



## Course Instructor

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

## Office Hours

Fridays 11am-12pm via Blackboard Collaborate

## Course Coordinator

Jennifer Campbell: [jac.campbell@utoronto.ca](mailto:jac.campbell@utoronto.ca)

## 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

Pre-recorded and posted on Quercus weekly before noon on Tuesdays

## 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

## Course Prerequisites

BIOB11H3

## Evaluation Scheme & Course Assessments

Assessment	% of Grade	Info
Homework Quizzes	10%	5 quizzes, 2% each
Self-reflection	5%	1 <sup>st</sup> part due June 2 2 <sup>nd</sup> part due July 7 3 <sup>rd</sup> part due August 4
Term Tests	40%	Two term tests
Final Exam	45%	Lectures 1-11

### **Homework Quizzes (10%)**

Quiz will be taken online on Quercus. Quizzes will be released after every 2 lectures.

Example: Quiz 1 will open Wednesday May 20 at 11:59pm and close Wednesday May 27 at 11:59pm and cover Lectures 1 & 2

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 and any incomplete quizzes will result in a mark of zero.

### **Self-reflection (5%)**

This is a participation assignment aimed to hopefully help you through this unprecedented time. You will have 1 week to complete each parts. 1<sup>st</sup> part is due June 2 – you will set up achievable goals (can be either academic or even personal). You will provide an update on what you are doing to achieve the set goals by July 7 (2<sup>nd</sup> part). Last part will be due on Aug 4 where you will reflect upon the set goals.

Each parts will open on Quercus as assignments:

Part 1 – open on May 26

Part 2 – open on June 30

Part 3 – open on July 28

### **Term tests (40%)**

There will be two term tests in this course outside of class time. The exact time will be determined by the Registrar's office.

The term tests may cover any materials taught in the course. Your term test with the higher mark will be worth 25% with the term test for which you receive a lower mark being 15%. You need to write both term tests to qualify for this 25% and 15% weighting.

Please refer to "Missed term test policies" for more detail.

### **Final Exam (45%)**

The final exam will cover all lecture topics.

## Class Topics

The tentative topics for the course are shown below. Some adjustments may be made as the course progresses.

Class Topic	Textbook Reference
1. Introduction, History, Detection of Viruses, Viral Replication	Chapter 1
2. Virus Structure & Assembly, Virus Classification	Chapters 2 & 3
3. Virus Entry, Viruses of Bacteria and Archaea	Chapters 4, 5-9 (selected topics)
4. Coronavirus	Chapter 14
5. Positive-Strand RNA Viruses	Chapters 12 & 13
6. Negative-strand and Double-stranded RNA viruses	Chapters 16 & 18
7. DNA viruses	Chapters 23 & 24
8. Viruses that use a Reverse Transcriptase	Chapters 28 & 29
9. Host Defenses Against Virus Infection	Chapters 33 & 34
10. Antiviral Agents and Viral Vectors	Chapters 35-37 (selected topics)

## Tentative Class Schedule

The tentative schedule for the course is shown below. Some adjustments may be made as the course progresses. **Lecture dates may change depending on the term test date provided by the Registrar's Office.**

Date	Class Topic	Textbook Reference
May 12	<b>Lecture 1</b> Introduction, History, Detection of Viruses, Viral Replication	Chapter 1
May 19	<b>Lecture 2</b> Virus Structure & Assembly, Virus Classification	Chapters 2 & 3
May 20	Quiz 1 – Lectures 1 & 2	
May 26	<b>Lecture 3</b> Virus Entry, Viruses of Bacteria and Archaea	Chapters 4, 5-9 (selected topics)
June 2	<b>Lecture 4</b> Positive-Strand RNA Viruses	Chapters 12-13
June 3	Quiz 2 – Lectures 3 & 4	
June 9	<b>Lecture 5</b> Coronavirus	Chapters 14
June 16	<b>*First Course Review OR Lecture 6</b> Negative-strand and Double-stranded RNA viruses	Chapter 16 & 18
June 23	<b>Reading Week</b>	
June 30	<b>Presidential Day</b>	
July 7	<b>*First Course Review OR Lecture 6</b> Negative-strand and Double-stranded RNA viruses	Chapter 16 & 18
July 8	Quiz 3 – Lectures 5 & 6	
July 14	<b>Lecture 7</b> DNA viruses	Chapters 23 & 24
July 21	<b>Lecture 8</b> Viruses that use a Reverse Transcriptase	Chapters 28 & 29
July 22	Quiz 4 – Lectures 7 & 8	
July 28	<b>Lecture 9</b> Host Defenses Against Virus Infection	Chapters 33 & 34
Aug 4	<b>Lecture 10</b> Antiviral Agents and Viral Vectors	Chapters 35-37 (selected topics)
Aug 5	Quiz 5 – Lectures 9 & 10	
Aug 11	<b>Second Course Review</b>	

\*June 16<sup>th</sup> and July 7<sup>th</sup> lecture will be first course review or Lecture 6 depending on the term test dates provided by the Registrar's Office.

## Course Communications

Content-related questions should be asked 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.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 AccessAbility Services Office as soon as possible.

AccessAbility Services staff (located in Rm AA142, Arts and Administration Building) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations 416-287-7560 or email [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 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 papers and assignments 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 someone else's ideas or words without appropriate acknowledgement, 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.

## Turnitin

Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

## Recording Lectures and Sharing Notes

Students are permitted to use the recorded lectures 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 as 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.

## 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 ([jac.campbell@utoronto.ca](mailto:jac.campbell@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](https://www.utoronto.ca/biosci/sites/utoronto.ca/biosci/files/u26/Self%20Declaration%20of%20Student%20Illness_0.pdf)

## Missed Term Test Policies

**Advance conflict:** If you know in advance that you cannot write the term tests 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 try and make arrangements for you to write the term tests. If an arrangement cannot be made, it will count as a missed term test.

**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 ([jac.campbell@utoronto.ca](mailto:jac.campbell@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](http://www.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf)

**Other valid reasons:** If you miss the term tests 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 term tests is valid in accordance with university policies. Also, the Course Coordinator may ask for any documentation required to verify the reason given.

**Missing one term test due to a valid reason:** You will not be able to write a make-up term test. The weight of the written term test will be 25% and the weight of the final exam will be increased by 15%.

**Missing two terms test due to a valid reason:** You will not be able to write a make-up term test. The weight of the final exam will be increased by 40%.

**Invalid reasons:** Students who miss the term tests for any invalid reason will receive a grade of zero for that term test.

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

*BIOC20H3 Principles of Virology Syllabus – Summer 2020*

## Submission of Assignments

All written assignments should be submitted **electronically** via Quercus.

## Penalty for Late Assignments

Late submissions of ALL assignments are subject to a late penalty of 20% per day unless an extension has been granted by the course instructor, with no late assignments allowed after **5 business days**. For example, if your essay receives a grade of 85, and it was two days late, with a 20% 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