

IMM1430

Clinical Immunology

Winter 2025 Syllabus

Course Meetings

IMM430H1 S

Section	Day & Time	Delivery Mode & Location
LEC0101	Tuesday, 3:00 PM - 5:00 PM	In Person: location TBD

Course Contacts

Course Website: Quercus

Instructor: Dr. Shannon Dunn

Email: shannon.dunn@utoronto.ca

Office Hours and Location: In person, Monday afternoons or by zoom. By appointment only.

Course Overview

This course will address the underlying pathogenesis as well as highlight the challenges of treating immune-related conditions such as autoimmunity, cancer, HIV, and transplantation and graft rejection. Half of the lectures will address the genetics and cellular pathogenesis of autoimmune diseases such as rheumatoid arthritis, type I diabetes and lupus. Other lectures will overview a number of immunological challenges faced in the clinic, such as preventing graft rejection after transplantation or boosting the immune system to fight cancer and HIV.

Course Learning Outcomes

By the end of the course, students will have a greater appreciation of the role of the immune system in health and disease and will have further developed skills in writing, critiquing, and oral communication.

Prerequisites: IMM350H1/IMM351H1 or equivalent introduction to immunology course

Corequisites: None

Exclusions: None

Recommended Preparation: None

Credit Value: 0.5

Marking Scheme

25% Take-home mid-term assessment

15% Graduate writing assignment

35% Presentation assignment

25% Final assessment

Assessment	%	Details	Due Date
Midterm	25%	<ul style="list-style-type: none"> • The Take-home mid-term assessment will consist of essay style questions covering material in the first half of the course. Five questions will be assigned and each student will choose three to answer. • One week will be provided to complete the mid-term. The assessment will be released after class on Feb 4th and should be uploaded to Quercus before class on the due date as a PDF or word document. • Each answer should be no more than 2 pages, double-spaced, 12 point font, 1 inch margins. A maximum of two ORIGINAL diagrams may be appended to the answer. Literature references may also be included and will not be included in the two page answer. Referencing/Citations and source material: Quotations are NOT permitted •When you have derived concepts from source material (which is expected), you must reference that source material in the text using a superscripted number. Your bibliography will then contain a numbered list of references. •Reference style in the bibliography should be similar to that used for Nature. Check journal website for details. • Your Take-home assessment will be subject to Turnitin. You will be given the chance to check your originality report prior to the final submission. • Up to 75% will be awarded for content of answers. Up to 25% will be awarded for organization of material, clarity of writing, formatting, and presentation. 	2025-02-11

Assessment	%	Details	Due Date
Presentation Assignment	35%	<ul style="list-style-type: none"> This is a group assignment. Groups will consist of 4 people (assigned by course coordinator). Each student in the group will choose one of the four following topics (a different topic for each person). 1) Ustekinumab for treatment of plaque psoriasis 2) Fecal matter transplant for treatment of Clostridium Difficile 3) Alemtuzumab for the Treatment of Multiple Sclerosis 4) TIL (tumor infiltrating lymphocyte) therapy for melanoma In your presentation. Provide background to the disease you are studying; Describe how and when the drug/treatment was first tried for the disease; The stated rationale for its use; The clinical effect of the treatment; Subsequent steps to identify its mechanism of action; Insights into the disease mechanism derived from animal models or its successful clinical use. Conclusions Your presentation should be approximately 10 minutes (no more than 12), and should contain no more than 10 slides. Students in each group will review the other presentations of their group members and provide feedback. You can use any preferred software to prepare your presentation so long as it has a 'Record' function. Both Powerpoint and Keynote have this function, as does Zoom. Grading will be based on the following rubric: 45% of the grade will reflect slide formatting, and the quality of the presentation. Are your slides easy to understand? Is your commentary clear and easy to follow? Have you told an interesting story? 45% of the grade will reflect the content. Have you covered the requested information effectively? 10% of the grade will reflect your feedback on other presentations in your group. Have you provided useful insight to your group members? 	2025-03-11

Assessment	%	Details	Due Date
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Graduate Writing Assignment	15	<ul style="list-style-type: none"> • Dr. Dunn will post extra material (a lecture on multiple sclerosis) that gives an introduction to the disease. She also can hold office hours if clarity is required on the material. • Each student is to find a primary research article (not a review) that is relevant to an important advance in Multiple Sclerosis (not on the animal model of multiple sclerosis), preferably published in the last two years in a high-impact journal. Contact Dr. Dunn ahead of time to determine whether the paper is appropriate. Each student is to pick a different paper and will be approved on a first-come-first-serve basis. • Summarize the article. Comment on the following in your summary: 1) What is the question being asked? 2) What was the experimental approach (or approaches) used. 3) Briefly describe the methodology. 4) What were the major findings and conclusions. • Critique the article. These are the questions you should answer. Was the research novel? Were the methods appropriate and sound? Do the results support the conclusions? Were the experiments replicated and appropriate statistics used? What experiments would have improved the manuscript? Do the results change the way we think about MS? • Maximum, 3 pages double-spaced, 12 point font. • Submit through Quercus before beginning of class on Due date. 	2025-02-04
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Final Exam: This will take place during the examination schedule. It will be online, open-book and based on material in the last seven lectures. The questions will be more conceptual in nature.

Course Schedule

Week	Description
Week 1 January 7	Dr. Dunn will provide an overview of the course. Dr. Stuart Berger will provide a lecture on "Rheumatoid Arthritis). Email: stuart.berger@utoronto.ca
Week 2 January 14	Dr. Bryan Coburn will provide a lecture entitled "Microbiome in health and disease" Email: bryan.coburn@uhn.ca
Week 3 January 21	Dr. Rupert Kaul will provide a lecture entitled "Immune Protection against HIV?" Email: rupert.kaul@utoronto.ca

Week 4 January 28	Dr. Chao Wang will provide a lecture entitled "Immune regulation of Depression" Email: chao.wang@sri.utoronto.ca
Week 5 February 4	Robyn Loves will provide a lecture entitled "Advances in the management of severe T cell immune defects" Email: robyn.loves@mail.utoronto.ca Graduate Assignment due before class. Midterm Assessment released
Week 6 February 11	Dr. Jayne Danska will provide a lecture entitled "Genes, microbes, and the origins of type I diabetes" Email: jayne.danska@sickkids.ca Midterm Assessment due before class
Week 7 February 25	Dr. Jalal Kazan will provide a lecture entitled "Cancer immunology and immunotherapy"
Week 8 March 4	Dr. Stephen Juvet will provide a lecture entitled "Transplant Immunology" Email: stephen.juvet@uhn.ca Note March 10 is the last day to drop the course without affecting academic record.
Week 9 March 11	Dr. Joan Wither will provide a lecture on "Immunopathogenesis of Systemic Lupus Erythematosus" Email: joan.wither@uhnresearch.ca Presentation assignment due before class.
Week 10 March 18	Dr. Thomas Eiwegger will provide a lecture on "Allergy" Email: thomas.eiwegger@sickkids.ca
Week 11 March 25	Dr. Eleanor Fish will provide a lecture entitled "Global virus outbreaks: type I IFNs as broad-spectrum anti-virals" Email: en.fish@utoronto.ca
Week 12 April 1	Dr. Josef Penninger will provide a lecture entitled "Osteoimmunology" Email: josef.penninger@helmholtz-hzi.de

Policies & Statements

Late/Missed Assignments or Assessments

10% will be deducted for a late submission (3 pm) on the date due with an additional 10% deducted for every day late thereafter.

Specific Medical Circumstances

If you become ill and it affects your ability to do your academic work, consult me right away. Normally, I will ask you for documentation in support of your specific medical circumstances. This documentation can be an Absence Declaration (via ACORN) or the University's Verification of Student Illness or Injury (VOI) form. The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. If you cannot submit a VOI due to limits on terms of use, you can submit a different form (like a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI (including dates, academic impact, practitioner's signature, phone and registration number). For more information on the VOI, please see <http://www.illnessverification.utoronto.ca>. For information on Absence Declaration Tool for A&S students, please see <https://www.artsci.utoronto.ca/absence>. If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible.

Make-Up Quizzes/Tests

Due to the large amount of time allotted to complete the mid-term, there will be no make-up. Students are encouraged to get started on the mid-term early. A make-up for the final will be provided only after the student has successfully petitioned the Faculty of Arts and Sciences.

Mental Health and Well-Being

Your mental health is important. Throughout university life, there are many experiences that can impact your mental health and well-being. As a University of Toronto student, you can access free mental health and wellbeing services at Health & Wellness (<https://studentlife.utoronto.ca/department/health-wellness/>) such as same day counselling, brief counselling, medical care, skill-building workshops, and drop-in peer support. You can also meet with a Wellness Navigation Advisor who can connect you with other campus and community services and support. Call the mental health clinic at 416-978-8030 ext. 5 to book an appointment or visit <https://uoft.me/mentalhealthcare> to learn about the services available to you.

You can also visit your College Registrar to learn about the resources and supports available: <https://www.artsci.utoronto.ca/current/academic-advising-and-support/college-registrars-offices>

If you're in distress, you can access immediate support: <https://uoft.me/feelingdistressed>

Re-marking Policy - Timeline and Protocol

There will be no re-mark of the presentation assignment or of the mid-term assessment. A re-mark of the final can be requested after petitioning the Faculty of Arts and Sciences. Dr. Dunn

will be the one to re-mark the final upon successful petition. Note that the mark can go up or down with remarking.

Plagiarism Detection Tool

Normally, students will be required to submit their course essays to the University's plagiarism detection tool 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 tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (<https://uoft.me/pdt-faq>).

Religious Accommodations

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of cultural and religious traditions. For my part, I will make every reasonable effort to avoid scheduling tests, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (such as a test or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

Students with Disabilities or Accommodation Requirements

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) at the beginning of the academic year by visiting <https://studentlife.utoronto.ca/department/accessibility-services/>. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your needs or condition with any instructor, and your instructors will not reveal that you are registered with AS.

Academic Integrity

All suspected cases of academic dishonesty will be investigated following procedures outlined in the [Code of Behaviour on Academic Matters](https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019) (<https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019>). If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me. Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources. For example, 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 [A&S Student Academic Integrity](https://www.artsci.utoronto.ca/current/academic-advising-and-) (<https://www.artsci.utoronto.ca/current/academic-advising-and->

[support/student-academic-integrity](#)) and the [University of Toronto Website on Academic Integrity \(https://www.academicintegrity.utoronto.ca\)](#).

Accommodation for Personal Reasons

There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, speak to me or to an advisor in your College Registrar's office; they can help you to decide if you want to request an extension or other forms of academic consideration. They may be able to email your instructors directly to provide a College Registrar's letter of support and connect you with other helpful resources on campus.

Quercus Info (if using)

This Course uses the University's learning management system, Quercus, to post information about the course. This includes posting readings and other materials required to complete class activities and course assignments, as well as sharing important announcements and updates. New information and resources will be posted regularly as we move through the term. To access the course website, go to the U of T Quercus log-in page at <https://q.utoronto.ca>. SPECIAL NOTE ABOUT GRADES POSTED ONLINE: Please also note that any grades posted are for your information only, so you can view and track your progress through the course. No grades are considered official, including any posted in Quercus at any point in the term, until they have been formally approved and posted on ACORN at the end of the course. Please contact me as soon as possible if you think there is an error in any grade posted on Quercus.

Recording Lectures

Lecturers will be asked whether they are open to their lecture being recorded. If so, a recording will be posted to quercus. There is no guarantee that the lecture will be recorded.

Course Materials, including lecture notes

Course materials are provided for the exclusive use of enrolled students. These materials should not be reposted, shared, put in the public domain, or otherwise distributed without the explicit permission of the instructor. These materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation and are protected by copyright. Students violating these policies will be subject to disciplinary actions under the Code of Student Conduct.

Equity, Diversity and Inclusion

The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

Additional Content

Policy Regarding Artificial Intelligence (AI) Tools

The use of AI tools is strictly prohibited in all course assessments. You may not interact with, copy, paraphrase or adapt any content from generative AI for the purpose of completing assignments or assessments for this course. The use of AI will be considered an unauthorized aid, which is a form of academic misconduct.

Teaching Assistants:

The TAs are a resource and they will be marking the exams and presentation assignments. Note that the lecturer is your best source for clarification of course material. They will make themselves available to answer questions immediately following the lecture.

TAs:

Meggie Kuypers (m.kuypers@mail.utoronto.ca)

Julia Lin (julial.lin@mail.utoronto.ca)

Stephanie Wong (stephaniewingyan.wong@mail.utoronto.ca)

Karen Yeung (ka.yeung@mail.utoronto.ca)