

BIO 205 - Microbiology for Health Professionals**Instructor Information**

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Office Hours: Weekdays and by appointment

Lectures Room C-102, Tues & Thurs 10-11:15am # 0545**Labs** Room DB-123, Tues 1pm # 0551, Weds 10am # 0553, Thurs 1pm # 0557.**Course Description**

The study of microorganisms as they relate to health and disease. Prerequisite for Nursing, Pharmacy, and other professional Healthcare programs and degrees.

Course Recommendations and Supplies

1. We strongly recommend that students have a minimum of a 'C' grade or better in BIO 156 or BIO 181 or current one year high school equivalent and one semester of college level chemistry.
2. Used or new edition of *Microbiology* by Bauman are recommended.
3. A pen and pencil are required for every lecture and lab meeting.
4. Lecture notes and lab activity handouts are required at every class meeting.
5. Computer use is required as internet access and all written assignments must be word processed from a computer.
6. Printed materials and activities for lecture and lab and exam forms are provided by the instructor.

Grading Scale and Points

Grade	Percent of points	Evaluations	Number	Points	Total
A	100 - 90%	Lecture Exams	4 ^a	100	400
B	89 – 80%	Lecture Quizzes	24 ^b	5	120
C	79 – 70%	Reports	4	20	80
D	69 – 60%	Lecture total			600
F	59 – 0%	Lab Total			320
		BIO 205 Total			920

^a 5 Exams are required, the lowest exam score is dropped. ^b 26 Quizzes are required, the lowest two are dropped.

Lecture Topic Presentations	Quizzes, Exams and Reports
Introduction to Infectious Microbes: Bacteria, viruses, and fungi.	Quizzes every meeting Tues 9/18 Exam 1 and Report 1
Control of Microbes and microbial resistance: Requirements for microbial growth. Physical, chemical, and antimicrobial drugs used to control microbes. Microbial resistance.	Quizzes every meeting Thurs 10/11 Exam 2 and Report 2
Human Defenses to Infection: Human immune defenses to infectious microbes.	Quizzes every meeting Tues 11/13 Exam 3 and Report 3
Infectious Disease Principles: Microbial pathogenesis, epidemiology, and emerging infectious diseases.	Quizzes every meeting Thurs 12/6 Exam 4 and Report 4

Final Exam - Required

Tues 12/11

Lecture presentations and course materials

Lectures will be delivered as Powerpoint presentations and students will be given presentation outline handouts. Exam Study Guides are included with each student lecture outline. Lecture presentation topics will be covered in the order listed in the table but may be changed at the discretion of the instructor. Students may make audio recordings of lecture presentations with instructor permission. Students seeking support materials outside of class lectures and outlines are recommended to refer to the course textbook. The textbook is recommended and should be sufficient reference material for readings, images, tables and for written clarification of lecture topics. The Phoenix College library has many current written, electronic, and internet resources for additional microbiology student support.

Lecture quizzes, exams, and reports

Students will have lecture content evaluated by daily quizzes and five exams given in lecture. A quiz will be given at every lecture meeting with several short answer questions from that days lecture and the previous lecture. The lowest two quiz scores will be dropped. Five exams will be required, one is a cumulative final, each consisting of multiple choice and a short answer writing sections. Each exam is started at the beginning of class and will be collected in about 50 minutes. The lowest exam score of the five will be dropped. Make up exams and quizzes will be considered by the instructor only in cases of real hardship to the student. Lecture quiz and exam dates are listed on this handout and may be subject to change at the discretion of the instructor. Any change in quiz and exam dates will be announced in class.

Infectious disease written reports

Students will be assigned four reports in lecture relating to infectious diseases. The instructor will assign report topics and handout written instructions detailing the report content and layout. Reports are due and must be submitted with each exam. Due dates are firm and late reports will not be accepted. Report due dates are listed on this handout and may be subject to change at the discretion of the instructor. Any change in due dates will be announced in advance.

Evaluation and Grading Policy

1. Keep all returned tests, quizzes, and reports for your records.
2. Lecture and lab points will be added together for one grade at the end of the semester. Extra credit assignments are not assigned.
3. Every student is required to take all exams and quizzes given in lecture.
4. Lecture exams are given promptly at the beginning of class period and will be collected in 50 minutes. Lecture quizzes will be given after the start of class.
5. Lab quizzes are given promptly at the beginning of lab class and late arrival for quizzes results in a missed quiz and zero points for that quiz.
6. Written reports and work are due during the class period assigned by the instructor. Failure to submit assignments at the due day and time will result in zero points for that assignment.

Lecture Attendance, Absence, and Withdrawal Policy

1. Only registered students may attend lectures and labs.
2. Three absences from lecture or two absences from lab without notifying the instructor can result in a withdrawal from the course.
3. Late arrival or early departure from lab will be counted as an absence.

4. It is the student responsibility to initiate withdrawal from the course. Requests to be withdrawn from the class be seen by the instructor. (See the Phoenix College Class Schedule).

Academic Dishonesty: Academic dishonesty including cheating and plagiarism will not be tolerated. Any assignment, quiz or exam that was completed dishonestly will result zero points for that assignment and consideration of withdraw from the course. The use of notes, books, written materials, cell phones, and any audio or video files are strictly forbidden during quizzes and exams. (See the Phoenix College Student Handbook)

Disruptive and unsafe behavior: Disruptive behavior in lecture or lab will not be tolerated and will result in zero points for all assignments associated with the incident and immediate withdraw from the course. Disruptive behavior includes 1) the harassment of other students or the instructor and 2) inappropriate or unsafe activities with respect to other students, instructors, equipment or supplies. 3) The misuse or unsafe use of any lab supplies or equipment can result in immediate withdrawal from the course. 4) The removal of any lab supplies or equipment will result in immediate withdrawal from the course and reporting to college safety. 5) The use of cell phones during class time is considered disruptive and cell phones must be turned off or set to vibrate. Talking on a cell phone or using text messaging during class time is not tolerated. 6) Cameras and the use of cameras of any kind will not be allowed in class without permission of instructor. 7) During exams or quizzes a student can leave the classroom only after they have completed the exam or quiz and have submitted it to the instructor as completed. (See the Phoenix College Student Handbook)

Disability Support Services: (602) 285-7477 (See the Phoenix College Student Handbook). It is a students responsibility to meet with the campus Disability Support Services Office before the first week of class, or as soon as possible. It is the responsibility of the student to provide documentation to the Manager of the Disability Resource Center (DRC), which conforms to the Documentation Policy as part of the intake process. The Documentation Policy is included in this handbook. Documentation must (1) verify the existence of a disability as defined under Section 504 and under the ADA; and (2) establish a clear connection between the accommodations being requested and the effects of the disability.

Student Attendance, Preparation, and Activities

1. **Attendance** strongly encouraged for all meetings and is required in every assigned lab. Late arrival or early departure from lab will be counted as an absence and zero points for any exercise and quiz from that lab meeting. Make up labs may be allowed at the discretion of the instructors in valid emergencies and must be accomplished during the same week of the missed lab.

2. **Preparation** It is the students' responsibility to be prepared for each lecture and lab meeting. Preparation for class includes prior review of the lab exercises, preparation for testing, and written work due. Every student must bring their Lab manual, a pen and pencil, and proper supplies for every lab session. Failure to bring proper supplies will result in zero points for that lab. The instructor will give handouts for lab instructions and background theory. Students are responsible for all lab activities, materials and the performance of lab activities described by the instructor. Lab activities will be covered in the order listed in the table, but may be changed at the discretion of the instructor.

3. **Activities** Active participation of students in every lecture and lab activity is mandatory. Labs begin with a quiz covering previous and current lab exercise material. Lab quizzes will consist of written short answers to questions. The lowest quiz score will be dropped from the total lab points. There is no extra credit because the lowest score will be dropped. Quizzes will be given promptly at the start of each lab session and late arrivals

will not be able to take the quiz receiving no points for that quiz. "Make up" quizzes are only available at the discretion of the instructor in a valid emergency. Quiz dates are listed on this handout and may be subject to change at the discretion of the instructor. Any change in quiz dates will be announced in advance.



Dates	Lab Exercises	Lab Activities
Meeting 1 8/20 – 8/23	1,2, 3	Lab Orientation and Safety Transfer of Bacteria using Aseptic Technique Streak Plate Method
Meeting 2 8/27 – 8/30	4,5,6	Quiz 1 Smear Preparation Gram Staining Microscopy
9/3-9/6	Labor Day Holiday	No Labs (Cotter & Rosati)
Meeting 3 9/10-9/13	7	Quiz 2 Mystery Infection Library Activity (40 points) All sections meet in library Room L122
Meeting 4 9/17-9/20	8, 9	Mystery Infection Assignment Due Oxygen Requirements Media for Isolation of Microbes
Meeting 5 9/24-9/27	10,11, cont'd 8, 9	Quiz 3 Ultraviolet Radiation Heat
Meeting 6 10/1-10/4	12, 13, 14 cont'd 10,11	Quiz 4 Disinfectants Handwashing and Antiseptics Patient Specimen Unknown (60 points)
Meeting 7 10/8-10/11	cont'd 12,13, 14	Quiz 5 Patient Specimen Unknown (continued)
Meeting 8 10/15-10/18	15, 16 14 cont'd	Quiz 6 Bacteria of the Skin Transformation of <i>Escherichia coli</i>
Meeting 9 10/22-10/25	17 cont'd 14, 15, 16	Quiz 7 Antimicrobial Susceptibility Testing
Meeting 10 10/29-11/1	18 cont'd 17	Quiz 8 Food Microbiology: <i>Staphylococcus</i> and <i>Salmonella</i>
Meeting 11 11/5-11/8	19 cont'd 18	Quiz 9 Unknown Report Due Detection of Coliforms in Water
Meeting 12 Weds/Thurs labs only 11/12-11/15	Veterans' Day 20, 21 cont'd 18, 19	Wednesday and Thursday labs only Quiz 10 Bacteria of the Respiratory Tract Oral Bacteria
Meeting 12 Mon/Tues labs only 11/19-11/22	Thanksgiving Holiday 20, 21 cont'd 18, 19	Monday and Tuesday labs only Quiz 10 Bacteria of the Respiratory Tract Oral Bacteria
Meeting 13 11/26-11/29	22 cont'd 20, 21	Quiz 11 Epidemiology & ELISA
Meeting 13 12/3-12/6	Clean up	Quiz 12