

Department of Biology Course Outline

SC/BIOL3155, Virology Winter, 2019/20

Course Description

This course focuses on cellular, molecular, and structural aspects of Virology. The goal is to understand how viruses hijack host cells and redirect cellular energy to perform virus-related tasks – like the synthesis of viral proteins and replication of viral genomes. The course material investigates the highly-regulated host- and virus-specific steps that lead to successful infections. Molecular processes and concepts will be emphasized using prototypical viruses selected from different virus families

Prerequisites

SC/BIOL 2020 and SC/BIOL 2021

Course Instructors and Contact Information

K. A. White
B304 Farquharson (3rd floor)
(416) 736-2100 x40890
kawwhite@yorku.ca

Schedule

LAS - C, Tue & Thur 5:30 – 7:00 pm

Evaluation

Two (2) midterm tests (25% each, non-cumulative) – dates T.B.A.
One (1) final exam (50%, cumulative) – during official exam period

Tests and the exam will include both multiple choice (~40% of evaluation) and written answer (~60% of evaluation) questions. The final exam will contain approximately 50% new and 50% old material.

Important Dates

<https://registrar.yorku.ca/enrol/dates/fw17>

Resources

Moodle

Four (4) copies of the course text are on reserve in the Steacie library: QR 389 A24 2011

Course Content

**TEXT: "Fundamentals of Molecular Virology" by Nicholas H. Acheson, 2nd Edit
(pub. by Wiley, c2011)**

Introduction:

- 1..... Introduction to Virology
- 2..... Virus Structure
- 3..... Virus Classification
- 4..... Virus Entry

Bacteriophages:

- 5..... ssRNA bacteriophages
- 8..... Bacteriophage Lambda

Small DNA Viruses:

- 22..... Papillomaviruses

Larger DNA Viruses:

- 24..... Herpesviruses

Positive-strand RNA viruses:

- 12..... Flaviviruses
- 13..... Togaviruses
- 14..... Coronaviruses

Negative-strand RNA viruses:

- 18..... Influenza viruses

Retroviruses:

- 28..... Retroviruses
- 29..... HIV-I

Antiviral agents:

- 36..... Antiviral Chemotherapy

Course Policies

IMPORTANT: No make-up tests for missed midterms – weight will be transferred to final exam (e.g. final will be worth 75%, or 100%). For **missed midterms** an “**Attending Physician’s Statement**” will need to be **completed by a Physician** and **handed in to me** within **1 week or a grade of zero** will be awarded. To get the necessary APS form, go to:
<http://www.registrar.yorku.ca/petitions/academic/package>

For a **missed final exam**, you will have to **petition** to write a deferred exam: “**Academic Petition Form**” (<http://science.yorku.ca/current-students/procedures/petitions/how-to-file-a-petition>). It is **your responsibility** to get the necessary forms completed and to file the petition.

Note, the **questions** on the deferred final exam **will be different** from the regular exam and the **format** of the deferred final exam could also be different.

University Policies

Academic Honesty and Integrity

York students are required to maintain the highest standards of academic honesty and they are subject to the Senate Policy on Academic Honesty (<http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>). The Policy affirms the responsibility of faculty members to foster acceptable standards of academic conduct and of the student to abide by such standards.

There is also an academic integrity website with comprehensive information about academic honesty and how to find resources at York to help improve students’ research and writing skills, and cope with University life. Students are expected to review the materials on the Academic Integrity website at - <http://www.yorku.ca/academicintegrity/>

Access/Disability

York University is committed to principles of respect, inclusion and equality of all persons with disabilities across campus. The University provides services for students with disabilities (including physical, medical, learning and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. These services are made available to students in all Faculties and programs at York University.

Students in need of these services are asked to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. You are encouraged to schedule a time early in the term to meet with each professor to discuss your accommodation needs. Please note that registering with disabilities services and discussing your needs with your professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet your needs.

Additional information is available at the following websites:

Counselling & Disability Services - <http://cds.info.yorku.ca/>

Counselling & Disability Services at Glendon - <http://www.glendon.yorku.ca/counselling/personal.html>

York Accessibility Hub - <http://accessibilityhub.info.yorku.ca/>

Ethics Review Process

York students are subject to the York University *Policy for the Ethics Review Process for Research Involving Human Participants*. In particular, students proposing to undertake research involving human participants (e.g., interviewing the director of a company or government agency, having students complete a questionnaire, etc.) are required to submit an *Application for Ethical Approval of Research Involving Human Participants* at least one month before you plan to begin the research. If you are in doubt as to whether this requirement applies to you, contact your Course Director immediately.

Religious Observance Accommodation

York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents. Should any of the dates specified in this syllabus for an in-class test or examination pose such a conflict for you, contact the Course Director within the first three weeks of class. Similarly, should an assignment to be completed in a lab, practicum placement, workshop, etc., scheduled later in the term pose such a conflict, contact the Course director immediately. Please note that to arrange an alternative date or time for an examination scheduled in the formal examination periods (December and April/May), students must complete an Examination Accommodation Form, which can be obtained from Student Client Services, Student Services Centre or online at

http://www.registrar.yorku.ca/pdf/exam_accommodation.pdf (PDF)

Student Conduct in Academic Situations

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect. Moreover, it is the responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and other academic settings, and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. The policy and procedures governing disruptive and/or harassing behaviour by students in academic situations is available at - <http://secretariat-policies.info.yorku.ca/policies/disruptive-and-or-harassing-behaviour-in-academic-situations-senate-policy/>