

MONTGOMERY COLLEGE
Biology Department
Rockville Campus

BIOL 114 Understanding Viruses Spring 2020

I. Instructor Information

Name: Shawn Lester Office: 234H Science Center (SC)
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Office Hours: MW: ~3-4pm; T: 1-2pm, ~3:30-4pm; R: 1:30-2pm and ~30 minutes before and after class--Email is also an excellent way to ask questions. I check my email 7 days/week.
Web site: info.montgomerycollege.edu/faculty/slester
Department Office: Biology SC 234 Department Phone: 240-567-5124

II. General Course Information

BIOL 114, Understanding Viruses, is a three credit lecture course intended for non-science majors. The lecture meets one day per week (Thursday) in room **SW 303**.

Prerequisites: Assessment levels: ENGL 101/101A, READ 120.

Course Description: Designed for non-science majors, this is an introduction to the foundation of modern virology from smallpox to AIDS. The approach will be both historical and experimental, emphasizing the discovery of viruses as a biological form, the role of viruses in disease, and the impact of viruses in the development of modern cell and molecular biology. Various aspects of AIDS as a viral disease will be explored

Format: Most of the class meetings are ~ half lecture and half activities. For lectures where you have to do readings from "Microbe Hunters" the class will start with you discussing those readings so you need to do those readings before class.

Handouts: Lecture handouts are available on my web site: cms.montgomerycollege.edu/slester. You **must** download the lecture handouts prior to class. Check the syllabus for appropriate dates. The handouts for the activities will be provided on the day the activity is scheduled to occur.

III. Learning Objectives

Upon completion of this course, the student will:

- Describe Koch's Postulates and how they are used to determine the etiology of a disease.
- Describe the contributions of Pasteur and Koch to the Germ Theory of disease.
- Discuss the global aspects of viral diseases and human welfare.
- Discuss the theories regarding the origin of AIDS and its epidemiology.
- Explore various therapies and vaccines now under investigation to treat AIDS.

This list is not intended to be comprehensive. Specific learning objectives will be included with each lecture.

IV. Texts and Supplies

Text: De Kruif, Paul; Microbe Hunters (\$10-\$20 including shipping from Amazon; cheaper elsewhere on the internet)
Pencils for exams.

V. Grading

A. Requirements/Hints for Success

Lecture

In order to successfully complete this course the student must attend the lectures and take all of the lecture exams (see section **B**). There is a significant amount of written work that must be submitted complete and on time. Handouts are available for each lecture. These handouts are outlines. You must still take notes. Learning (study) objectives will be included with each handout. Treat these objectives like test questions. Try to answer them first. Then refer to the notes and textbook and **write** out the complete answer and use this to study for the exams. Exams are derived from the objectives and primarily from the lecture notes. The textbook is a supplement to the lecture. Anything specifically referenced (verbally or in writing by me) in the book is "fair game" on an exam. The lecture exam format can be multiple-choice, short answer, essay or any combination thereof. **Exams, quizzes, and certain assignments will be returned for your review. You may not keep these or photocopy/photograph or otherwise create a copy of the exams, quizzes or certain assignments.**

B. Course Grade

The lecture and lab components are combined to determine your final grade. The following grading policy is **tentative and subject to change**.

Lecture

Lecture exams 3 @100 points = 300 points

(You may drop the lowest exam grade **and replace** it with the final. Optional Cumulative Final @100 points)

Survey Viruses = 5 points

Worksheet: American Experience - Influenza 1918 = 10 points

Worksheet: Emerging Viruses = 10 points

Worksheet: Ebola = 30 points

Worksheet: Giant Viruses = 10 points

Worksheet: DNA-RNA-Protein = 10 points

Koch's Postulates = 10 points

Case Study: Skin Infections = 30 points

Case Study: HIV = 10 points

Epidemiology Simulation = 5 points (participation)

Louis Pasteur Activity = 10 points

Worksheet: Emerging and re-emerging viruses in the era of globalization = 10 points

Paper: Walter Reed = 30 points

Technology Presentation = 50 points

Total Points = 530 points

The final exam is comprehensive and optional. It may be used to replace the lowest lecture exam score. The final exam is typically all multiple-choice. Please show up at the beginning of the scheduled time.

Check my web site for specific information on each assignment if available. If there is nothing on the web site, I will provide handouts as needed. **There is no extra credit but there will be bonus points on exams.**

C. Standards and Expectations

Final grade scale: 90-100%=A; 80-89%=B; 70-79%=C; 60-69%=D; <60% = F

Grade Calculation: your points earned divided by the total possible points times 100 = your grade percent

There is often a "disconnect" between student expectations and faculty expectations. Students seem to expect that grades should be awarded based on effort whereas faculty award grades based on performance. These performance criteria are things like accuracy, correctness, completeness and timeliness. Many students seem to think putting a lot of time into a project should automatically yield a high grade. Quality not quantity is what counts.

D. Make-up Policy

Lecture exams and activities **can only** be made up with an excused absence. **Documentation must be provided!** Contact me **on or before** the day of the exam/activity. There is no excuse for not having someone like family or friends contact me.

E. Late Policy

Assignments are due as stated on the lab syllabus. Assignments will **lose 10% each day they are late regardless of the excuse**. Everyday of the week counts (including weekends and holidays). For example: an assignment is due Thursday at 7 pm. You turn it in at 7:15 pm = -10%. You turn it in on Wednesday = -20%. You turn it in the following Tuesday = -70% etc.

F. Audit Policy

Students must attend this course and participate in all activities.

VI. Classroom Policies

A. Attendance

Students are expected to attend all classes. More than two unexcused absences can result in an "F". **If you are late twice to lecture, it will count as an unexcused absence.** If you wish to withdraw from the course, you must do so officially. Please refer to the Montgomery College web site for dates and procedures. Simply not showing up for class the rest of the semester, will not result in an official withdrawal. If you do this, you will receive an "F". **Because this course only meets 1x/week, attending all classes is very important. Almost every class, there is an activity/assignment worth points. If you miss class, you miss points. If you have to miss class and you contact me before the next class, it may be possible make up the missed activity/assignment.**

Arriving late to class frequently is rude and disruptive. You have no right to do it. Please be on time (weather permitting). If you cannot make it to class, you can call my voice mail at 240-567-5127, the department's voice mail at 240-567-5124, or e-mail shawn.lester@montgomerycollege.edu. All are available 24 hours/day. There is no excuse for not notifying me.

B. Academic Honesty

I will show you the respect and trust you deserve. In return, you must live up to my expectations. Academic dishonesty will not be tolerated. Group study is a great way to learn but your work is your own. Reports or other assignments that have been copied from one another will result in half or no credit for each conspirator. A student caught cheating on an exam will have 2 options: 1) you will immediately drop the course or, 2) I will fail you and your grade history will reflect the reason. For more information, please refer to the Student Code of Conduct section under Student Affairs of the Montgomery College Policies and Procedures. On the web, go to: <https://www.montgomerycollege.edu/documents/policies-and-procedures/42001-student-code-of-conduct.pdf> (this link opens a PDF file) **Note: Exams and Case Studies may not be photographed, copied, or recorded in any way. Such activity will be considered cheating.**

C. Classroom Conduct

I will show you the respect and courtesy you deserve and I expect you to do the same for your fellow classmates and me. You are all here to learn. Please refrain from using or having others contact you on cell phones, pagers etc. For more information, please refer to the Student Handbook section on "Classroom Behavior".

D. Support Services

The Math/Science Center, Campus Tower Room 02, offers **limited** services to biology students. These services may include: reference texts, software, and tutoring.

A student who may need an accommodation due to a disability should discuss this with at the start of the course. A letter from Disability Support Services (DSS) authorizing your accommodations will be needed. The DSS office is located in CAB Room 122 and may be called on 240-567-5058, TTY 240-567-9672. Visit the web site at: <http://www.montgomerycollege.edu/dss>. Please note that DSS students **do not receive double-time for group activities.**

E. Cancellation of Classes

The only time the Biology Department cancels classes is when the college closes. The college reports its status to all of the major television and radio stations. Typically the college only reports that it is closing or closed **not** that it is open. If the weather is inclement and you have not heard or the college has not made a decision yet, **use your own judgment.** This applies anytime there is severe weather. Your life is worth an absence! Just call me and let me know as soon as you can if you will miss class.

F. Cell Phones etc.

Unless you have an urgent need such as children home alone, please turn off cell phones and other devices before class begins. Do not use them during class except for viewing lecture materials.

G. Children on College Premises

Per college Policies and Procedures, Section 75005CP, Paragraph 1.C.: "...both supervised and unsupervised children are discouraged from visiting classrooms, libraries, centers, lecture halls, offices or other facilities without the approval of the faculty member or supervisor of the facility." In addition, Paragraph 1.D.: "No children, whether supervised or unsupervised, are permitted in laboratories, gymnasiums, fitness centers, construction sites, maintenance facilities or other areas where their presence constitutes a danger to themselves or others." The term 'children' means any persons under the age of 16.

H. First Exam

There will be several questions on the first exam concerning the policies and procedures in this syllabus. Make sure you study it!

I. Electronic Devices

You are not permitted to use any type of electronic device during an exam. This includes, but is not limited to, dictionaries and translators, listening devices with headphones, cell phones, i-pods, smart watches and any other wearable smart technology. They must be put away during exams. If you have a question about a word on the exam or what something means, ask me.

The college has created a web page with many important links:
<http://www.montgomerycollege.edu/mcsyllabus/>

J. Written Communications

“OMG, stop uzn chtspk n ur writin. cuz prob is when u need 2 tipe somthin prfssnl u wont. hehe ...lol”

Stop using "chatspeak" in your writing. The problem is that when you need to type something professional, you will inadvertently use "chatspeak" when is it not appropriate. The people on the receiving end will not be impressed. If you send me an email using chatspeak, I will not respond. When you send an email to someone who is not a friend or stranger in a chat room, use an appropriate greeting, ending, capitalize the first word of a sentence and the pronoun "I" etc.

K. Beginning and Ending

This course begins and ends as stated in the schedule of classes. The last day of this course is **May 7th** with final exams the following week. If for some reason you have planned not to be here that last week or you have planned a vacation during this course, you must drop the course now. You will not be accommodated and you will be failed for lack of attendance.

BIOL 114 Understanding Viruses Spring 2020 Syllabus*

**This syllabus is tentative and subject to change.*

Date	Lecture Topic	Activity
January 30	Introduction – History & Scope	Survey: What do you know about viruses? Video: Battlefield Cell
February 6	Leewenhoek, Pasteur I (Ch. 1, p. 1-22, Ch. 3,54-100) Pasteur II (Ch. 5, p. 140-177)	Louis Pasteur: Cooperative Learning Activity
13	Koch (Ch. 4, p. 101-139) Spallanzani (Ch. 2, p. 23-53) Walter Reed (Reading for paper assignment p.303-325)	Brief discussion of coronaviruses (SARS, MERS, 2019-nCoV) Activity: Koch’s (and Rivers’s) Postulates.
20	Metchnikoff (Ch. 7, p. 201-227) Erlich (Ch. 12, p, 326-350)	Paper Discussion: Could Giant Viruses Be the Origin of Life on Earth? Worksheet
27	Exam 1 / Virus Structure	Making a Virus / Walter Reed paper due
March 5	Replication, Transcription, Translation	DNA Replication Game Translation Simulation Worksheet
12	HPV / Herpes	Mini-Lecture: Scientific Method Case Study: Skin Infections
19	Spring Break!!!!!!!!!!!!	
26	Ebola	Video: Ebola – Worksheet/discussion
April 2	Exam 2 / HIV	-----
9	HIV	Case Study: HIV ; Epidemiology Simulation: Determining “Patient Zero”
16	Zika / 1918 Spanish Flu	Video: Influenza 1918 – Worksheet/discussion
22	Last day to drop with a “W”	
23 Double Lecture	Defenses: Immunity, Vaccines, Antivirals	Microbiome/Virome: Implications for Health & Well-being
30	Emerging Viruses & Climate Change Technology Presentation Due	Paper Discussion: “Emerging and re-emerging viruses in the era of globalization” Worksheet
May 7	Exam 3 / Review for final exam	
14	Final Exam – Optional (7:15 – 8:30pm)	-----

Prof. Lester's Courses
Cheating, Academic Dishonesty, Recommendation Letters, Scantrons and Misc.

Identical Assignments

Although you may work together on homework, your assignments may not be identical (i.e., overwhelmingly the same) to each other. If this happens, everyone involved will receive a "0". If it happens again, everyone will receive an "F" for the course.

Copying Assignments from a Previous Semester

Some students give all of their notes and assignments from the previous semester to their friends taking the course in the next semester. If I find that you are using last semester's answers, you will receive an "F" for the course. How will I know this? I make slight changes in assignments so that a particular question may be the same but the answer is different.

Students Caught Cheating on Exams

If I catch you cheating on an exam, you will fail the course and your transcript will show 'Academic Dishonesty'.

Recommendation Letters

Recommendation letters are a privilege granted by faculty. We are not required to write them. The minimum grade required to be considered is a "B". It is my right to deny your request for any reason. I will only write a limited number of recommendations per semester.

Once Assignments are Returned

Once an assignment has been returned, late assignments will not be accepted.

Assignments with Multiple Pages

Assignments with multiple pages must be stapled. Assignments with paper clips and folded corners will not be accepted. When they are stapled they may be turned in late with a 10% penalty.

Handwriting

Handwriting must be legible. Written answers must be clear and make sense. It is not my job to interpret your written work. If I cannot read your writing or it makes no sense, you will either lose credit or receive no credit. This applies to assignments and exams.

Photographing Exams, Case Studies, and other Assignments

Exams, case studies, and all other assignments that you do not keep may not be photographed, copied, or recorded in any way. These actions constitute cheating. If you are caught doing these things, you will receive an "F" for the course! Even if you delete the images/recordings, you will still fail the course. It is the action, not the product that merits the "F".

Filling Out Scantrons

Lecture exams are part multiple-choice and lab exams are all multiple-choice. All answers must be filled in on the Scantron. The only answers that count are on the Scantron. If you circle the correct answer on the test paper but fill in the wrong answer on the Scantron, you will not get credit for that answer. If you fill in more than one answer on the Scantron, you will not get credit for the one that is correct. The Scantron must be filled in during the exam not at the end! If you wait until the exam is over to fill in the Scantron, you will receive zero credit for the multiple-choice questions.

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