



## Course Instructor

Dr. Tae Joon Yi: [taejoon.yi@utoronto.ca](mailto:taejoon.yi@utoronto.ca)

## Office Hours

Tuesdays from 11am-1pm in Room SW542  
11am-12pm open office hour  
12pm-1pm through appointments, booked online via Quercus

## Teaching Assistants

Jonathan Burnie: [jonathan.burnie@mail.utoronto.ca](mailto:jonathan.burnie@mail.utoronto.ca)  
Laxshaginee Thaya: [laxsha.thaya@mail.utoronto.ca](mailto:laxsha.thaya@mail.utoronto.ca)

## Lectures

Tuesdays 9am-11am Room HL B101

## Textbook

Fundamentals of Molecular Virology (2<sup>nd</sup> edition) by Nicholas H. Acheson

## Course Description

This course introduces viruses as infectious agents. Topics include: virus structure and classification among all kingdoms, viral replication strategies, the interactions of viruses with host cells, and how viruses cause disease. Particular emphasis will be on human host-pathogen interactions, with select lectures on antiviral agents, resistance mechanisms, and vaccines.

## Course Learning Outcomes

Learning objectives for this course include a greater appreciation and understanding of:

- The ubiquitous nature of viruses across all kingdoms
- Viral-specific terminology to explain virus and host interactions, and host immune responses to infection
- The basic categories of viral structure and molecular mechanisms of viral replication for each of the major categories (classifications) of viruses
- Viral processes lead to host disease, both at molecular and organismal level

## Exams

Mid-term: 2 hours, in-class on October 8 – location TBD

Final exam: 3 hours, during final exam period – date and location TBD

## Course Prerequisites

BIOB11H3

## Evaluation Scheme & Course Assessments

Assessment	% of Grade	Due Date
<b>Homework Quizzes</b>	15%	Bi-weekly on Quercus 5 quizzes, 3% each
<b>Mid-term</b>	30%	In-class on October 8 Lectures 1-5
<b>Infographic</b>	15%	Group Assignment Due November 12
<b>Final Exam</b>	40%	Lectures 1-11 Emphasis on Lectures 6-11

### ***Homework Quizzes (15%)***

Quiz will be taken online on Quercus. You will have one week to complete bi-weekly quizzes.

Example: Quiz 1 will open Wednesday Sep 11 at 11:59pm and close Wednesday Sep 18 at 11:59pm and cover Lectures 1 & 2

Each quiz is 10 questions, worth 3% of your final grade. Missed quizzes for medical reasons will be assessed for re-write on an individual basis and any incomplete quizzes will result in a mark of zero.

### ***Mid-term (30%)***

The mid-term will cover Lectures 1-5 (up to Oct 1). The format will be multiple choice and short answers.

### ***Infographic (15%)***

Group assignment (up to 5 per group) – the goal is to design an infographic of a virus of your choice. Further details on the grading rubric will be given on October 22. The assignment is due on November 12, in both electronic and hard copy (in-class).

### ***Final Exam (40%)***

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

## Class Schedule

The tentative schedule for the course is shown below. Some adjustments may be made as the course progresses.

Date	Class Topic	Textbook Reference
Sep 3	<b>Lecture 1</b> Introduction, History, Detection of Viruses, Viral Replication	Chapter 1
Sep 10	<b>Lecture 2</b> Virus Structure & Assembly, Virus Classification	Chapters 2 & 3
Sep 11	Quiz 1 – Lectures 1 & 2	
Sep 17	<b>Lecture 3</b> Virus Entry, Viruses of Bacteria and Archaea	Chapters 4, 5-9 (selected topics)
Sep 24	<b>Lecture 4</b> Positive-Strand RNA Viruses	Chapters 12-14 (selected topics)
Sep 25	Quiz 2 – Lectures 3 & 4	
Oct 1	<b>Lecture 5</b> Negative-strand and Double-stranded RNA viruses	Chapter 16 & 18
Oct 8	<b>In-class Mid-term</b>	
Oct 15	<b>Reading Week</b>	
Oct 22	<b>Lecture 6</b> DNA viruses	Chapters 20, 23, 24, 26 (selected topics)
	Infographic Assignment Details	
Oct 23	Quiz 3 – Lectures 5 & 6	
Oct 29	<b>Lecture 7</b> Viruses that use a Reverse Transcriptase	Chapters 28-30
Nov 5	<b>Lecture 8</b> Host Defenses Against Virus Infection	Chapters 33 & 34
Nov 6	Quiz 4 – Lectures 7 & 8	
Nov 12	<b>Lecture 9</b> Antiviral Agents and Viral Vectors	Chapters 35-37 (selected topics)
	Infographic Assignment Due	
Nov 19	<b>Lecture 10</b> Special Topic	
Nov 20	Quiz 5 – Lectures 9 & 10	
Nov 26	<b>Lecture 11</b> Course Review	

## Course Communications

Content-related questions should be asked during class, during a scheduled office hour appointment with Professor Yi, or on the class discussion board on Quercus. No content-related questions will be answered over email.

For help with Quercus specifically, please contact [student-helpdesk@utsc.utoronto.ca](mailto:student-helpdesk@utsc.utoronto.ca) or visit <https://www.utsc.utoronto.ca/projects/quercus/student-help/>

## Accessibility Accommodations

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 me and/or the UTSC AccessAbility Services Office at (416) 287-7560 or [ability@utsc.utoronto.ca](mailto:ability@utsc.utoronto.ca). The sooner you let us know your needs, the quicker we can assist you in achieving your learning goals in this course.

## Academic Integrity

The University of Toronto treats cases of academic misconduct very seriously. Academic integrity is a fundamental value of learning and scholarship at the UofT. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that your UofT degree is valued and respected as a true signifier of your individual academic achievement.

The University of Toronto's Code of Behaviour on Academic Matters outlines the behaviours that constitute academic misconduct, the processes for addressing academic offences, and the penalties that may be imposed. You are expected to be familiar with the contents of this document. Potential offences include, but are not limited to:

- Using or possessing any unauthorized aid, including a cell phone.
- Looking at someone else's answers.
- Letting someone else look at your answers.
- Misrepresenting your identity.
- Submitting an altered test for re-grading
- Falsifying or altering any documentation required by the University, including but not limited to doctor's notes.

Any instance of suspected academic dishonesty will be reported to the Office of Student Academic Integrity. For further information on you may wish to visit <http://www.artsci.utoronto.ca/osai/resources> and <http://www.writing.utoronto.ca/advice>.

## Recording Lectures and Sharing Notes

Students are permitted to record lectures as a form of note-taking for personal use. Students are instructed to not upload the recordings to a shared drive or folder or hosted on a video service platform such a YouTube or Facebook messenger. Students are reminded that lectures are the intellectual property of the instructors, and the recordings should be respected thus. Students are further reminded that the Academic Handbook states: "It is absolutely forbidden for a student to publish an instructor's notes to a website or sell them" (section 4.5)" Any student found violating this rule will be brought in to the Office of Student Academic Integrity.

There may be guest lecturers in this course, and if the topics they cover include medical record/confidential/un-published information, recordings will not be permitted, and Chatham House Rules (free to use the information received, but neither the identity nor the affiliation of the speaker(s) may be

revealed) will be in effect. Students will receive advance warning should recordings be prohibited from any lecture in this course.

## 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](mailto: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.utsc.utoronto.ca/biosci/sites/utsc.utoronto.ca.biosci/files/u26/Self%20Declaration%20of%20Student%20Illness\\_0.pdf](https://www.utsc.utoronto.ca/biosci/sites/utsc.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 8, 2019).

**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](mailto: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.utsc.utoronto.ca/~registrar/resources/pdf\\_general/UTSCmedicalcertificate.pdf](http://www.utsc.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 70% of your grade).

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

## Submission of Assignments

All written assignments should be submitted in two ways: 1) **electronically** via Quercus, and (2) **hard copy in class** on the due date. Both criteria for submission must be met in order for an assignment to be considered fully submitted.

## Penalty for Late Assignments

Late submissions of ALL assignments and the take-home term test are subject to a late penalty of 10% per day unless an extension has been granted by the course instructor, with no late assignments allowed after **10 business days**. For example, if your essay receives a grade of 85, and it was four days late, with a 10% late penalty per day, your final grade is 51.

Requests for extensions will only be considered on a case-by-case basis if Dr. Yi is contacted by email to request the extension at least ONE WEEK prior to the due date. Extensions will not be granted if this step is not followed.

## Marking Concerns With Assignments

Any requests to have an assignment re-graded must be made in writing directly to Dr. Yi **within one week** of the date the marks were posted on Quercus. To be considered, your message must clearly identify your concern, contain a detailed justification for your concern and make specific references to the relevant course material. Keep in mind that it is possible for your assignment grade to go down if the re-graded mark is lower than your original assignment grade.

## Health and Wellness

The university experience can be a challenging one, there is no need to go about it alone. If you or anyone you know could use someone to talk to (or text with), here are some resources in addition to your instructors, program coordinators, and TAs:

- Your **college registrar** and **office of residence of student life (ORSL)**
- **MySSP** [24/7, talk in 146 languages & text in 35 languages]: available on Apple App Store and Google Play Store.
- **Good 2 Talk Student Helpline** [24/7]: 1-866-925-5454
- **Gerstein Centre** [24/7]: 416-929-5200