

Virology BIO 315/515 Spring 2016 Lecture Syllabus

Professor: Dr. Teri Shors
Office: HS 155
E-mail: shors@uwosh.edu
Office Hours: Please allow 48 hours for E-mail communications (possibly longer on weekends and holidays).
Please include the course number in the subject or body of e-mail communication.

Lecture: MWF 10:20-11:20 a.m. HS 260

Textbook: Understanding Viruses, 3rd Edition, Jones and Bartlett Publishers by T. Shors 2011. Students are responsible for all material in each chapter unless specified by the instructor. Therefore, preparation for exams should include reading the chapter material assigned for each lecture exam. **The 2nd edition will NOT suffice.** Virology is a fast-paced field. Information is outdated quickly. Over half of the book was rewritten when revising the 2nd edition (creating the 3rd edition).

Course Description: BIO 315/515 Virology (3+0) 3 cr. (Spring)

Principles of animal and human molecular virology. Topics include replication, expression, pathogenesis, methods of diagnosis and detection, current uses of viruses in gene therapy and vaccine applications, viruses and cancer and other diseases, persistent infections, and emerging viruses. Prerequisite: BIO 323 (**Introduction to Molecular and Cell Biology**) or consent of instructor.

D2L: Please check D2L at least weekly for content, grades posted for this course, special accommodations (e.g. inclement weather). D2L will mainly be used to post the syllabus, podcasts and grades.

FORMS: Forms (located in D2L→Content) for testing accommodations and make-up exams (if allowed) must be filled out and turned into the instructor one week prior to an exam.

ACCOMMODATIONS: If you need special accommodations approved by Project Success or the Dean of Students for the course, please fill out the **Accommodations Form (D2L-Content—Forms)** and provide it to the instructor 1 week prior to each exam. Thank you.

A **Request to Make Up a Missed Exam Form** is posted to D2L in case of an *emergency* resulting in a missed exam. See section in the syllabus on **EXAM POLICIES**.

EXAM POLICIES Bring and have ready a PHOTO ID to each exam. The exams will not be handed out until your Instructor is satisfied with the seating arrangement and the room is quiet. **You will be present for every scheduled exam.** No one should even think about missing an exam for any but the most extreme emergencies (e.g., grievous illness or injury, death of a loved one). **If such an emergency should arise, if you notify me of your intended absence before the start of the exam, and if your excuse is then and only then will you be allowed to take the a make-up exam representing the missed material at the Testing Center located in the basement of Polk library.** The score earned on the make-up will only be allowed if the above conditions are met. If you miss an exam and these conditions are not met, you will receive a zero for that exam. **Provide the instructor with the Request to Makeup a Missed Exam Form (located on D2L→ Content→Forms).**

E-mail

As a UW Oshkosh student, you should be checking your **UW Oshkosh e-mail account daily**. If there are schedule changes or important class business issues, the instructor will e-blast the class with information so that you are prepared for lectures and labs.

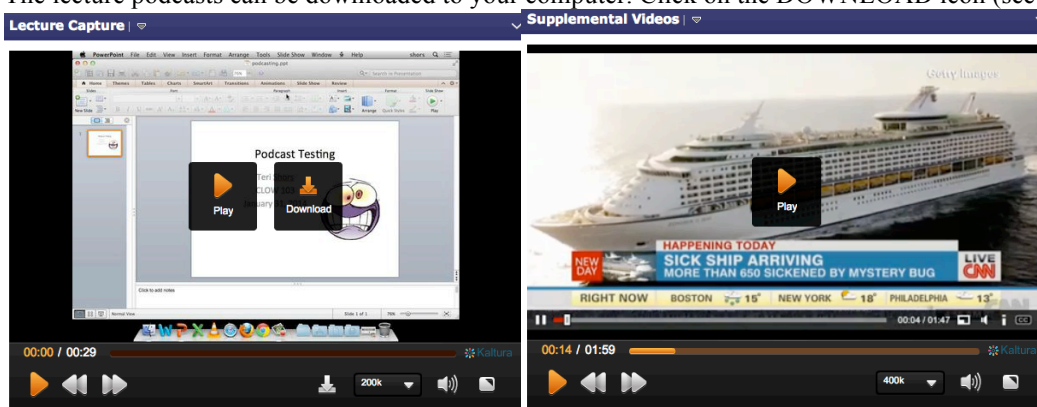
INCLEMENT WEATHER: For campus closings, check the following URL: <http://emergency.uwosh.edu/> Updates will be at this emergency site, including the nature of the problem, steps to address the problem and any necessary instructions. For road conditions, refer to 511 Wisconsin Travel Conditions <http://www.511wi.gov/Web/> Lastly, check your e-mail. If the instructor feels she cannot safely make it to campus or feels that the majority of students will not be able to attend the class based on e-mail queries on road conditions etc., other accommodations to learn the

material for that day will be made via D2L. Check your e-mail to determine if lecture is canceled and what accommodations have made to accommodate the classroom time missed. The instructor has the capability to podcast lectures from home.

Podcasting and Supplemental Videos

If attendance drops below 80%, the instructor reserves the right to stop podcasting. BIO 315 is not an online class. Podcasts should be used to review material while studying for exams.

BIO 315/515 lecture podcasts will be available on D2L. Podcasts will consist of both a screen capture of PowerPoint presentations along with the voiceover from lecture. Films cannot be podcasted. Podcasts are accessed through D2L. The lecture podcasts can be downloaded to your computer. Click on the DOWNLOAD icon (see image below).



Supplemental video clips must be viewed via D2L and **cannot be downloaded to your computer due to permission rights**. NOTE: there is no download icon for supplemental videos. See image above.

Both sets of videos (lecture capture and supplemental video clips) are on the course HOME PAGE in D2L. If you are using wireless internet, reduce the pixel size of the video so that it runs better on your laptop. You can do this by scrolling through the pixel sizes (e.g. the lecture capture video above is set to 200K-the lowest pixel size setting but the video clips are set to 400K).

GRADING: Due to privacy regulations, grades cannot be given out over the phone or by e-mail. Grades will be posted in the Gradebook of D2L. **Copies of the exam and your original scantrons will be made available at the Halsey Resource Center (2nd floor of Halsey Science Center).** **Scantrons will not be accepted for re-scoring** but please pick them up and find out what you got wrong on your exam. *Answer keys will be posted to D2L (Content).*

Exam Answer Keys: **After all students have taken an exam, a copy of the exam and your original scantron will be made available at the Halsey Resource Center (2nd floor of Halsey Science Center).** **Scantrons will not be accepted for re-scoring** but please pick them up to determine which questions were answered incorrectly. *Answer keys will be posted to D2L (Content).* If you did not do as well as you expected, a new strategy should be implemented/consult with the instructor if needed, request tutoring through CAR etc. **The first exam and scantron will be available until the 2nd exam is taken. After the second exam is taken, the 2nd exam will replace the first exam at the Halsey Resource Center and the answer keys will replace the answer keys to exam 1 on D2L and so forth.** Therefore, it is imperative that you review your exams in a timely manner because copies of exams and answer keys are available during a finite time period. After this period, the exam and keys are shredded. There are three lecture exams. The final exam is comprehensive. It will include 25% of the questions from each lecture exam and 25% new questions from the last material covered in the class.

QUESTIONS ABOUT GRADES: If you believe your exam was not scored properly (e.g. less points than you should have), **you must notify the instructor in writing within 1 week of the exam key being posted to D2L. Word process your query, print it, place it in an envelope on the instructor's office door (HS155).** The instructor will then review your exam based on your scored responses provided by the Testing Center. An e-mail or phone call asking for more points will NOT BE CONSIDERED by the instructor for review.

Your query should contain the following.

1. Your name
2. **Course number and title**
3. **Exam number**
4. Your query

Undergraduate and Graduate GRADING:

There will be three 100 pt. lecture exams and a 200 pt. COMPREHENSIVE final exam. Exam format will be multiple choice. The grading system/point breakdown below will be used for both undergraduates and graduate students, however, **if you are a graduate student, you will be required to give a presentation in class. Instructor will provide more details to the Graduate students about this. Graduate students are also required to ask questions or contribute to lecture discussions each week.**

UNDERGRADUATE Grading items	Points Possible
3 lecture exams	300 pts.
Comprehensive Final Exam	200 pts.
TOTAL POINTS	500 pts

GRADUATE EXAMS Grading items	Points Possible
3 lecture exams	300 pts.
Comprehensive Final Exam	200 pts.
Graduate student presentation	60 pts.
Class Participation (Weeks 2-13: 10 points/week)	120 pts.
TOTAL POINTS	680 pts.

**It is expected that graduate students will ask questions or contribute to lecture discussions each week.*

GRADING BIO315/515:

A	100%-94%	4.00
A-	93%-88%	3.67
B+	87%-86%	3.33
B	85%-81%	3.00
B-	80%-78%	2.67
C+	77%-76%	2.33
C	75%-71%	2.00
C-	70%-69%	1.67
D+	68%-66%	1.33
D	65-63%	1.00
D-	62-60%	0.67
F	<60%	0.00

*Instructor reserves the right to **adjust grades** of the entire class if necessary (**e.g. curve scores higher or lower**).

Common courtesy: Please do not text or monitor **cell phones, iPods, iPads (unless using for note-taking) or other bluetooth devices during class. Please remove ear buds.** If you are using a laptop, it should be used for note-taking only. If you are distracting students by surfing the Internet, playing games or accessing Facebook or other social network sites, the instructor may ask you to leave the room.

Course Objectives:

- To present the historical perspectives of virology.
- To introduce the idea that viruses and all microorganisms, whether pathogenic or benign, are important members of the biosphere and have an important impact on our daily and future activities. This impact goes both ways.
- Virology is biology "writ small." The principles studied here apply to all biological sciences. Virology is intimately linked with molecular biology and biochemistry.
- To discuss the prospects of using medical technology to eliminate specific viral and other infectious diseases.

Virology and Promoting the Liberal Arts: A liberal arts education refers to studies in a college or university intended to provide general knowledge and develop intellectual capacities. A liberal arts education prepares students to work in a variety of jobs. This is different from other types of education where students develop professional or vocational skills for a specific job. The Biology, Microbiology and Medical Technology Majors are offered at UW-Oshkosh within the College of Letters and Sciences (COLS). The COLS emphasizes a liberal arts education. It promotes a liberal arts education model proposed by Carol Geary Schneider, president of the Association of American Colleges and Universities since 1998. Schneider stresses the idea that ALL students receive an education of lasting value, relevant for the 21st century. In her model learning should be: 1) "analytical, contextual and holistic thinking;" 2) "effective communication using multiple literacies and forms of expression;" 3) "critical reflection/informed action as citizens, producers, human beings;" 4) "ethical action for local and global communities;" and 5) "integrative learning."

At UW-Oshkosh, you will have a broad exposure to the liberal arts, while focusing on a topic that you are particularly interested in such as a biology or microbiology. BIO 315 (Virology), is an elective course within all three of the aforementioned majors. Virology is important in not only the study of infections and their treatment and prevention, **but also in the unraveling of the most fundamental aspects of biology**. This is because viruses have an intimate relationship with the basic machinery of their host cells. Thus, research on how viruses reproduce themselves and spread has given us many insights into the way in which the cells of our bodies function, **leading in turn to a better understanding of the whole organism and of how infective diseases may be prevented or cured**.

Academic Dishonesty: Policies are clearly defined at this institution and will be followed. Students are referred to the University of Wisconsin Oshkosh Student Discipline Code as detailed in specific provisions of Chapter 14 of the State of Wisconsin Administrative Code. Any student(s) found in violation of any aspect of the above Code (as defined in sections UWS 14.02 and 14.03) will receive a sanction as detailed in UWS 14.05 and 14.06. Examples of violations include: looking at another student's exam or answer sheet and copying the answers during an exam, talking or whispering to another student during an exam, receiving text messages during an exam on an electronic device, or listening to answers or information recorded on an electronic via earphones during an exam. Sanctions range from a grade of zero for the assignment in question to an oral reprimand to expulsion from the University of Wisconsin Oshkosh.

*Tentative Lecture Syllabus

Week	Period	Date	Chapter	Topic
1	1	M Jan. 30		Syllabus/Intro to Course
1	2	W Feb. 1	Instructor's Notes Chapter 1 Chapter 15 Appendix C	Viruses in the News Emerging viral diseases and healthcare today Ebola and Zika virus infections review
1	3	F Feb. 3	Instructor's Notes Chapter 1 Chapter 15 Appendix C	Viruses in the News Emerging viral diseases and healthcare today Ebola and Zika virus infections review Disease Triangle Concept
2	4	M Feb 6	Chapter 1	Introduction to Viruses
2	5	W Feb 8	Chapter 1	Introduction to Viruses
2	6	F Feb. 10	Chapter 17	The History of Medicine, Clinical Trials, Gene Therapy, and Xenotransplantation
3	7	M Feb. 13	Chapter 17	The History of Medicine, Clinical Trials, Gene Therapy, and Xenotransplantation
3	8	W Feb. 15	Chapter 2	Virus Architecture and Nomenclature
3	9	F Feb. 17	Chapter 3	Eucaryotic Molecular Biology, Cellular Hurdles, and How Viruses Hijack Host Cells
4	10	M Feb. 20	Chapter 3	Eucaryotic Molecular Biology, Cellular Hurdles, and How Viruses Hijack Host Cells
4	11	W Feb. 22		Exam 1
4	12	F Feb. 24	Chapter 4	Mechanisms of Viral Entry and Spread of Infection in the Body
5	13	M Feb. 27	Chapter 4	Mechanisms of Viral Entry and Spread of Infection in the Body
5	14	W Mar. 1	Chapter 5	Host Resistance to Viral Infection (The Immune System)
5	15	F Mar. 3	Chapter 5	Host Resistance to Viral Infection (The Immune System)
6	16	M Mar. 6	Chapter 6	Epidemiology
6	17	W Mar. 8	Chapter 6	Epidemiology
6	18	F Mar. 10	Chapter 7	Laboratory Diagnosis of Viral Diseases and Working with Viruses in the Research Laboratory
7	19	M Mar. 13	Chapter 7	Laboratory Diagnosis of Viral Diseases and Working with Viruses in the Research Laboratory NIH Slideshow
7	20	W Mar. 15		Exam 2
7	21	F Mar. 18		Take Home Assignment (No Lecture)
				SPRING BREAK MARCH 19-MARCH 26
8	22	M Mar. 27	Chapter 9	Influenza: Winnebago County Study Virology Class 2001
8	23	W Mar. 29	Chapter 9	Influenza
8	24	F Mar. 31	Chapter 9	Influenza
9	25	M Apr. 3	Chapter 9	Influenza
9	26	W Apr. 5	Chapter 9	Influenza Surveillance and Vaccines
9	27	F Apr. 7	Chapter 9	Influenza Surveillance and Vaccines
10	28	M Apr. 10	Chapter 16	Viruses and Cancer Film: My Shocking Story (Papillomaviruses)
10	29	W Apr. 12	Chapter 16 Parts of Chapters 10-12	Viruses and Cancer
10	30	F Apr. 14	Chapter 16 Parts of Chapters 10-12	Viruses and Cancer
11	31	M Apr. 17	Chapter 16 Parts of Chapters 10-12	Viruses and Cancer
11	32	W Apr. 19		Exam 3
11	33	F Apr. 21	Chapter 13	Rabies
12	34	M Apr. 24	Chapter 13	Rabies
12	35	W Apr. 26	Chapter 13	Rabies
12	36	F April 28	Chapter 12	HIV
13	37	M May 1	Chapter 12	HIV
13	38	W May 3	Chapter 12	HIV
13	39	F May 5		GRADUATE STUDENT PRESENTATION on Measles Virus
14	40	M May 8		Film (To be announced)
14	41	W May 10		FINAL COMPREHENSIVE EXAM
14	42	F May 12		Final Exam Make Up

*The instructor reserves the right to change this syllabus at any time in the semester.