

IMM350H1 – The Immune System in Action The Immune System in Action illustrates how different elements of the immune system come together to mount efficient and measured responses. Topics include response to infectious microorganisms, allergy and autoimmunity, immune responses against cancer, and transplantation immunology.

Course Coordinator: Liliana Clemenza, Assistant Professor, Teaching Stream

Online Office Hours: Every Monday, 2pm-2:50pm, Teams Office Hours Room. Other times can be arranged by appointment.

Lecturers	Email
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Delivery Mode:

In-person lectures will take place on Thursdays from 9 a.m. to 11 a.m. They will be recorded and posted on Quercus one week before tests/exams.

Tutorials: Each Monday, from 3 pm to 4 pm, seven to fourteen groups of eight self-assigned students will discuss a draft of their project and receive feedback from the instructor/TAs. ***Each group will attend only one tutorial, but tutorial attendance is mandatory for all group members. If a group member does not attend their scheduled tutorial, they will be removed from the group and will need to join a later group or submit an individual video assignment on the same topic assigned to their original group.*** The first IMM350 tutorial is scheduled on Monday, January 19. The full tutorial schedule is on the last page of this syllabus. Please see the Course Assessment section below for more important information about tutorials.

Term Tests/Final Exam: Term tests will be conducted online as a Quercus Quiz during regular class hours. The final exam will be in person. The Faculty of Arts & Science will set the final exam date.

Arts & Science Calendar Course Overview (20L/7T)

IMM350H ‘The Immune System in Action’ introduces the basic principles and key players of the immune system: differences and interplay between innate and adaptive immunity, how immune cells develop and function, how immune cells recognize threats and danger and mount an appropriate and measured response.

Prerequisite: IMM340H1

Required Textbook: Janeway’s Immunobiology, 10th Edition by Murphy, Weaver, Berg; Norton.

Evaluation Scheme & Course Assessments

Assessment	% of Grade	Due Date
Readings & InQuizitive	10%	Ongoing
Group Video Presentations	10%	Two weeks after tutorial meeting
Test 1	20%	January 29, 9:30 am-11:00am ET
Test 2	20%	March 5, 9:30 am-11:00am ET
Final Exam (in person)	40%	TBA

1. Readings and Inquizitive (10%)

Janeway's textbook and companion site, InQuizitive, are mandatory resources for this course and can be purchased for CAD 74.00. **Note: If you have already purchased the InQuizitive package as an IMM340 student in fall 2025, you still have access to Janeway's resources and ebook and will not need to buy it again. However, you will need a student Set ID and an access code that will be posted on Quercus.**

Readings related to the weekly lecture will be assigned every Thursday, along with an associated InQuizitive quiz. In InQuizitive, students must answer a minimum number of questions in each activity before receiving a grade and reach a 100% Target Score. **The quiz must be completed by 11:59 p.m. on Thursday of the following week (one-week window).** An activity called "How to use InQuizitive" will be available during the first week of class.

There are no make-ups for missed InQuizitive homework, given the nature of the assessment and the one-week completion period.

2. Tutorial Group Presentations: (10%)

Tutorial Attendance & Collaboration Sessions:

Tutorials are designed to facilitate group discussions, planning, and project development. The use of generative AI during tutorial sessions is allowed to enhance your initial brainstorming and structuring process. Here is how the sessions will unfold:

Designated Space: Each Monday, student groups will attend the tutorial as scheduled (see List of Topics & Groups in the Tutorial Presentations Quercus Module). Each group will be assigned a spot in the tutorial room to discuss their respective projects without disturbances. ***Each group will attend only their scheduled tutorial.***

Objective: These sessions are dedicated to helping group members convene, brainstorm, and develop their presentations. The focus will be on using generative AI to create an initial outline for your presentation, which will serve as a starting point for further discussion, refinement, and development.

However, the final submitted work, including newly created images and script, must be original (i.e. not AI-generated) and reflect the group's collective input.

AI Tool Integration:

- Step 1: At the beginning of the session, each group will upload their assigned paper to an AI tool of your choice.
- Step 2: The AI tool will generate a suggested outline for a 10-minute presentation. This outline will include key points and potential sub-sections.
- Step 3: Groups will then critically evaluate the AI-generated outline. Discuss what works, what needs to be adjusted, and how to best align the outline with your project goals.
- Step 4: Modify the outline based on your discussion, ensuring the final structure reflects the group's understanding and approach to the topic.

Suggested Initial Prompt:

You could provide a basic prompt like the following:

"Generate an outline for a 10-minute video presentation based on the key findings and main arguments of [Title of the Assigned Paper]. The outline should include an introduction, 3-5 main sections covering significant points or experiments, and a conclusion that ties the findings back to the broader field of immunology."

Groups can then adjust this prompt by adding specifics from their assigned paper or case study, such as emphasizing specific aspects, or addressing controversial points within the research. The list of papers will be uploaded on Quercus in the Tutorial Presentations Module.

Instructor/TA's Role: During these sessions, the instructor/TA will move around the room, visiting each group. This time is a chance for groups to ask questions, seek feedback on the AI-generated outline, and ensure they are on the right track. By the end of the tutorial, each group should present a draft plan outlining the direction, content, and design of their presentation. This plan, including the AI-generated outline and your modifications, should be uploaded to the Quercus Group Page as a work in progress.

Opting Out of AI Use: Groups that prefer not to use the AI tool can opt-out. In this case, the group should start by manually brainstorming and creating an outline. These groups must document their process and how they arrived at their final outline without AI assistance.

Using AI for Contrasting Perspectives Throughout the Project

Video Production Phase:

- **Creative Decisions:** If your group has different opinions on creative elements, such as which information to include, how many speakers to feature, or the overall style of the presentation, use the AI tool to explore various options. For example, you could ask the AI tool to generate alternative styles - one formal, one informal - for presenting the key findings of your project paper."

Final Decision-Making:

- After reviewing the AI-generated options, the group should discuss and decide on the final approach.

If AI tools are used, the group must:

Document AI Use:

1. **Outline:** Briefly explain how the AI tool was used, what aspects were retained or modified, and how the final outline was developed.
2. Use of AI throughout the project to solve within-group disagreements must also be documented.

When you submit your video, the AI-use document should be uploaded as an attachment to the comment space. The group's effectiveness in using and modifying the AI output will also be assessed (See rubric).

Groups opting out of AI use must also document their brainstorming process and outline development, ensuring that the same level of rigor is applied. The points allocated to AI use, will be distributed to other rubric criteria.

Microsoft Copilot:

The recommended AI tool is the protected version of Microsoft Copilot available to faculty, staff, and UofT students. "Copilot is an enterprise version of an AI-powered chatbot and search engine that better protects users' privacy and security (when users are signed into their U of T account). Copilot, like other generative AI tools, may provide information that is not correct ("hallucinations"), and it is up to each individual user to determine if the results are acceptable. For information and instructions on accessing the enterprise edition, please read and adhere to the [Microsoft Copilot guidelines for use](#)."

Please note that any uses of generative AI beyond those listed above are not permitted and will be considered unauthorized aid, which is an academic offence. Submissions will be assessed at the discretion of the course coordinator, and students will be asked to show evidence of their work if a case of Academic Integrity and the inappropriate use of Generative AI tools is suspected.

Group Formation:

- **Self-assigning:** Once the instructor populates Quercus with groups and topics, you can select a group number and its associated topic.
- **Size:** Groups must consist of up to 7 students (might be increased to 8, depending on final enrolment).

- Diversity: Forming groups with a mix of skills is beneficial for a richer collaborative experience.
- Roles: Assign specific roles. Remember, each member can assume multiple roles, and roles can overlap among members:
 - Researcher: **Everyone participates in this role**
 - Writer: Drafts the presentation's primary content or a complete script, if preferred.
 - Presenter: Delivers the presentation. If possible/desired, all members should be involved as presenters.
 - Editor: Refines clarity, coherence, and grammar.
 - Coordinator: Manages meetings and acts as the group's representative.
 - Visual Designer: Designs slides or visual aids.

Guidance for Group Choice:

This assignment offers students flexibility regarding their learning styles, interests, and scheduling availability. When selecting a group, consider:

1. Interest in the topic.
2. Personal schedule.
3. Interest in acquiring digital skills.

Format: Submit a 10-minute video or voice-over PowerPoint presentation.

Submission: Due by 11:59 p.m. on Sunday, two weeks after the group’s tutorial week. (For example, groups meeting on Monday, January 19, have a submission deadline on Sunday, February 1st).

Presentation Crafting Tips:

- Slide Design: Prioritize visuals over text. Use graphs, images, or charts.
- Script: Either script your narration or create bullet points to maintain focus.

Software Recommendations:

- PowerPoint: Use the "Record Slide Show" feature for voice narrations.
- Online Tools: Platforms like Quercus, Zoom, and MyMedia offer screen and voice recording.
- Advanced Editing: Adobe Premiere Pro, iMovie, or Filmora

As indicated in the “Missed Assessment Policy” section below, there are no extensions or accommodations for the Group Assignment due to the nature of the assessment (i.e. it is a group assignment).

Evaluation Criteria (an extensive rubric will be posted on Quercus):

Criteria	Weight (Points)	Description
Presentation Structure/Audience	20	Evaluates the coherence, engagement, and appropriateness of the presentation for the intended audience.
Content/Research	25	Assesses the accuracy, relevance, and depth of the content presented.
Script/Narrative	20	Looks at the clarity, organization, and citation of references in the script.
Use of Digital Media/Creativity and Editing	20	Measures the originality, quality, and integration of digital media, as well as the overall flow and engagement of the video.
AI and documentation of AI Use	15	Evaluates how effectively AI tools were used, including the critical evaluation and modification of AI-generated content.

3. Tests and Final Exam

Term Tests 1 and 2 will be online via Quercus Quizzes. **The Final Exam will be in person.** Test dates and coverage/format are highlighted below:

Test 1 (20%): Online on January 29, 2026, from 9:30 am to 11:00 am. It will cover Lectures 1-3 of the course, with 10 multiple-choice questions for each lecture.

Test 2 (20%): Online on March 5, 2026, from 9:30 am to 11:00 a.m. It will cover Lectures 4-6 of the course, with 10 multiple-choice questions for each lecture.

Final Exam (40%): The Faculty of Arts & Science will set the final exam date. The exam will include content from lectures 7 to 10, with 10 multiple-choice questions for each lecture.

Please refer to the “Missed Assessment Policy” section below for information on requesting accommodation for a missed test or final assessment, including the possible accommodations.

Missed Assessment Policy

- This course follows the University of Toronto’s Policies on missed tests and assignments and requires students to complete an [Absence Declaration on ACORN](#) for illness-related circumstances.
- Other reasons for missing course assessments will require prior approval by the course coordinator. If approval is not granted in advance for non-medical reasons, then 0% will be recorded for the missed assessment.
- Note: If you submit an assessment, it will be assumed that you deemed yourself fit enough to do so and your grade will stand as calculated. No accommodations will be made based on claims of medical, physical or emotional distress *after* the fact.
- **InQuizitive Homework** – There are no make-ups for missed InQuizitive homework, given the nature of the assessment and the one-week time limit to complete it.
- **Missed Tests** – Missed tests will be accommodated at the course coordinator’s discretion. *Make-up tests will be composed of a mix of multiple-choice questions.*
- **Group Assignment** – There are no accommodations for individuals/groups for the Group Assignment under any circumstances due to the nature of this assessment. Late videos will not be accepted, and there are no accommodations available for individuals who did not contribute to their group’s video.

Course Schedule

Lecture Date	Lecture	Lecturer
Jan 8	Innate Lymphocytes	T. Mallevaey
Jan 15	Mucosal Immunity	A. Mortha
Jan 22	The microbiota and the Immune System	L. Clemenza
Jan 29	Test 1	N/A
Feb 5	Cancer Immunology	T. Mallevaey
Feb 12	Cancer Immunotherapy	T. Mallevaey
Feb 19	Reading week	N/A
Feb 26	Autoimmunity	L. Clemenza
March 5	Test 2	N/A
March 12	Immune memory & vaccination	T. Watts
March 19	Immunity to viral & bacterial infections	L. Serghides
March 26	Immunology of Transplantation	S. MacParland
April 2	Hypersensitivity reactions	L. Clemenza
See next page for Tutorial Schedule		

Tutorial Date	Groups	Submission Date
Jan 19	Groups Lectures 1 & 2	Feb 1 st
Jan 26	Groups Lectures 3	Feb 8
Feb 2	No Tutorial	
Feb 9	Groups Lecture 4	March 1 st
Feb 16	No Tutorial Reading week	
Feb 23	Groups Lecture 5	March 8
March 2	Groups Lecture 6	March 15
Mar9	No Tutorial	
March 16	Groups Lecture 7	March 29
March 23	Groups Lecture 8	Monday, April 6

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 or <http://studentlife.utoronto.ca/accessibility>.

Masks on Campus:

While the mask mandate has been paused as of 1 July 2022, the use of medical masks continues to be strongly encouraged in high-density indoor settings where physical distancing is not possible. Please wear a mask when attending lectures or tutorials unless not able to do so due to health condition.