

**General Microbiology – BIOL 207
Summer 2016 – Online**

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Office hours: Skype (drpattersonwku) or available to meet in my office by appointment

Communication - Email will not be our only means of communication. I have found that sometimes it is necessary to talk either on the phone or face-to-face in order to clarify things. Usually I'm able to meet face-to-face in my office with those who want; however, talking on the phone or using video chat on the internet are both options. If you wish to video chat I have a Skype account with the user name drpattersonwku. Obviously the initial contact will still be via email, but don't hesitate to ask for the opportunity to speak with me. Arrangements can be made and you will be helped!

Course Description: This course provides an overview of the structures and functions of microorganisms as well as their importance to humans and human disease. A lab (BIO 208C) is also offered for this course and may be optional, depending on the student's degree requirements. Lecture and lab do not have to be taken together.

This course will help you attain the following goals and outcomes: **To use the scientific perspective to gain basic understanding of the natural and physical world and the relevance of science issues of personal and public importance.**

1. Demonstrate and understand the methods of scientific inquiry
2. Explain basic concepts or principals in one or more of the sciences
3. Apply scientific principles to interpret and make predictions in one or more of the sciences
4. Explain how scientific principles relate to issues of personal and/or public importance

Course Objectives: Upon successful completion of the course, the student will be able to:

1. To provide basic information on scientific process and method.
2. To develop a knowledge of natural science and its relevance in our lives.
3. To explain the structure, life cycle and process in bacteria and viruses.
4. To explore diseases caused by pathogens.
5. To differentiate among microbial forms.

Required eText – READ BEFORE PURCHASING

The Biology Department at WKU has worked over the past year to develop a new model for textbook adoption. In order to save you some money, maximize your effective use of your textbook, increase learning and evaluate the best ways of teaching you difficult topics, we've entered into a partnership with McGraw-Hill publishers. By enrolling in this course, you agree to purchase the digital materials associated with this course. These materials include 12-month or 24-month (depending on the course) access to Connect, LearnSmart or LabSmart where appropriate, a downloadable e-copy of the textbook which is yours to keep, and the option to print a gray-scale copy of your textbook at greatly reduced cost. The cost per text, with all online materials, is \$75, about 35% to 50% the cost of purchasing a new textbook, even before purchasing online materials. If you want a printed copy, that's about \$25, but you must order that through the WKU Store during the first week of class. In order to make these savings available to you, WKU must institutionalize the purchasing process. As a result, about two weeks into

the semester, you will be billed the cost of the materials for the course. The nice thing about this is that you will have access to all the course materials from day one, without doing a thing! If you choose to drop the course during the regular add-drop period, you won't be charged for the book. You should note that for this course, you **WILL** be charged for the digital materials. Do **NOT** buy a copy of the book from online or local vendors. **ONLY** the digital format will be used in this course. We anticipate that this approach to teaching will result in better learning and a more interesting classroom experience for you, and less stress on your spine!

Other Required Materials for Course – On Blackboard you will find a tremendous amount of information associated with this class that you are responsible for using. This includes both lecture notes and lectures videos (called Tegrity) that will guide you through the material during the semester, and will have considerably more weight on exams than that of text material. Assignments have sheets outlining the basics and videos providing more details and examples.

There are additional videos you can explore which explain a variety of topics that you will find helpful to you in this class. The **very first thing** you will need to do is go to the “Start Here” tab and refer to the information found within the “Required Technical Guides” folder. If you have never had an online class before and/or are not very familiar with using Blackboard these files and their associated videos will assist you greatly.

HIGHLY CRITICAL INFORMATION!!!

Technology Quiz: You will then use that information to take the “Technology Quiz”, which you **MUST** pass before you can gain access to the course's materials (however it will not count toward your final points). Clearly this is a priority item for you!

Important Dates for this Semester

Wednesday, July 13: last day to drop a course without a grade or to change from audit to credit
Tuesday, July 26: Last day to drop a class with a W or to change a class from credit to audit.

Student Accessibility Resource Center

It is Western Kentucky University's policy that students with a disability who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Student Accessibility Resource Center in DUC A-200 of the Student Success Center in Downing Student Union. Please **DO NOT** request accommodations directly from Dr. Patterson without a letter of accommodation from the Student Accessibility Resource Center.

Internet Access

Given that this is an online class you **MUST** have access to a working computer and the internet. Not having access is **NOT** an acceptable excuse for late assignments or quizzes! Be sure you have an alternate plan in case your own personal computer and internet go down. If you are in Bowling Green you have access to the computer lab in Mass Media 24/7. If you are taking this class from some other location then I suggest you secure some other location (local library, internet café, a friend or family member, etc.).

All students are required to have an active WKU email account. Your email account and Blackboard will be the main methods (especially Blackboard) used for sending out messages/announcements and posting assignment information for class, so you should get in the habit of checking it every day in case some kind of additional information has been posted. All materials can be included in the quizzes and exams (see below under assessment tools/methods).

Student Code of Conduct - Following the procedures of due process, if the WKU Student Code of Conduct is violated, the responsible parties will go through the University's judicial process, which is intended to be a fair and educational experience. Any WKU student may be expelled, suspended, placed on probation or given a lesser sanction for one or more of the following causes:

1. **Dishonesty.** Dishonesty, such as cheating, plagiarism, misrepresenting of oneself or an organization, knowingly furnishing false information to the University, or omitting relevant or necessary information to gain a benefit, to injure, or to defraud is prohibited.

This information is according to the 2014-2015 WKU Undergraduate Catalog (www.wku.edu/undergraduatecatalog/.../ugrad.../14_15ugrad_catalog.pdf).

Assessment Tools/Methods

1. **Quiz:** There is one short quiz to do at the beginning of the semester. It is called "Syllabus Questions and Agreement", but is actually a quiz to show that the students understand what is being asked of them in the course syllabus and that they are willing to abide by the policies. It is due by 11:59 pm on July 14.
2. **Online Lecture Quizzes:** There will be an online quiz regarding each of the lecture's material. These are found in the individual folders with the lecture material.
3. **LearnSmart:** This is an adaptive learning tool that maximizes productivity and identifies the most important learning objectives within a chapter for each student to master at a given point in time. LearnSmart also knows when students are likely to forget specific information and brings that content back so students can advance the knowledge from their short-term to their long-term memory. The tool is proven to improve academic performance, including higher retention rates (35% more likely to complete the class) and better grades (13% more likely to pass the class). For each chapter covered in lecture there is a LearnSmart assignment. The chapters being covered for each exam (see Reading Schedule) will have their LearnSmart assignments open throughout the entire time we are working on that unit to give you plenty of time to work on them and to encourage you to use them for study/review for the exam.

4. **Exams:** There will be four exams during the semester. Each exam will be a combination of multiple choice, true/false, and matching questions. The exams cover the material since the previous exam with the exception of concepts that repeat throughout the semester, which are fair material for any and all exams. This includes the final exam, which is **not** comprehensive but rather a regular exam.

Your exams will be given through the DL Testing Center so they can be proctored and you **have** to have an appointment to take your exam. You have to follow the directions on their site (<http://www.wku.edu/testing>) to make an appointment to take your exam. These people will also assist you to find a place to proctor your exam if you are located outside of Bowling Green while taking this course.

Exam 1 – July 18

Exam 2 – July 25

Exam 3 – August 1

Exam 4 – August 11

Topics to be Covered in Class

Chapter 1 – Introduction to Microbes and Their Building Blocks

Chapter 3 – Prokaryotic Structure

Chapter 4 – Eukaryotic Structure

Chapter 5 – Viral Structure and Life Cycle

Chapter 6 – Microbial Nutrition and Growth

Chapter 7 – Microbial Metabolism

Chapter 8 – Microbial Genetics and Genetic Engineering

Chapter 9 – Physical and Chemical Control of Microbes

Chapter 10 – Antimicrobial Treatment

Chapter 11 – Interactions Between Microbes and Humans

Chapter 12 – Host Defenses I: Overview and Nonspecific Defenses

Chapter 13 – Host Defenses II: Specific Immunity and Immunization

Chapter 22 – Environmental and Applied Microbiology

Grade Determination

Grades will be assigned based on the percent total of points earned in the course. The grading scale is as follows: A = 90 - 100%, B = 80 - 89%, C = 70 - 79%, D = 60 - 69%, F = 59% and below. To determine your grade at any time, add up the number of points earned, divide by the total number of points possible at that time and multiply by 100.

“Syllabus Questions and Agreement” quiz	10 points
Online Lecture Quizzes	10@15 points each 150 points
LearnSmarts	10@20 points each 200 points
Exams	4@100 points each 400 points
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TOTAL	760 points

A = 684 - 760

B = 608 - 683

C = 532 - 607

D = 456 - 531

F = 455 and below

Extra Credit - No more than a TOTAL of 30 extra credit points can be earned. No exceptions!

The latest extra credit can be turned in is Thursday, August 11 by 12 pm.

1. You may earn 10 points for a cell phone that you no longer use. You may bring in up to two cell phones for extra credit. These phones are donated to BRASS (Barren River Area Safe Space) for use by victims of domestic violence. Please note that I will accept as many as you (or anyone you know) have and are willing to donate so you do not need to limit yourself to two phones, except with regards to the points you can earn.
2. There are seminars offered throughout a regular semester, yet during the summer it is hard to find any. Attendance at ones that have something to do with science or study skills would be something I'd be looking for you to attend; however I am open to different ones. If in doubt try contacting me and see if I will approve one you are interested in attending. Try local hospitals for seminar events too. Attendance for each one will earn you 5 points, so a total of 10 points is possible.
3. Participation in a blood drive, either by donating blood or working at the blood drive itself, will earn 5 points in extra credit. Verification of your participation is necessary in order to receive the points.

Unforeseen circumstances may make it necessary to change either the schedule or procedures outlined in this syllabus; however, you will be provided with written notification of these changes as soon as it is possible to provide them to you.