

## Course & Instructor Information

### Course Coordinator

Dr. Arthur Mortha, PhD [arthur.mortha@utoronto.ca](mailto:arthur.mortha@utoronto.ca)

Office Hours: *Please email for appointment*

## Course Overview

Using a combination of lectures and seminars, this course will give students an in-depth knowledge of recent key advances in various Immunological topics.

### Course Prerequisites:

The prerequisite for this course is a basic background in Immunology obtained from at least one recent full-year undergraduate course. The course will be taught at a fairly advanced level. Students who are missing background knowledge in some areas should fill the gaps from textbook, discussions with colleagues, or advice from faculty members. Don't hesitate to reach out.

**Please note that students who are *not* in the graduate program in Immunology need to obtain prior permission from the course coordinator to register for this course.**

### Course organization:

The course will follow a lecture/seminar format. Each session will include an overview of the topic followed by an in depth analysis of recent key advances. At least one student will be assigned to each session and will present a paper in class. Depending on the course enrollment, it is anticipated that each student will give one presentation.

The faculty member selects 2-3 papers, including a review, for the class to read and an additional paper to be presented in class by a student.

The student assigned to each session will be responsible for contacting the professor two weeks in advance of the lecture to request citations for the papers for the class to read, and to remind the speaker of the date, time, and link of the lecture.

The student will arrange to send the papers to the course coordinator at least one week before class, who will post it on Quercus for the rest of the class.

After reading the paper for presentation, the student should feel free to discuss it with the professor in advance of the session (through a scheduled phone call or online meeting). The student will succinctly summarize the background, methods and key findings of the paper and point out any pitfalls or problems. Plan for the presentation to take no more than **twenty minutes**, to have enough time for a discussion with the class.

**Course location and time:**

The lecture will take place on the depicted dates in the *Lecture Schedule* below.

Lectures and seminars will be held in-person\*. (\* the format of the lecture *may be subject to changes*)

**TIME:** start at 1:30 PM until 4:00 PM

**LOCATION:** PB 255 (Pharmacy Building), 144 College Street (close to MSB)



144 College Street  
Toronto, Ontario  
M5S 3M2

**Recommended textbook:**

Primer to The Immune Response, 2nd Edition. Tak W. Mak, Mary Saunders, and Bradley Jett. 2014 (Academic Press).

## Evaluation Scheme & Course Assessments

Assessment	% of Grade	Due Date
Midterm Exam	40%	December 9 <sup>th</sup> , 2022 (5:00pm)
Presentation	20%	Throughout term
Final Exam	40%	March 31 <sup>st</sup> , 2023 (5:00pm)

*\*All grading will be done by the professor/s who submitted the question or assigned the paper for presentation. The course coordinator will assemble the marks and administer the final mark.*

The grade for the course will be based on one mid-term “take-home” exam and one final “take-home” exam. Three faculty member will providing questions for the midterm and the final exam. Students have a maximum of two pages to answer the questions of each faculty member. The exams will be marked by the faculty member that provided each question. Details on the format will be posted on Quercus ahead of the exams.

**MID-TERM EXAM** (40%): Questions will be distributed on December 5<sup>th</sup> 2022 (9am) through Quercus. Student will upload their responses to Quercus on December 9<sup>th</sup> 2022, by 5 pm.

**FINAL EXAM** (40%): Questions will be distributed on March 27<sup>th</sup> 2023 (9am) through Quercus, and will be due on March 31<sup>st</sup> 2023, by 5 pm via a Quercus submission.

## Lecture schedule (Speaker/class times may be subject to change)

SEPT-12/2022		INTRODUCTION	Mortha
SEPT-12/2022		Innate Immunity	Philpott
SEPT-19/2022		T cell development	Zuniga-Pfluecker
SEPT-26/2022		Spatial organization of the immune response	Gommerman
OCT-3/2022		B cell development	Paige
OCT-10/2022		THX GIVING	
OCT-17/2022		Myeloid cell development and diversity	Mortha
OCT-24/2022		Antigen processing-MHC class I	Watts
OCT-31/2022		Antigen processing-MHC class II	Watts
NOV-7/2022		B cell activation	Treanor
NOV-14/2022		T cell activation	Rottapel
NOV-21/2022		Antibody diversity	Martin
NOV-28/2022		Evolution of the adaptive immune system	Erhardt
DEC-5/2022		MID TERM EXAM begins*	
		WINTER HOLIDAYS	
JAN-9/2023		Apoptosis and immunity	Berger
JAN-16/2023		Mucosal Immunology	Mortha
JAN-23/2023		NK cells and ILCs	Crome
JAN-30/2023		NKT cells and MAIT cells	Mallevaey
FEB-6/2023		Gene-Environment interactions in Autoimmune Disease	Danska
FEB-13/2023		HIV	Ostrowski
FEB-20/2023		FAMILY DAY	
FEB-27/2023		Allergy and hypersensitivity	Eiwegger
MAR-6/2023		Autoimmunity	Wither
MAR-13/2023		Cancer Immunology	Zhang
MAR-20/2023		Genes and Immunology	Mak
MAR-27/2023		FINAL EXAM begins*	

**E-mail contacts:**

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**Statement on Academic Integrity**

All students, faculty and staff are expected to follow the University's guidelines and policies on academic integrity. For students, this means following the standards of academic honesty when writing assignments, collaborating with fellow students, and writing tests and exams. Ensure that the work you submit for grading represents your own honest efforts. Plagiarism—representing someone else's work as your own or submitting work that you have previously submitted for marks in another class or program—is a serious offence that can result in sanctions. Speak to your course instructor for advice on anything that you find unclear. To learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at <http://www.writing.utoronto.ca>. Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see <http://www.artsci.utoronto.ca/osai> and <http://academicintegrity.utoronto.ca>.

*Note: Upon submission on Quercus, student term papers will be automatically submitted to Turnitin.com for review of textual similarity and detection of possible plagiarism. In doing so, students will allow their assignments 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 website.*

## **Accessibility Needs**

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: [disability.services@utoronto.ca](mailto:disability.services@utoronto.ca) or <http://studentlife.utoronto.ca/accessibility>.

## **Drop Date**

The final date to drop full-year courses without academic penalty is Monday, February 27, 2023.