



Oregon State University
Ecampus

Course Name: Human Virology

Course Number: MB340 crosslisted as BHS340

Credits: 4

Instructor name: Hannah Rowe (she/her/hers)

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Course Description

Properties of viruses, their biology, pathogenesis and concern to society. Emphasis on viruses causing human disease.

Prerequisites or Corequisites

BI 204 with C- or better and BI 205 [C-] and BI 206 [C-]) or ((BI 211 [C-] or BI 211H [C-]) and (BI 212 [C-] or BI 212H [C-]) and (BI 213 [C-] or BI 213H [C-])) or ((BI 221 [C-] or BI 221H [C-]) and (BI 222 [C-] or BI 222H [C-]) and (BI 223 [C-] or BI 223H [C-])) **OR** 12 credits of university biology

Communication:

Please post all course-related questions in the Q&A Discussion Forum so that the whole class may benefit from our conversation, and since sometimes your classmates can answer better/faster than I can. Please contact me via email for matters of a personal nature. I will reply to course-related questions within 24 hours. I will strive to return your assignments and grades for course activities to you within five days of the due date.

Office hours

Office hours will be held over Zoom: <https://oregonstate.zoom.us/j/98198152629>
Password: OSUVirus21, Tuesdays 4-5pm and Fridays 1-2pm, or by appointment. Please reach out to me if the standard times do not work for you, I can meet with you on weekends if necessary.

Time Expectations:

This course combines approximately 130 hours of instruction, online activities, study and assignments for 4 credits.

Technical Assistance:

If you experience any errors or problems while in your online course, contact 24-7 Canvas Support through the Help link within Canvas. If you experience computer difficulties, need help downloading a browser or plug-in, or need assistance logging into a course, contact the IS Service Desk for assistance. You can call (541) 737-8787 or visit the [IS Service Desk](#) online.

Learning Resources:

Required Textbook: Essential Human Virology, by Jennifer Louten, Academic Press, 2016, ISBN: 128009475, eBook ISBN: 9780128011713

Note to prospective students: Please check with the OSU Bookstore for up-to-date information for the term you enroll ([OSU Bookstore Website](#) or 800-595-0357). If you purchase course materials from other sources, be very careful to obtain the correct ISBN.

Library access: a ebook copy is on reserve at the library:

<https://search.library.oregonstate.edu/permalink/f/kgr9kh/CP7131984>

Note that availability may be limited in the time right before exams and assignment due dates.

Measurable Student Learning Outcomes:

At the completion of the course, you should be able to:

1. Discuss the properties of viruses using the specialized language relevant to virology.
2. Name key pathogenic viruses and the diseases they cause.
3. Explain the basic design, infection, replication strategy and disease causality of viruses.
4. Communicate and explain in writing key aspects of virology.
5. Discuss currently exciting topics and issues in the field of virology.

Evaluation of Student Performance:

- Online Discussions – 20 points
- Weekly Quizzes – 100 points
- Assignments – 400 points
- Crosswords – 80 points
- Midterm Exam – 200 points
- Final Exam – 200 points
- **Total – 1000 points**

Letter Grade

Grade	Percent Range
A	93-100%
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	76-79%
C	70-75%
C-	65-69%
D+	60-64%
D	55-59%
D-	50-54%

Grade	Percent Range
F	Less than 50%

Course Content:

Week 1: Virus structure & classification; cell biology review

Week 2: Molecular biology review; viral molecular biology; DNA virus replication schemes

Week 3: Replication schemes of RNA and reverse transcribing viruses; virus transmission and epidemiology

Week 4: Innate and adaptive immune responses to virus infection; detection and diagnosis of viral disease

Week 5: Vaccines and antiviral drugs; viruses and cancer

Week 6: Influenza virus and disease

Week 7: Human immunodeficiency virus and AIDS

Week 8: Viral hepatitis; poliovirus disease and eradication

Week 9: Herpes viruses and disease; poxviruses and smallpox eradication

Week 10: Emerging and re-emerging viral disease

Course Learning Outcomes "After successful completion of this course, you will be able to..."	Learning Activities	Measurement (points available)
Week 1: Describe the variety of genome type and structure among viruses; Recall basic cell biology	Chapters 1-3, pp. 1-36, video lectures, study, quiz sets, crosswords, assignment #1, discussion	Discussion post (2) Assignment #1 (16) Crosswords (10) Quizzes (10)
Week 2: Recall basic molecular biology; describe aspects of viral molecular biology; compare, contrast and summarize DNA virus replication strategies	Chapters 3-4, pp. 36-56 & 63-69, video lectures, study, quiz sets, crossword, assignment #2	Discussion post (2) Assignment #2 (50) Crossword (5) Quizzes (10)
Week 3: Compare, contrast, and summarize RNA and reverse-transcribing virus replication strategies; describe and distinguish different methods of virus transmission and spread (epidemiology)	Chapters 4-5, pp. 56-63 & 71-92, video lectures, study, quiz sets, crosswords, assignment #3	Discussion post (2) Assignment #3 (32) Crosswords (10) Quizzes (10)
Week 4: Describe and explain immune responses to viruses; describe and explain methods for virus detection and viral disease diagnosis	Chapters 6-7, pp. 93-131, video lectures, study, quiz sets, crosswords, assignment #4 (case study, part B)	Discussion post (2) Assignment #4 (32) Crosswords (10) Quizzes (10)
Week 5: Describe vaccine and antiviral drug treatment of viral diseases; explain and describe how viruses can cause cancer	Chapters 8-9, pp. 133-170, video lectures, study, quiz sets, crosswords	Discussion post (2) Crosswords (10) Quizzes (10) Midterm exam (200)
Week 6: Summarize the biology of influenza virus and influenza disease	Chapter 10, pp. 171-190, video lectures, study, quiz	Discussion post (2) Assignment #5 (50) Assignment #6 (25)

	sets, crossword, assignments #5 and #6	Crossword (5) Quizzes (10)
Week 7: Summarize the biology of HIV and AIDS disease	Chapter 11, pp. 193-210, video lectures, study, quiz sets, crossword, assignments #7 and #8	Discussion post (2) Assignment #7 (50) Assignment #8 (25) Crossword (5) Quizzes (10)
Week 8: Summarize the biology of hepatitis and polio viruses relevant to disease; describe the poliovirus eradication program	Chapters 12 & 14, pp. 213-232 & 257-270, video lectures, study, quiz sets, crosswords, assignment #9	Discussion post (2) Assignment #9 (25) Crosswords (10) Quizzes (10)
Week 9: Summarize and explain the biology of herpes and pox viruses relevant to disease; describe how smallpox was eradicated	Chapters 13 & 15, pp. 235-255 & 273-290, video lectures, study, quiz sets, crosswords	Discussion post (2) Crosswords (10) Quizzes (10)
Week 10: Explain how human, ecological and viral factors influence emergence and reemergence of viral disease	Chapter 16, pp. 291-309, video lectures, study, quiz sets, crossword, assignments #10 and #10	Discussion post (2) Assignment #10 (70) Assignment #11 (25) Crossword (5) Quizzes (10)
Finals Week		Final exam (200)

Course Policies

Discussion Participation

Students are expected to participate in all graded discussions. While there is great flexibility in online courses, this is not a self-paced course. You will need to participate in discussions on at least two different days each week. You must make meaningful, substantive comments (not just agreeing with an earlier post), and support your assertions with facts.

Late Work Policy

Late assignments will accepted up to one week late and points will be deducted up to 5% per day late.

Corrections

For quizzes and the midterm exam, up to half the missed points can be earned back if the student submits the correct answer and a 1-2 sentence description of why that answer is correct for each missed question, by email within 7 days of the grade being released to the student.

Makeup Exams/Quizzes:

Contact me as soon as you know you will miss an exam or quiz (ideally before the exam or quiz opens). I can extend the window or provide you an alternative assessment for excused absences.

Incompletes

Incomplete (I) grades will be granted only in emergency cases (usually only for a death in the family, major illness or injury, or birth of your child), and if the student has turned in 80% of the points possible (in other words, usually everything but the final exam). If you are having any difficulty that might prevent you completing the coursework, please don't wait until the end of the term; let me know right away.

Statement Regarding Religious Accommodation

Oregon State University is required to provide reasonable accommodations for employee and student sincerely held religious beliefs. It is incumbent on the student making the request to make the faculty member aware of the request as soon as possible prior to the need for the accommodation. See the [Religious Accommodation Process for Students](#).

Guidelines for a Productive and Effective Online Classroom

(Adapted from Dr. Susan Shaw, Oregon State University)

Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university's regulations regarding civility. Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in this online course, paying particular attention to the following:

- Unless indicated otherwise, please complete the readings and view other instructional materials for each week before participating in the discussion board.
- Read your posts carefully before submitting them.
- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.

Expectations for Student Conduct

Student conduct is governed by the university's policies, as explained in the Student Conduct Code (<https://beav.es/codeofconduct>). Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility.

Academic Integrity

Integrity is a character-driven commitment to honesty, doing what is right, and guiding others to do what is right. Oregon State University Ecampus students and faculty have a responsibility to act with integrity in all of our educational work, and that integrity enables

this community of learners to interact in the spirit of trust, honesty, and fairness across the globe.

Academic misconduct, or violations of academic integrity, can fall into seven broad areas, including but not limited to: cheating; plagiarism; falsification; assisting; tampering; multiple submissions of work; and unauthorized recording and use.

It is important that you understand what student actions are defined as academic misconduct at Oregon State University. The OSU Libraries offer a [tutorial on academic misconduct](#), and you can also refer to the [OSU Student Code of Conduct](#) and [the Office of Student Conduct and Community Standard's website](#) for more information. More importantly, if you are unsure if something will violate our academic integrity policy, ask your professors, GTAs, academic advisors, or academic integrity officers.

TurnItIn

Your instructor may ask you to submit one or more of your writings to Turnitin, a plagiarism prevention service. Your assignment content will be checked for potential plagiarism against Internet sources, academic journal articles, and the papers of other OSU students, for common or borrowed content. Turnitin generates a report that highlights any potentially unoriginal text in your paper. The report may be submitted directly to your instructor or your instructor may elect to have you submit initial drafts through Turnitin, and you will receive the report allowing you the opportunity to make adjustments and ensure that all source material has been properly cited. Papers you submit through Turnitin for this or any class will be added to the OSU Turnitin database and may be checked against other OSU paper submissions. You will retain all rights to your written work. For further information, visit [Academic Integrity for Students: Turnitin – What is it?](#)

Statement Regarding Students with Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval, please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Accessibility of Course Materials

All materials used in this course are accessible with the possible exception of items provided directly from the textbook publisher, such as the crossword puzzle files. If you require accommodations please contact [Disability Access Services \(DAS\)](#).

Additionally, Canvas, the learning management system through which this course is offered, provides a [vendor statement](#) certifying how the platform is accessible to students with disabilities.

Tutoring and Writing Assistance

TutorMe is a leading provider of online tutoring and learner support services fully staffed by experienced, trained and monitored tutors. Access TutorMe from within your Canvas course menu.

The Oregon State [Online Writing Suite](#) is also available for students enrolled in Ecampus courses.

Ecampus Reach Out for Success

University students encounter setbacks from time to time. If you encounter difficulties and need assistance, it's important to reach out. Consider discussing the situation with an instructor or academic advisor. Learn about [resources that assist with wellness and academic success](#).

Ecampus students are always encouraged to discuss issues that impact your academic success with the [Ecampus Success Team](#). Email ecampus.success@oregonstate.edu to identify strategies and resources that can support you in your educational goals.

If you feel comfortable sharing how a hardship may impact your performance in this course, please reach out to me as your instructor. I want you to succeed in this class and recognize that this COVID winter things are harder than they usually are.

- **For mental health:**

Learn about [counseling and psychological resources for Ecampus students](#). If you are in immediate crisis, please contact the Crisis Text Line by texting OREGON to 741-741 or call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255).

- **For financial hardship:**

Any student whose academic performance is impacted due to financial stress or the inability to afford groceries, housing, and other necessities for any reason is urged to contact the Director of Care for support (541-737-8748).

Academic Calendar

All students are subject to the registration and refund deadlines as stated in the Academic Calendar: <https://registrar.oregonstate.edu/osu-academic-calendar>.

Student Evaluation of Courses

During Fall, Winter, and Spring term, the online Student Evaluation of Teaching system opens to students the Wednesday of week 8 and closes the Sunday before Finals Week. Students will receive notification, instructions and the link through their ONID email. They may also log into the system via Online Services. Course evaluation results are extremely important and used to help improve courses and the learning experience of future students. Responses are anonymous (unless a student chooses to "sign" their comments, agreeing to relinquish anonymity) and unavailable to instructors until after grades have been posted.

The results of scaled questions and signed comments go to both the instructor and their unit head/supervisor. Anonymous (unsigned) comments go to the instructor only.