

2026 Fall Biol 4011 Immunology Course Outline (2026-09-12)

Instructor: Dr. Wensheng Qin

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Office Hours: CB4016, Tuesdays, 1:00 pm to 2:00 pm (or by appointment or by Zoom, the TA and the instructor, we prefer you to email us your requests or questions before you come to meet with us for discussion. This is to make our work and discussion more efficient.

The Zoom link: <https://lakeheadu.zoom.us/j/9062746109?pwd=SFIZVDQ3Ujl2aUZNMnNaTlFkZnBZdz09>

Meeting ID: 906 274 6109, Passcode: 853564. This zoom link will be used for discussion and/or even for one or a few classes when alternative arrangements are very necessary.

Lecture Location: RB 2026

Time: Tuesdays, Thursdays: 10:00 am-11:30 am

Duration: 2026-09-08 to 2025-12-08

Credits: 0.50

TA: Dhanushya Jeyakumar (PhD Student)

TA's Tel: 807-343 8010 ext. 7141, Office: CB 3037

Email: djeyakum@lakeheadu.ca & ghanu.teachassist@gmail.com

Textbook: The Immune System (Peter Parham-6th Edition of 2026 Norton). The fall of 2026 semester is our first time of using this textbook. For questions about e-access to the textbook, please contact Maya Uriarte at W. W. Norton Canada, Email: muriarte@wnnorton.com, Mobile: 431-668-4976.

Students are highly encouraged to buy this textbook but not required. Whether you buy this 6th edition of the textbook or use other versions of the textbook or use other similar textbook, it is totally up to you, you do not need to ask me this question, because if you ask, the answer is “it is

totally up to you”. One copy of the book is reserved in the library. The printed copy of the loose-leaf book is \$132.99, and the eBook is \$69.99.

Additional Requirements: (1) Preview the textbook and think about the questions in the related chapter(s) before the applicable class. (2) Review the textbook and try to answer the questions in the chapter(s) after the class. (3) Study the entire lectured chapters 1-14 for exams. The PPT slides do not contain all the information needed for exams; you must study the textbook as well. (4) Students must understand well enough to solve all the problem questions in chapters 1-14. (5) The course covers 14 chapters, a lot of information, you should have daily study and prepare for exams early.

Grading Scheme: (The PowerPoint slides do not cover all the information for exams, so intensive reading and understanding of the whole lectured chapters 1-14 are necessary).

1. Exam One: October 8, 2026: Exam One covers chapters 1-3 (25%). The exam one may include (1) Fill in the blank questions, (2) Multiple choice questions, (3) True/False questions, (4) Essay questions, etc. TA will help to administer and mark the exam. Duration is up to 75 minutes.
2. Exam Two: November 26, 2026: Exam Two covers chapters 4-11 (45%). Covering the chapters 4-9. The exam two may include (1) Fill in the blank questions, (2) Multiple choice questions, (3) True/False questions, (4) Essay questions, etc. TA will help to administer and mark the exam. Duration is up to 75 minutes.
3. Exam Three: December 8, 2026: Exam Three covers chapters 12-14 (20%). The exam may include (1) Fill in the blank questions, (2) Multiple choice questions, (3) True/False questions, (4) Essay questions, etc. Duration is up to 75 minutes.
4. Class Attendance Marks (10%): [1] Random checks will be conducted on attendance at 20 classes by signing the attendance sheets, with 0.5% of students attending in each class, for a total of 20 classes (including attending exams in the originally planned times), amounting to 10%. Sometimes, we may also use pop quizzes/in class exams as checks. As long as you attend more than 80% of the class you will receive the full class attendance marks (10%). [2] If you voluntarily email us (the TA and Instructor) beforehand with a valid reason for not being able to attend a class, you are appreciated, but you will not receive this class attending marks, because as long as you attend more than 80% of classes you will receive full class attendance marks. [3]

Please email us (the TA and Instructor) beforehand if you have any very special circumstances or reasons for special consideration. [4] For the students who attend all the classes, they may receive extra 2 bonus points.

5. Bonus point marks: Some bonus points for raising your final grades may be offered when necessary (see the notes below).

Notes: If you miss any examination (midterm exams or final exam), we strictly follow the university regulations of “Missed Examinations Due to Illness or Other Extenuating Circumstances”. If you are permitted to write your missed exam, an alternative test paper (Test B or even Test C, Test D, etc.) will be made. Test B, C, or D will be different or even totally different in formats and questions from the test questions in Test A for the class. Please try your best to avoid missing an exam.

Extra notes:

- (1) We strictly follow the course outline as rules for the course.
- (2) The important contents and information for examinations will often be emphasized in class. Occasionally, I will provide a few example questions in the class, and those questions may be directly used in the midterm or final examinations. The example questions will be related to our contents but may not be from the textbook.
- (3) Slides in D2L and slides for lecturing may be slightly different. To encourage students to take good notes of the lectures, the lectured slides will not be sent to the students. Please do not email us to request for the lectured slides.
- (4) Bonus points: [1] If you actively participate in class discussion, you may obtain extra bonus point(s). Therefore, I strongly encourage you to upload your clear photo in D2L as early as possible (for an extra bonus point). This will help the TA and instructor to identify you when you answer questions and credit you bonus point(s). [3] Each bonus point can value more or less than 1% adding to the student’s final grade. The bonus point value depends on class average marks. If the class average marks are too low, pop quizzes may be arranged for extra bonus points. Pop quizzes (if any) are ONLY for students who attended the classes. No excuse or exception for students who do not attend the classes for whatever reason, unless your case is very special and with special approval from the department chair or other officer.

Lecturing Schedule & Course Contents

Week	Date	Chapter	Contents
1	September 7-11	1	Elements of the Immune System and Their Roles in Defense
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2	September 14-18	2	Innate Immunity: The Immediate Response to Infection
			Innate Immunity: The Immediate Response to Infection
3	September 21-25	3	Innate Immunity: The Induced Response to Infection
			Innate Immunity: The Induced Response to Infection
4	Sept 28-Oct 2	4	Antibody Structure and the Generation of B-Cell Diversity
			Antibody Structure and the Generation of B-Cell Diversity
5	October 5-9	5	Antigen Recognition by T Lymphocytes
			October 8, 2026: Exam One covers Chapters 1-3 (25%)
6	October 12-16		Fall Reading Week
7	October 19-23	6	The Development of B Lymphocytes
		7	The Development of T Lymphocytes
8	October 26-30	8	T Cell-Mediated Immunity
			T Cell-Mediated Immunity
9	November 2-6	9	Immunity Mediated by B Cells and Antibodies
			Immunity Mediated by B Cells and Antibodies
10	November 9-13	10	Preventing Infection at Mucosal Surfaces
		11	Immunological Memory and Vaccination
11	November 16-20	12	Natural Killer Cells
			Natural Killer Cells
12	November 23-27	13	Unconventional Lymphoid Cells
			November 26, 2026: Exam Two covers chapters 4-11 (45%)
13	Nov 30-Dec 4	14	Failures of the Body's Defenses
			Failures of the Body's Defenses
14	December 7-11		December 8 (or maybe December 3), 2026: Exam Three covers chapters 12-14 (20%)

First Day of Classes	September 8, 2026
Final Day of Classes	December 8, 2026
Final Date to Register (Add)	September 21, 2026
Fall Reading Week	October 12 - October 16, 2026
Final Date to Withdraw (Drop)	November 6, 2026
Study Days	December 9 - December 10, 2026
Examination Period	December 11 - December 20, 2026
Exam Contingency Date	December 21, 2026
Marks Due	December 24, 2026

Lakehead	Grading System	Biol 2171 Grading Plan (only for your reference)	Grading Scheme
A+	90-100	~20% of the students	$20\% \times 95 = 19.00$
A	80-89	~30% of the students	$30\% \times 85 = 25.50$
B	70-79	~30% of the students	$30\% \times 75 = 21.50$
C	60-69	~10% or less of the Students with C or Fail	$10\% \times 65 = 6.50$
Fail	01-59	~10% or less of the Students with C or Fail	$10\% \times 55 = 5.50$
		The class average marks will be around 70-75%. We will have class average not higher than 78%. If the class average is too high, the marks will be reduced by percentage.	*Average by calculation = 78%.
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