

**THE UNIVERSITY OF LETHBRIDGE  
FACULTY OF HEALTH SCIENCES  
HLSC/BIOL 2806N – IMMUNOLOGY  
Course Syllabus – Fall, 2016**

**INSTRUCTOR:** Roshanee De Silva, MBBS, MSc  
**OFFICE:** M3070  
**CLASS:** Mondays, 18:00 – 20:50, TH201  
**OFFICE HOURS:** Mondays, 17:00 – 18:00 and 21:00-21:30 or by appointment (via e-mail)  
**E-MAIL:** roshanee.desilva@uleth.ca (I will do my best to respond within 48 hours)

**COURSE DESCRIPTION:**

The focus of this course is to understand the biological role of immunity and natural resistance. The human immune system evolved to protect us from pathogens in the environment around us. It is a complex system of cells and molecules that work together to protect our body. Our immune system is so specific that it can adapt after recognizing a pathogen once to allow our body to respond more quickly. Understanding the regulation of immune responses to pathogens and environmental hazards is the main goal of immunological research.

In the first half the of course, we will learn about the immune system and how it works to protect us from pathogenic microorganisms. While the immune system is remarkably adept at specifically recognizing and eliminating pathogens, occasionally, inappropriate immune responses occur. In the second half of the course, we will discuss how some pathogens have learned to evade our immune responses and discuss diseases that arise as a result of malfunctions in the immune response such as autoimmune diseases, hypersensitivity reactions, and immunodeficiencies.

Pre-requisites: BIOL 1010 or admissibility to any program in the Faculty of Health Sciences.

**COURSE OBJECTIVES:**

1. To describe the biological role of the immune system.
2. To describe the roles of the immune system in acute and chronic diseases.

**COURSE TEXTBOOK (MANDATORY):**

Sompayrac, L. (2015). *How the immune system works*. Sussex, UK: Wiley-Blackwell.

For more detailed information on material covered in class or to supplement the required textbook, see:

Kindt, T., Goldsby, R, & Osborne, B. (2007) *Kuby Immunology* (6<sup>th</sup> ed.). W. H. Freeman & Co.

*There is one copy of the above book in the library. This textbook is NOT necessary and will not be tested from; it is simply an additional resource.*

For more detailed information on case studies presented at the end of each lecture see:  
Geha, R. & Notarangelo, L. (2008) *Case studies in Immunology* (5<sup>th</sup> ed.). Garland Science.

*There is one copy of the above book in the library. This textbook is NOT necessary and will not be tested from; it is simply an additional resource.*

**COURSE MATERIALS:**

Lecture slides will be available on the course Moodle site by the Saturday before the lecture. Lectures will be posted in both PDF and PowerPoint formats

**QUESTIONS:**

Questions can be asked during office hours, before or after class, by email (see above) or through the Moodle discussion board.

**GRADING COMPOSITION:**

This course will be evaluated based on three (3) exams, six (6) quizzes and one (1) assignment.

<b>Exam</b>	<b>Date</b>	<b>Weighting</b>
Exam # 1 (90 minutes)	Oct. 03	20%
Exam # 2 (90 minutes)	Nov. 14	20%
6 Quizzes (15 minutes each)	Sept. 19, 26, Oct. 24, 31, Nov. 28, Dec. 5	12%
Assignment	Nov. 14	18%
Final Exam (3 hrs)	TBA	30%

**Note:** In some cases, bonus questions may be available on exams. Answering these questions correctly will result in extra marks. However, the maximum possible grade on each exam will be 100%.

**Note:** The final exam for this course will take place during the exam period in December. The date and time will be confirmed as soon as the exam schedule is posted. **Please do not make any travel plans until after the last day of the exam period, December 19, 2016.**

The assignment and its grading scheme will be discussed during class time and will be posted on the course Moodle site.

**POLICY STATEMENTS:**

The course syllabus acts as an agreement between the student and professor of this class regarding the details of the course. The details listed may be changed only with the unanimous written consent of all class members.

The University of Lethbridge is committed to the highest standards of academic integrity and honesty. Our institution is committed to providing an environment of equality and respect for all people within the university community, and to educating faculty, staff and students in developing teaching and learning contests that are welcoming to all.

The Faculty recommends that students and staff use inclusive language to create a classroom atmosphere in which students' experiences and views are treated with equal respect and value in relation to their gender, racial background, sexual orientation, and ethnic backgrounds.

**GRADING BREAKDOWN:**

The grading system for this course is consistent with that established in the Faculty of Health Sciences, effective May, 2002.

<b>Letter</b>	<b>GPA</b>	<b>Percent</b>	<b>Letter</b>	<b>GPA</b>	<b>Percent</b>
A+	4.0	95 - 100%	C+	2.3	71 - 74.9%
A	4.0	91 - 94.9%	C	2.0	67 - 70.9%
A-	3.7	87 - 90.9%	C-	1.7	63 - 66.9%
B+	3.3	83 - 86.9%	D+	1.3	59 - 62.9%
B	3.0	79 - 82.9%	D	1.0	55 - 58.9%
B-	2.7	75 - 78.9%	F	0	0 - 54.9%

**PLAGIARISM STATEMENT:**

The University of Lethbridge subscribes to Turnitin.com, a plagiarism detection service. Please be advised that student work submitted for credit in this course may be submitted to this system to verify its originality. Students must be able to submit both electronic and hard copy versions of their work upon request.

**ACCOMMODATIONS FOR STUDENTS WITH A DISABILITY:**

Reasonable accommodations are available for students who have a documented disability. If you have been diagnosed with a disability, there is no need to face the challenge of University without support. Please contact the Accommodated Learning Centre to set up an appointment at 403-329-2766 <http://www.uleth.ca/ross/counselling/index.html>. After registering with the Accommodated Learning Centre, your instructor will be notified by a formal letter of any accommodations you require. In addition, students are responsible for requesting accommodations from the instructor at least **\*two weeks\*** in advance of the evaluation date. The instructor and student are jointly responsible for arranging the resources needed for the evaluation process.

**COPYRIGHT STATEMENT:**

All University of Lethbridge students, faculty and staff must comply with Canadian law and institutional license agreements pertaining to copyright. At the same time, keeping abreast of our copyright obligations and options is a complex task as copyright matters locally and globally are in flux and are likely to remain so for at least the near future.

The University's Copyright website ([www.uleth.ca/copyright](http://www.uleth.ca/copyright)) is a source of current copyright information that includes:

- answers to common copyright questions (see the [FAQs](#)),
- guidance on whether you need permission or a license to copy a particular work (see the [Copyright Permissions Flow Chart](#)),
- guidance on assessing whether fair dealing may apply to specific instances of copying you wish to undertake (see the [Guidelines for Copying under Fair Dealing](#)), and
- a [permissions look-up tool](#) to help you determine the kinds of copying and other uses permitted by the Library's license agreements covering specific online journals and other online resources.

You are encouraged to contact the University Copyright Advisor ([copyright@uleth.ca](mailto:copyright@uleth.ca)) for assistance with any copyright questions or issues.

**TENTATIVE CLASS SCHEDULE:**

Date	Lecture #	Topic(s)/Assignment Due Dates
<b>PART 1: THE IMMUNE SYSTEM</b>		
September 12	1	<ul style="list-style-type: none"> <li>• Introduction &amp; innate immunity</li> </ul>
September 19	2	<ul style="list-style-type: none"> <li>• Cellular effectors of innate immunity</li> <li>• <b>Quiz #1</b></li> </ul>
September 26	3	<ul style="list-style-type: none"> <li>• Adaptive immunity: antigen recognition &amp; presentation</li> <li>• <b>Quiz #2</b></li> </ul>
October 3		<ul style="list-style-type: none"> <li>• <b>EXAM #1 (Lectures 1-3)</b></li> <li>• <b>Lecture 4</b></li> </ul>
October 10		<b>Thanksgiving – No Class</b>
October 17	4	<ul style="list-style-type: none"> <li>• T and B cell maturation</li> </ul>

<b>Date</b>	<b>Lecture #</b>	<b>Topic(s)/Assignment Due Dates</b>
October 24	5	<ul style="list-style-type: none"> <li>• T and B cell trafficking and activation</li> <li>• <b>Quiz #3</b></li> </ul>
October 31	6	<ul style="list-style-type: none"> <li>• Cell-mediated and humoral immunity</li> <li>• <b>Quiz #4</b></li> </ul>
November 7		<b>Fall Reading Break - No Class</b>
November 14	7a	<ul style="list-style-type: none"> <li>• <b>EXAM #2 (Lectures 4-6)</b></li> <li>• Immunologic memory and vaccination</li> <li>• <b>ASSIGNMENT DUE TODAY @ 8:00AM</b></li> </ul>
<b>PART 2: THE IMMUNE SYSTEM IN DISEASE</b>		
November 21	7b 8	<ul style="list-style-type: none"> <li>• Immunologic memory and vaccination</li> <li>• How pathogens evade immune responses</li> </ul>
November 28	9a	<ul style="list-style-type: none"> <li>• Hypersensitivity reactions, immunodeficiency</li> <li>• <b>Quiz #5</b></li> </ul>
December 5	9b	<ul style="list-style-type: none"> <li>• Autoimmunity and Review</li> <li>• <b>Quiz #6</b></li> </ul>
During Exam Week		<b>FINAL EXAM (date and time to be confirmed)</b>