 (Gram Stain)	15
Lab Practical 2 (Morphological Unknown)	20
Lab Practical 3 (Eucaryotic Microorganisms)	20
Lab Practical 4 (Biochemical Unknown)	30
Written Laboratory Exercises	150
TOTAL POINTS	**585**

C. **Grading Standards:**

A	=	526	-	585
B	=	468	-	525
C	=	409	-	467
D	=	351	-	408
F	=	BELOW		351

TESTING CENTER HOURS:

To Be Announced

HOMEWORK / READING ASSIGNMENTS:

The lecture portion of Biology 123 – Microbiology is divided into fourteen (14) modules. You will receive objectives for each module. Past history shows us that a student should expect to spend 3 -5 hours per week outside the class preparing course materials. This estimate varies greatly with the individual student.

ATTENDANCE and ABSENCES:

Lecture:
Students are expected to attend all lecture sessions of the class. You will be held responsible for all information given during lecture. If you miss a session, please call your instructor for an excused absence, otherwise you will not be given a quiz extension. Cell phones and texting are not allowed in lecture or lab.

Lab:
All laboratory sessions are required. Cultures are issued, directions given, and discussions of previous laboratories are included in these sessions. The time will vary greatly from week to week.

If you are unable to attend a laboratory session, you must phone and leave a message for your instructor so that cultures and other material will be saved for you. Lab make-ups will be allowed only with documentation of an emergency or illness. IF UNEXCUSED, NO MAKEUPS WILL BE ALLOWED!

All laboratory and lecture assignments missed during periods of absence must be made up within a one-week period following your return to class. Tardiness beyond 5 minutes will result in loss of participation in lab and A MAKEUP WILL NOT BE ALLOWED!

A penalty of one point per day will be assessed for late laboratory assignments.

LABORATORY WARNING:

A small number of laboratory tests performed in Biology 123 use chemicals which if handled carelessly are potentially harmful to pregnant women. If you are pregnant or become pregnant during the semester in which you are taking Microbiology, notify your laboratory instructor immediately. The tests will be performed by others and the results given to you.

AMERICAN DISABILITIES ACT:

If you feel you have a disability for which you may need an academic accommodation (including special testing, auxiliary aids, non-traditional instructional formats), please inform the instructor as soon as possible and / or contact the following for assistance:

Sarah Lytel (Assistant Director, Office of Disability Services)
X 148
353-2338
slytel@parkland.edu

CENTER for ACADEMIC SUCCESS:

If you find yourself needing assistance of any kind to complete assignments, stay on top of readings, study for tests, or just to stay in school, please contact one of the following staff at the Center for Academic Success:

Anita Taylor
D 120
353-2005
ataylor@parkland.edu

Sue Schreiber
D 120
351-2441
sschreiber@parkland.edu

You may also email the CAS at centerforacademicsuccess@parkland.edu

EVALUATION:

All students will be asked to complete an Instructor and Course Evaluation at the completion of BIO 123.

MICROBIOLOGY
Tentative Lecture Syllabus

START	MODULE	TOPIC
01/12	C-1	Introduction – Microscopy
01/19	**MARTIN LUTHER KING DAY (COLLEGE CLOSED)**	
01/21	C-2	Procaryotes, Eucaryotes Growth, Classification
01/28	C-3	Biochemistry, Metabolism
02/04	C-4	Genetics
02/11	C-5	Viruses
02/18	C-6 C-7	Disinfection, Sterilization Antimicrobial Drugs
02/26	**PROFESSIONAL DEVELOPMENT DAY (NO CLASSES)**	
03/04	C-8	Host-Microbe Interactions, Epidemiology Immunization
03/11	C-9 (4 hours)	Functional and Dysfunctional Immunity
03/20	C-10	Skin Infections
03/21-29	**SPRING BREAK**	
04/03	C-11	Upper and Lower Respiratory Infections
04/10	C-12 (4 hours)	Oral, Gastrointestinal Tract Infections
04/20	C-13	Urinary, Genital, and Reproductive Infections
04/27	C-14	Nervous System, Circulatory Infection
05/07	**LAST DAY OF CLASSES**	

MICROBIOLOGY
Tentative Laboratory Syllabus

WEEK OF:	LABORATORY EXERCISE	LAB #
01/12	Isolation of Organisms from the Environment	1
01/19	**MARTIN LUTHER KING DAY – NO LABS THIS WEEK**	
01/26	Broth Culture Agar Slant Culture	2
02/02	The Care and Use of the Microscope	3
02/09	Smear Preparation Gram Stain	4
02/16	The Streak Plate Pour Plate	5
02/23	Testing of Antimicrobial Agents PRACTICAL – Gram Stain	6
02/26	**PROFESSIONAL DEVELOPMENT DAY – NO CLASSES**	
03/02	PRACTICAL – Morphological Unknown Eucaryotic Microorganisms – Fungi	7
03/09	Eucaryotic Microorganisms – Parasitology	8
03/16	EXAM – Eucaryotic Microorganisms Issue Biochemical Unkown	
03/21-29	**SPRING BREAK**	
03/30	Sugar Tube Fermentation Hydrogen Sulfide Production	12 13
04/06	Starch Hydrolysis Casein & Gelatin Hydrolysis Hemolysis	9 10 11
04/13	Nitrate Reduction Catalase & Oxidase Production	14
04/20	IMVIC Reactions Caries Susceptibility	15 16
04/27	Urea Hydrolysis Eosin Methylene Blue Agar Mannitol Salt Agar Consultations – Biochemical Unknown	17 18 19
05/04	Normal Flora of the Human Throat	20
05/06	Biochemical Unknown Due	

LAB REPORTS

LAB	TOTAL POINTS POSSIBLE
Organisms in the Environment	5
Use of the Microscope	10
Broth and Slant Culture	10
Smear Preparation	5
Gram Stain	5
Streak Plate	5
Pour Plate	5
Antibiotic Susceptibility	5
Fungi	5
Parasitology	10
Starch Hydrolysis	5
Casein & Gelatin Hydrolysis	10
Hemolysis	5
Sugar Tube Fermentation	10
Hydrogen Sulfide Production	5
Nitrate Reduction Catalase & Oxidase	15
IMV Reactions	10
Urea Hydrolysis	5
EMB	5
MSA	5
Normal Flora of Human Throat	5
Caries Susceptibility	5
TOTAL	**150**

MICRO QUIZ DEADLINE

MODULE	QUIZ OPEN
C1	1/20 – 1/23
C2	1/28 – 1/30
C3	2/04 – 2/06
C4	2/11 – 2/13
C5	2/18 – 2/20
C6/7	3/04 – 3/06
C8	3/11 – 3/13
C9	3/19 – 3/20
C10	4/03 – 4/06
C11	4/10 – 4/13
C12	4/20 – 4/22
C13	4/27 – 4/29
C14	5/05 – 5/08

FINALS

MON, 5/11	TUE, 5/12	WED, 5/13
11 AM – 1 PM	11 AM – 1 PM	8 AM – 10 AM
6 PM – 8 PM		2 PM – 4 PM