

Department of Biology Course Outline

SC/BIOL 3120 3.00 Immunobiology
Fall 2015

Course Description

The biology and chemistry of the immune response. Structure and function of antibodies; antibody diversity; anatomy and development of the immune system; cellular interactions; immunological responses in disease. Production and use of monoclonal and polyclonal antibodies. Three lecture hours. One term. Three credits.

Prerequisites

SC/BIOL 2020 3.00, SC/BIOL 2021 3.00, SC/BIOL 2040 3.00, SC/BIOL 2070 3.00.

Course Instructors and Contact Information

Course Instructor: Dr. Tanya Da Sylva

Office: 118A Farquharson

Office hours posted to Moodle, or by appointment

Email: dasylva@yorku.ca

Emails must include your full name, student number and BIOL3120 in the subject line.

Expect an average response time of 48 hours. Email will not routinely be replied to on weekends or holidays.

Schedule

Wednesdays 7-10pm; LAS B

Note: Class is **cancelled** September 23rd

Evaluation

The final grade for the course will be based on the following items weighted as indicated:

Weekly short write-ups (due weekly on Tuesdays by 11:55pm)	10%
Midterm 1 (class time October 14 th ; see below for information on 2-stage exams)	25%
Midterm 2 (class time Nov. 18 th , 2015; see below for information on 2-stage exams)	30%
Cumulative Final Exam (TBA; date and time set by Registrar)	35%

Details on test/assignment expectations and due dates can be found on Moodle.

*Final course grades may be adjusted to conform to Program or Faculty grades distribution profiles

Important Dates

Note: Class is **cancelled** September 23rd

Midterm 1: October 14th, 2015

Midterm 2: November 18th, 2015

Final Exam: TBA

Short Answers: Due weekly on Tuesdays through Moodle

Classes Start: September 10th, 2015

Reading Days (no class): October 29th – November 1st, 2015

Drop Date: November 9th, 2015

Last Day of Classes: December 7th, 2015

Exam Period: December 9th – 23rd (inclusive)

NOTE: for additional important dates such as holidays, refer to the “Important Dates” section of the Registrar’s Website at <http://www.yorku.ca/yorkweb/cs.htm>

Resources

Required Textbook: *Kuby Immunology 7th Edition*. J. Owen, J. Punt and S. Stranford. W.H. Freeman and Company Publishers

Additional readings may be assigned or recommended during the course

Learning Outcomes

Upon successful completion of this course, students should be able to:

- Use current and historical research in immunology to support discussions and explanations of the immune response
- Discuss the role of, and relationships between, cells of the hematopoietic system in the immune response
- Explain the major components of the mammalian immune response; distinguishing between and describing the interactions of the innate and adaptive immune branches and the cellular and humoral branches of immunity.
- Describe and discuss unique features of the adaptive immune response including the generation of diversity, clonal selection, self tolerance and memory responses.
- Explain the development, activation and effector responses of immune cells
- Relate knowledge of the development and mechanisms of the immune response to the understanding of disease processes, immune therapy and the use of immunological mechanisms and methods in experimental systems.

Course Content

You are expected to come to class prepared which includes completing the textbook readings before class and completing the short answer question assigned through Moodle.

Readings are meant to prepare you to actively participate in class; you are not expected to understand the material from the textbook alone. **If you are spending more than one hour on each reading before class please speak to me** – you are likely reading too deeply. You should also be revisiting the readings after class.

A draft of textbook readings is below (the order of readings may change as the course progresses):

Class of Sept. 16th; Chapters 1, 2, 4, and 3 (pp.65-80)

Class of Sept. 23rd; CANCELLED

Class of Sept. 30th; Chapters 5 and 6

Class of Oct. 7th; Chapters 8 and 3 (pp. 80-100)

Class of Oct. 14th; MIDTERM 1

Class of Oct. 21st; Chapter 7

Class of Oct. 28th; Chapters 9 and 10

Class of Nov. 4th; Chapters 11 to 13

Class of Nov. 11th; Chapter 14 and review of adaptive immune responses

Class of Nov. 18th; MIDTERM 2

Class of Nov. 25th; Chapters 17, 18 and 15

Class of Dec. 2nd; Chapters 16 and 19

Note: Chapters 3 and 4 are not covered in much depth; pay attention to depth of in-class discussions. Chapter 14 contains little new information, instead, summarizing visually and with experimental data the information contained in previous chapters. The end of the chapter contains links to the numerous videos mentioned within. The entire chapter may not be covered, especially in chapters 3, 4 and 13-19.

Experiential Education and E-Learning

Other Information

Information on 2-stage Testing:

Numerous educators have used 2-stage tests as a way to turn the assessment process into a learning experience. 2-stage tests involve writing tests both as an individual and in a group. When your group disagrees on an answer you get to discuss the subject right away perhaps correcting your own misconceptions before you leave the exam room. We will use 2-stage testing for our midterms and final exam.

You will arrive for your test and write the 1st stage - individual test; this will be like a traditional test. You will hand in your scantron and test booklet when you are done but remain seated until the end of the 1st stage. Once everyone's tests have been collected you will assemble into groups of four. In your groups you will be given another test booklet and scantrons to begin the 2nd stage (group test) - this test will be almost identical to the one you just completed by yourself. You will now have additional time to complete the test again in groups. You will not be allowed to write the group test by yourself or in groups of less or more than 4 people (unless unavoidable due to class numbers).

Your mark for your will be calculated as follows - 85% individual score plus 15% group score. However if your individual score is higher than your group score you will simply have

your individual score (100%).

Students who normally write with Alternate Exams have been able to join the class for the 2nd stage (group). However, if you have any concerns about the testing format or joining the main room please let me know and we can discuss your accommodation needs.

Additional Information:

- You will be responsible for material presented in class and associated textbook sections. The textbook is your resource and will help you understand this material. It contains many of the visuals presented in the lectures. Pay careful attention to the Figures and to the questions and guidelines for study at the end of each chapter.
- Audio recording (ONLY audio) of the lecture is permitted. Recordings can only be shared with students enrolled in the course and section the recording was made of. Therefore recordings CANNOT be uploaded to public websites or otherwise shared publicly. Students in violation of these policies may have legal action taken against them.
- The midterms will consist predominantly of multiple choice but may include short answer, fill-in, matching, calculating and drawing type questions.
- Your comprehensive final will be given in a three hour block during the Winter exam period and will have the same type of questions as the midterm and may have essay questions. It is your responsibility as a student to ensure that you are available to sit for examinations during the entire exam period. Under no circumstances will makeup exams (midterm or final) be provided because of conflict with vacation plans or work conflicts.
- All assignment/test grades will be posted to Moodle when available. Do not email asking when grades will be posted or for your grade; these emails will not be responded to.
- It is your responsibility to earn your grade. Individually adjusting a student's grade without academic merit is unethical. All requests for grade "bumping" will be ignored.

Course Policies

Grading and Policies for Missed Tests and Assignments

Grading: The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (for a full description see the York University Undergraduate Calendar – <http://calendars.registrar.yorku.ca/2014-2015/academic/grades/index.htm>)

Missed Midterm/Exam – General Policies: Students must have a documented **urgent reason** for missing a course exam, such as illness, compassionate grounds, etc., which is confirmed by appropriate supporting documentation (e.g., attending physician's statement).

- Missing a midterm/exam due to weather will be excused ONLY if the University closes/cancels classes. In all other cases, **it is YOUR responsibility to get to class on time**. Transit and/or traffic issues are never an excuse to miss exams. Plan to be at exams early.
 - You MUST contact (email) your course director (dasyuva@yorku.ca) **within TWO days (48hours)** of missing the test (the sooner the better).
 - Valid and appropriately detailed documentation supporting the events (typically medical or emergency related) preventing your attendance must be submitted to the Course Director, Dr. Da Sylva, **within ONE week of the missed test**.
 - Religious accommodations must be arranged at least 3 weeks prior to the

midterm/exam (see general course policies below for guidelines).

- **IMPORTANT:** If you miss a test due to illness **you MUST see a Physician within 24 hours of the missed test – normally on the same day** - so that the Physician can confirm you are too ill to attend the test based on medical examination. Valid documentation for medical situations consists of a current “Attending Physician’s Statement” http://www.registrar.yorku.ca/pdf/attend_physician_statement.pdf? A note that simply says you were seen in the clinic will not be accepted. Any documentation should cover the date of the missed test.
- Contact your instructor to determine the appropriate documentation required for other circumstances.
- **If appropriate documentation is NOT provided within ONE week, a zero will be assigned on the missed test.**
- **NOT all situations will be accommodated**, meaning that a zero will be assigned on the missed test.

Midterms: There will be no make-up midterms. Students with acceptable documentation will have the weight of the midterm added to their final exam. Further extensions or accommodation will require students to submit a formal petition to the Faculty.

Final Exam: *It is your responsibility as a student to ensure that you are available to sit for examinations during the entire exam period.*

- If you miss the final exam for a valid reason (e.g. medical emergency, death of an immediate family member) **you must request deferred standing and notify the course director within 48 hours of missing the exam.**
 - See <http://www.registrar.yorku.ca/exams/deferred/index.htm> for additional information.
- To request deferred standing **you must complete and submit a Deferred Standing Agreement Form** (see <http://www.registrar.yorku.ca/exams/deferred/index.htm>) **along with supporting documentation** to your Course Director **within ONE week of the missed exam.**
 - **Requests submitted after this time will be denied and the student must formally petition**
- Doctor’s notes are NOT sufficient for missed final exams; **you MUST have your doctor fill out the Attending Physician’s Statement** (please make sure you are using the current version of the Attending Physician’s statement form – no other versions will be accepted). (http://www.registrar.yorku.ca/pdf/attend_physician_statement.pdf?).
- If the Course Director approves the deferred standing request the date and time of the deferred exam is at the discretion of the course director. Students who miss the deferred exam will have to formally petition.
- If the Course Director denies the deferred standing request you must submit a petition to the Faculty through the Office of the Registrar. An academic committee will decide whether or not permission to write will be granted based on the situation and evidence presented. Denied petitions will result in a zero on the final exam. See <http://www.registrar.yorku.ca/petitions/academic/> for information regarding academic petitions.

Incomplete/Late Course Work Policies:

Extensions on course work deadlines (short write ups) **will not be granted.**

- Short write ups are due on the dates indicated at 11:55pm through Moodle – this is the deadline for submission, not for starting the assignment. All late submissions will receive a zero grade. All students will have their lowest grade dropped from the calculation of their mark.

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/>