Biology 348-Kolibachuk- Lecture Rules & Regulations

Texts:

Microbiology, 7th ed. Black; (ISBN 978-0-470-10748-5) or (Binder ready: 978-0-470-279823) (lecture);
Microbiology, 8th ed. Cappuccino & Sherman (0-0853-2578-6) (lab)

Registration: The total number of students is limited to the number of spaces available in the laboratory (24/section). A basic knowledge of chemistry, cell biology, and algebra is required for this course.

Grading: The lecture portion of the course is worth 70% of your final grade.

Total of 4 hourly exams = 4 x 100 points= 400 points

The final grades will be as follows: <59=F, 59-69=D, 70-79=C, 80-89=B, 90-100=A.

I do not curve.

However, I do give out +/-: The exact cut-off may vary slightly each semester.

The laboratory portion is worth 30% of your final grade:

Lab quiz I-50 points
Lab quiz II-100 points
Lab quiz III-100 points
Unknowns- 150 points (total)
Total- 400 points*

* The exact breakdown may vary depending on the lab instructor.
In any case, the lab is worth 30% of the final grade.

Exams will be on the lectures indicated on the syllabus. The final exam is NOT cumulative.
Exam Format is: multiple choice, fill-in-the-blank, True/False, matching, & short answer.
Make-up exams will be given at the instructor's discretion. The format of a make up exam will also be at the instructor's discretion. Be advised that essay (long answer) formats are common and the make-up exam may cover everything and anything in the course, including topics in the text material that weren't covered in lecture.

Please be aware the last day to drop or change to audit is March 26th. Late withdrawals are for extreme situations only- poor grades are not an extreme situation.

Departmental Policy on Repetition of Courses: Lecture and laboratory are integrated components of biology courses offered at Rhode Island College. Therefore, effective with the Spring '07 semester, a student must repeat both components of this course if taken again at RIC. Grades previously assigned in either lecture or laboratory will not be carried forward to a new semester.

Attendance and Study Habits: I will not take attendance for lecture. As upperclassmen, you should be responsible enough to know that you need to attend class. Although I do provide lecture outlines/overheads, these are in no way complete. To do well, you need to read the text before lectures, take notes during lectures, and copy your notes over. (That way you've seen the material 3x before you even start to study for an exam). A word to the wise: my exams are not the type of exam you can cram the night before and expect to do well on. In general, the text provides background information for each lecture. Don't be concerned if the text seems more detailed than my lectures. Remember: I really have no way of knowing whether or not you understand the material, so don't be afraid to ask questions or ask for help!

As with any college course, there is zero tolerance for cheating of any kind. Section 3.9.1 of the RIC Handbook of Policies, Practices, and Regulations (available from the RIC web site) CLEARLY defines plagiarism and cheating as well as the actions the instructor may take which include, but are not limited to receiving a zero on the assignment, failing the laboratory, or failing the course. Be assured the punishment will be severe. Instructors are required to notify the Vice President of Academic Affairs for every case. Because nurses must be held to high standards of honesty and integrity, any incidences of cheating by Nursing Majors will be reported to the Dean of Nursing as well as the Vice President of Academic Affairs. As a reminder, all student assignments are to be written by the individual student. This means that each individual student will turn in all written assignments in his or her own words, regardless of whether or not students worked together in groups. Failure to properly use quotation marks or footnotes when directly quoting information verbatim from another source is also considered to be plagiarism. There are no exceptions to this rule.

Rhode Island College is committed to making reasonable efforts to assist individuals with documented disabilities. If you are seeking reasonable classroom accommodations under the Americans with Disabilities Act, and/or Section 504 of the Rehabilitation Act of 1973, you are required to register with the Student Life Office located in 127 Craig-Lee (456-8061). To receive academic accommodations for this class, please obtain the proper forms from the Student Life Office and meet with me at the beginning of the semester.

Lecture Goals & Objectives

Goal 1. What is microbiology?

- A. The differences between prokaryotes and eukaryotes and archaea.
- B. History and impact of microbiology; the origin of life
- C. Taxonomical classification of bacteria, particularly 16s rRNA-based taxonomies
- D. Basic cell structures found in prokaryotes and the functions of these structures.
- E. The differences between Gram-positive and Gram-negative bacteria
- F. Overview of the more unusual, nonpathogenic bacteria

Goal 2. Growth & Death of Bacteria.

- A. Growth requirements of bacteria
- B. Growth in batch (static) versus continuous culture
- C. Bacterial Death & Sterilization: Germicides, Antibiotics, Sterilization Methods, & Pasteurization
- D. Bacterial energetics: Catabolism, Photosynthesis, Anabolism
- E. Enzyme function and regulation at the protein level

Goal 3. Molecular Biology of Bacteria.

- A. DNA: genetic code, types of mutations, how are mutations generated/repaired
- B. Genetic regulation at transcriptional and translational levels; global regulation; recombination
- C. Methods of gene transfer: transformation, transduction, conjugation
- D. Overview of bacterial viruses (bacteriophages); emphasizing genetic regulation

Goal 4. Microbiology and You: Medical Microbiology

- A. Host parasite relationships: common habitats of bacteria in/on the human body
- B. Nonspecific and Specific host defenses against bacteria
- C. Pathogenic bacteria and the diseases they cause
- D. Mammalian viruses and the diseases they cause
- E. Eukaryotic pathogens (fungal, protozoan, helminthic) & the diseases they cause
- F. Epidemiology & Public Health Microbiology

Bio 348-Microbiology-Sections 01/02/03/~~04~~ Spring '10 Lecture Syllabus

M, W 4-5:20 PM, Room 050 Fogarty Hall

Dr. Dana Kolibachuk: Office F248 456-8479; Email: DKolibachuk@ric.edu; Biology Office 456-8010

Office hours: T 1-2 PM, W 3-4 PM, or by appt

Date	Topic	Chapter (Black 7th ed.)
M, Jan 25	Microbiology as a science, Historical Perspective	1
W, Jan 27	Prokaryotic Cell Biology	4
M, Feb 1	Prokaryotic Cell Biology	4
W, Feb 3	Prokaryotic Cell Biology	4
M, Feb 8	Microbial Evolution & Systematics	4, 9
W, Feb 10	Survey of Bacteria	
M, Feb 15	Survey of Bacteria	
W, Feb 17	Bacterial Death & Sterilization	12, 13
M, Feb 22	Lecture Exam I (covering 1/25-2/15 lectures)	-
W, Feb 24	Bacterial Growth & Factors Affecting It	6
M, Mar 1	Bacterial Energetics: Catabolism	5
W, Mar 3	Photosynthesis, Anabolism, Enzyme Regulation	5, 7
M, Mar 8	Molecular Genetics: Gene Regulation	7, 8
W, Mar 10	Molecular Genetics: Mutation, Mutagens	7
M, Mar 15	Happy Spring Break!	
W, Mar 17	Happy Spring Break!	
M, Mar 22	Recombination, Gene Transfer: Transformation & Conjugation	8
W, Mar 24	Lecture Exam II (covering 2/17-3/8 lectures)	-
M, Mar 29	Bacteriophage Genetics; Gene Transfer: Transduction (Last Day to Drop is Friday March 26th)	8
W, Mar 31	Host-Parasite Relationships	14
M, Apr 5	Host-Parasite Relationships; Nonspecific Host Defenses	16
W, Apr 7	The Specific Immune Response	17, 18
M, Apr 12	Major Bacterial Diseases	19, 20, 21, 22, 23
W, Apr 14	Lecture Exam III (covering 3/10-4/7 lectures)	-
M, Apr 19	Major Bacterial Diseases	19, 20, 21, 22, 23
W, Apr 21	Major Bacterial Diseases	19, 20, 21, 22, 23
M, Apr 26	Mammalian Virology	10
W, Apr 28	Survey of Eukaryotic Pathogens-Fungal,Protozoan, Helminthic	11, 19-24
M, May 3	Epidemiology & Public Health Microbiology	15
W, May 5	Make-Up lecture; review for final; course evaluation	
TBA 5/10-5/15	Lecture Exam IV (covering lectures 4/12-5/5)	