

PRINCIPLES OF VIROLOGY (BIOC20H3F)

COURSE INSTRUCTOR:

- Dr. Christina Guzzo: christina.guzzo@utoronto.ca

OFFICE HOURS:

- Thursdays from 2:00 – 4:00pm in SW560A
- By appointment only, 15 min time slots, booked online via Quercus

TEACHING ASSISTANTS:

- Primary Contact: Jonathan Burnie - jonathan.burnie@mail.utoronto.ca
- Secondary Contact: Durga Acharya - durga.acharya@mail.utoronto.ca

LECTURES:

- Tuesday 9:00am – 11:00am, Room HL 001 (Highland Hall)

TEXTBOOK:

- Fundamentals of Molecular Virology (2nd edition) by Nicholas H. Acheson
- 3 reserve copies available at the library

EXAMS:

- Midterm: 2hrs, in-class on October 16th - room location(s) is TBD
- Final Exam: 3hrs, during final exam period – date & location TBD by Registrar

COURSE PREREQUISITES:

- BIOB10Y3 or BIOB10H3+BIOB11H3

GRADING SCHEME:

- Homework Quizzes = **10%** (5 quizzes x 2% each)
- Midterm Exam = **35%**
- Final Exam (cumulative) = **55%**

HOMEWORK QUIZZES (10%):

- You will have one week to complete bi-weekly quizzes on Quercus
 - Example: Quiz #1 will open Weds, Sept 12th at 11:59PM and close Weds, Sept 19th at 11:59PM
- Each quiz is 10 questions, worth 2% of your final grade
- Missed quizzes for medical reasons will be assessed for re-write on an individual basis.
- Any incomplete quizzes will result in a mark of zero.

MIDTERM (35%):

- The midterm will cover lecture topics up to and including October 2nd (Lecture 5).
- The format will be multiple choice, diagram, and short answer.

FINAL (55%):

- The final exam will cover all lecture topics, with an emphasis on Lectures 6-11. The format will be multiple choice, diagram, and short answer.

COURSE LEARNING OBJECTIVES:

- 1) Conceptualize the ubiquitous nature of viruses across all kingdoms.
- 2) Correctly use viral-specific terminology to explain virus and host interactions, and host immune responses to infection.
- 3) Describe the basic categories of viral structure and molecular mechanisms of viral replication for each of the major categories (classifications) of viruses.
- 4) Synthesize knowledge of how viral processes lead to host disease, both at molecular and organismal level.

LECTURE TOPICS (tentative):

1. Introduction, History, Detection of Viruses, Viral Replication
 - Textbook Chapter 1
2. Virus Structure & Assembly, Virus Classification
 - Textbook Chapter 2 & 3
3. Virus Entry
 - Textbook Chapter 4
4. Viruses of Bacteria and Archaea
 - Textbook Chapters 5-9 (selected topics)
5. Positive-Strand RNA Viruses:
 - Textbook Chapters 12-14 (selected topics)
6. Negative-Strand and Double-Stranded RNA Viruses:
 - Textbook Chapters 16 & 18
7. DNA Viruses
 - Chapters 20, 23, 24, 26 (selected topics)
8. Viruses that use a Reverse Transcriptase
 - Textbook Chapters 28-30
9. Host Defences Against Virus Infection
 - Textbook Chapters 33 & 34
10. Antiviral Agents and Viral Vectors
 - Textbook Chapters 35-37 (selected topics)

CLASS SCHEDULE:

DATE	WEEK	CLASS TOPIC
04-Sep	1	Lecture 1
		Introduction, History, Detection of Viruses, Viral Replication
11-Sep	2	Lecture 2
		Virus Structure & Assembly, Virus Classification
12-Sep	QUIZ 1	Week 1 and 2 material
18-Sep	3	Lecture 3
		Virus Entry, Viruses of Bacteria and Archaea
25-Sep	4	Lecture 4
		Positive-Strand RNA Viruses
26-Sep	QUIZ 2	Week 3 and 4 material
02-Oct	5	Lecture 5
		Negative-strand and Double-stranded RNA viruses
09-Oct	6	READING WEEK
16-Oct	7	MIDTERM (in class, rooms TBD)
23-Oct	8	Lecture 6
		DNA viruses
24-Oct	QUIZ 3	Week 5 and 6 material
30-Oct	9	Lecture 7
		Viruses that use a Reverse Transcriptase
06-Nov	10	Lecture 8
		Host Defences Against Virus Infection
07-Nov	QUIZ 4	Week 7 and 8 material
13-Nov	11	Lecture 9
		Antiviral Agents and Viral Vectors
20-Nov	12	Lecture 10
		Special Topic
21-Nov	QUIZ 5	Week 9 and 10 material
27-Nov	13	Lecture 11
		Course Review

COURSE POLICIES

COURSE COMMUNICATIONS:

- Content-related questions should be asked during class, during a scheduled office hour appointment with Prof. Guzzo, or on the class Discussion board on Quercus.
 - Please note: no content-related questions will be answered over email.
- Quiz-related questions should be sent via Quercus inbox message to the TA Jonathan Burnie.
- Conflicts with the course schedule or access to content (i.e. lecture slides) should be sent via Quercus inbox message to the TA Durga Acharya.
- For help with Quercus specifically, please contact student-helpdesk@utsc.utoronto.ca or visit <https://www.utsc.utoronto.ca/projects/quercus/student-help/>

ACCESSIBILITY NEEDS:

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach the course instructor and/or the *AccessAbility* Services Office as soon as possible. Professor Guzzo will work with you and *AccessAbility* Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC *AccessAbility* Services staff (located in SW302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability@utsc.utoronto.ca. The sooner you let the us know your needs the quicker we can assist you in achieving your learning goals in this course.

ACADEMIC INTEGRITY:

The University treats cases of cheating and plagiarism very seriously. The University of Toronto's *Code of Behaviour on Academic Matters* (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences.

Potential offences in assignments/exams include using someone else's ideas or words without appropriate acknowledgement, submitting your own work in more than one course without the permission of the instructor, making up sources or facts, obtaining or providing unauthorized assistance on any assignment.

On tests and exams cheating includes using or possessing unauthorized aids, looking at someone else's answers during an exam or test, misrepresenting your identity, or falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

Please avoid academic dishonesty, have confidence in your own ability to learn and grow academically by doing your own thinking and writing, and when in need, ask for help!

MISSED QUIZ DUE TO ILLNESS:

If you are ill during the term, and this illness influences your ability to meet a deadline for completion of a quiz, rather than submitting a Verification of Student Illness form in your request for accommodation you can submit a Self-Declaration of Student Illness form, indicating the days in which you were ill. This form is meant to take the place of the more typical medical form.

Please note the following aspects related to this Self-Declaration of Student Illness form:

1. Similar to the submission of a medical form, YOU ARE RESPONSIBLE for contacting Jennifer Campbell to make arrangements for an accommodation for this work.
2. You may use the Self-Declaration of Student Illness form ONLY for term quizzes. For any term exams in this course, you will need to submit a Verification of Student Illness form. For the final exam, you will need to follow the typical procedures for petitioning to write a deferred exam.
3. You may use the Self-Declaration of Student Illness form up to three times in this course. If you require an additional accommodation for a term assignment, you must then use the standard UTSC Verification of Illness Form.
4. Submitting a false Self-Declaration of Student Illness form constitutes academic misconduct, and could be subject to sanctions under the Code of Behaviour on Academic Matters.

Please submit any Self-Declaration of Student Illness forms in the same fashion as you would have a previous Verification of Student Illness form. Accordingly, you will need to submit this form to Jennifer Campbell (jacampbell@utsc.utoronto.ca), Course Coordinator within three days of the missed term work.

The 'Self-Declaration of Student Illness' form can be found here:

https://www.utoronto.ca/biosci/sites/utoronto.ca.biosci/files/u26/Self%20Declaration%20of%20Student%20Illness_0.pdf

MISSED MIDTERM POLICIES:

- **Advance conflict:** If you know **in advance** that you cannot write the Midterm exam at the scheduled time because it conflicts with some other **valid activity**, please notify the course instructor as soon as possible so that we can make arrangements for you to write the Midterm at an alternative time. **Any such alternative time must be 72hrs before the scheduled date of the Midterm Exam (Oct 16th, 2018).**
- **Medical illness:** If you miss a term test you must provide the UTSC Verification of Illness Form within 3 days of the term test to Jennifer Campbell (jacampbell@utsc.utoronto.ca) Course Coordinator in Biological Sciences. You must see a doctor on the day of the test, notes that are dated before the test or after the test are will not be accepted. The UTSC Verification of Illness Form can be found here:
 - http://www.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf
- **Other valid reasons:** If you miss the Midterm for any other valid reason, please consult with the Course Coordinator (Jennifer Campbell) as soon as possible. The

Course Coordinator will determine whether the reason given for the missed Midterm is valid in accordance with university policies. Also, the Course Coordinator may ask for any documentation required to verify the reason given.

- **Invalid reasons**: Students who miss the Midterm for any invalid reason will receive a grade of zero.
- **One make-up exam**: There will be one single make-up exam scheduled. Missing the make-up midterm exam will result in transfer of all midterm exam grades onto the final exam weighting (i.e. final exam worth 90% of your grade).

****Disclaimer: The above schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances.**