

Introduction to Virology 4312/5304

Spring 2016

Instructor(s): Dr. Michael Roner

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Office Hours: TuTh 10:00-11:30 AM

Section Information: Biol 4312-001/5304-001, Introduction to Virology

Time and Place of Class Meetings: Life Science 122, TuTh 8-9:20.

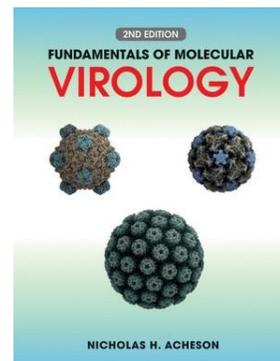
Description of Course Content: This course is an introduction to molecular virology and the importance of viruses in human disease. It covers the methods available to study virus architecture, genome structure, replication strategies and virus interactions with cellular factors.

Student Learning Outcomes: Viruses have a major impact on humanity. They cause a number of acute diseases which can be serious or even life-threatening, but can also cause long-term complications such as paralysis, are involved in the induction of some cancers and may even cause some forms of diabetes and heart disease. The introduction of molecular approaches over the past 20 years has transformed our understanding of viruses and has provided a number of routes to the development of vaccines and anti-virus therapy. This course will give an introduction to the unique nature and importance of viruses then will show, using a number of detailed, specific examples, how molecular approaches are used in their study and what are the results of these approaches. The course will highlight molecular features which are critical in the induction of disease and also which current approaches are likely to lead to novel ways of controlling virus infections.

The intended **learning outcomes** are as follows. By the end of the course students should have knowledge of;

- Describe the differences in virus architecture and how these may be used to classify viruses
- Demonstrate the principles of molecular virology using specific examples
- Explain how gene expression is modulated in different virus – host cell systems
- Discuss some of the strategies adopted by viruses to replicate and express their genetic information
- Discuss the role of viruses in disease and how this relates to molecular interactions with the infected cell
- Discuss how an understanding of virus infections opens up the possibility of novel therapeutic approaches
- Design viral vectors for use in gene therapy
- Apply newly acquired knowledge of virus replication and host cell interactions in the development of antiviral agents

Required Textbooks and Other Course Materials: <http://www.wiley-vch.de/publish/en/books/forthcomingTitles/LS00/0-470-90059-8/?sID=p2qlnooj68su7htl8qrrc2qjt3>



Grading Policy: Final course grades will be based on 3 exams spread across the semester, **or** the final exam. Grades will be calculated as follows: if you have taken Exams 1, 2 and 3 and are satisfied with your grade, you do not need to take the comprehensive final exam. If you elect to take the final exam, your grade on the final exam or your grade on the first three (3) exams, whichever is greater, will be the grade you earn for this course. The optional final exam gives a student an opportunity to "redeem" a poor exam 1, 2 or 3 performance, or "replace" an unexcused missed exam. Please remember the final exam is COMPREHENSIVE and requires significantly more effort than the three (3) regular exams! Students are encouraged to study and complete the three exams during the regular course period and not depend on the final

Attendance Policy: At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, **I strongly encourage students to attend all lectures. I allow students to attend class at their own discretion.**

Expectations for Out-of-Class Study: Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional **9** hours per week of their own time in course-related activities, including reading required materials, completing assignments, preparing for lectures.

Grade Grievances: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate / graduate catalog. For undergraduate courses, see <http://catalog.uta.edu/academicregulations/grades/#undergraduatetext>; for graduate courses, see <http://catalog.uta.edu/academicregulations/grades/#graduatetext>.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/aao/fao/>).

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and

policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: The University of Texas at Arlington is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents’ Rule* 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this

week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which are located in the front and back of the classroom. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

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Writing Center. : The Writing Center, 411 Central Library, offers individual 40 minute sessions to review assignments, *Quick Hits* (5-10 minute quick answers to questions), and workshops on grammar and specific writing projects. Visit <https://uta.mywconline.com/> to register and make appointments. For hours, information about the writing workshops we offer, scheduling a classroom visit, and descriptions of the services we offer undergraduates, graduate students, and faculty members, please visit our website at www.uta.edu/owl/.

After Hours Safety Escort

The Sam Mav Escort service provides a service to assist students, faculty, staff and campus visitors to reach their destinations after regular business hours. The hours of service are 7:00 p.m. to 1:00 a.m., Sunday through Saturday. 817-272-3381

Make-up Exam Policy: Make-up exams will be allowed only in extreme circumstances at the discretion of the Instructor. You should have a doctor's note in case of illness.

Notify me (by email, phone, note etc., AS SOON AS you are aware of a problem, AND prior to the exam.

Grade Grievance Policy: As per University policy as outlined in the current student catalog.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located at the nearest end of the hallway, to the right, as one exits the classroom. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

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The English Writing Center (411LIBR):[Hours are 9 am to 8 pm Mondays-Thursdays, 9 am to 3 pm Fridays and Noon to 5 pm Saturdays and Sundays. Walk In **Quick Hits** sessions during all open hours Mon-Thurs. Register and make appointments online at <http://uta.mywconline.com>. Classroom Visits, Workshops, and advanced services for graduate students and faculty are also available. Please see www.uta.edu/owl for detailed information.

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Course Schedule

Tentative Lecture Schedule

Week 1	Jan 19	Introduction
	Jan 21	Chapter 1
Week 2	Jan 26	Chapter 2/3
	Jan 28	Chapter 4
Week 3	Feb 2	Chapter 5/6
	Feb 4	Chapter 7
Week 4	Feb 9	Chapter 8/9
	Feb 11	Chapter 10
Week 5	Feb 16	Chapter 11/12
	Feb 18	Chapter 13
Week 6	Feb 23	Exam 1
	Feb 25	Chapter 14/15
Week 7	March 1	Chapter 16
	March 3	Chapter 17/18
Week 8	March 8	Chapter 19
	March 10	Chapter 20/21
Week 9	March 15	Spring Break
	March 17	Spring Break
Week 10	March 22	Chapter 22
	March 24	Chapter 23/24
Week 11	March 29	Exam 2
	March 31	Chapter 26/27
Week 12	April 5	Chapter 25
	April 7	Chapter 28
Week 13	April 12	Chapter 29/30
	April 14	Chapter 31/32
Week 14	April 19	Chapter 33/34
	April 21	Chapter 35/36
Week 15	April 26	Chapter 37
	April 28	Exam 3
Week 16	May 3	Dead Week
	May 7	Dead Week
	Final Exam	May 10 8-10:30

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. –Michael R. Roner.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911. Non-emergency number 817-272-3381

- Library Home Page <http://www.uta.edu/library>
- Subject Guides <http://libguides.uta.edu>
- Subject Librarians..... <http://www.uta.edu/library/help/subject-librarians.php>
- Course Reserves..... <http://pulse.uta.edu/vwebv/enterCourseReserve.do>
- Library Tutorials <http://www.uta.edu/library/help/tutorials.php>
- Connecting from Off- Campus..... <http://libguides.uta.edu/offcampus>
- Ask A Librarian <http://ask.uta.edu>

The subject librarian for your area can work with you to build a customized course page to support your class if you wish. For examples, visit <http://libguides.uta.edu/os> and <http://libguides.uta.edu/pols2311fm> .

Undergraduate student grading

Option 1

Completion of 3 midterm exams 100 points each 300 points
Completion of "Extra credit" 10 points/midterm exam 30 points
Final grade based on 300 points (330 points possible)

Option 2

Completion of 2 of 3 midterm exams 100 points each 200 points
Completion of "Extra credit" 10 points/midterm exam 20 points
Completion of Final Exam 100 points
Final grade based on 300 points (320 points possible)

Option 3

Final exam 100 points
Final grade based on 100 points

Graduate student grading

Option 1

3 exams 110 points each 330 points
3 take-home exams 50 points each 150 points
Final grade based on 480 points

Option 2

Completion of 2 of 3 midterm exams 110 points each 220 points
Completion of Final Exam 100 points
Completion of 3 take-home exams 50 points each 150 points
Final grade based on 470 points

Option 2

Final exam 100 points
3 take-home exams 50 points each 150 points
Final grade based on 250 points

FINAL GRADES WILL BE ASSIGNED AS FOLLOWS:

100%	-	89.51%	A
89.50%	-	79.51%	B
79.50%	-	69.51%	C
69.50%	-	59.51%	D
<59.50%			F