IMM435/1435 Practical Immunology

2019 Course Syllabus

Course Coordinator:	Dr. G. Ehrhardt
Tutor:	Dr. Y. Dimitriou

Contact information:

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Office hours: Monday 1-5 pm (MSB-7316) – *please email in advance for appointment*

Class time: Wednesday, 10 am - 4:00 pm

Location: MSB-2377 (introduction lectures)
MSB-2284 and MSB-2383 (laboratories)

In this course, students will conduct experiments aimed at the introduction of molecular and cellular biology techniques to address immunological questions. Each experiment will be preceded by a lecture giving the relevant background information. During each laboratory session, the tutor and 2 TAs will be present at all times.

Method of evaluation:

Lab Reports	50%
Mid-Term Test	20%
Final Exam	30%

Missed Term Test Policy:

If a term test is missed due to illness, then:

I *The student must obtain the University of Toronto 'Verification of Student Illness or Injury Form', have it filled out by their Physician, Surgeon, Nurse Practitioner, Registered Psychologist, or Dentist, and submit it to the Immunology Office (Room 7205, MSB) within 1 week of the missed exam.*

II *If the note confirms that the student was incapacitated on the day of the test, then the weighting of the students other graded work (including the final exam) will be increased by the amount of the missed test. If the note does not confirm that the student was incapacitated on the date of the test, then a grade of "0" will be assigned for the test.*

III *THERE ARE NO MAKE UP MID-TERM TESTS*

Course schedule:

Date	Lab	Title	Topic/Methods	Lab report due
Sep. 11	1	Introduction/ Organization	Introduction to "Practical Immunology" Use of animals in research Visit of animal facility (DCM)	
Sep. 18	2	Cells of the immune system	Preparation of murine tissues, cell counting, flow cytometry	1
Sep. 25	3a	B cell activation	RNA preparation, proliferation assay	2
Oct. 2	3b	B cell activation (cont'd)	Complete Lab 3a, RT-PCR qRT-PCR	
Oct. 9	4	Analysis of Ig Protein structure	SDS-PAGE, analysis of protein gel patterns	3
Oct. 16	5a	Protein interactions	Stimulation of B cells, Immunoprecipitations	4
Oct. 23	5b	Term Test	Complete Lab 5a	4
Oct. 30	6	Immune cells in blood	Detection of plasma cells	5
Nov. 13	7	Detection of IgM mutants	ELISA, use of mutants for structure/function analysis	6
Nov. 20	8a	T cell activation	Western blotting, phospho-specific antibodies	7
Nov. 27	8b	T cell activation (cont'd)	Complete Lab 8a final exam preview	
Dec. 4	9	NKT cell activation *in vivo*	Intracellular cytokine analysis flow cytometry	8
TBA		final exam		9