

# LIFS4060

Time: Mon.: 13:30–14:50PM

Fri.: 9–10:20 AM

Venus: Room 2306 (Lift 19)

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## Course Description:

The **Immunobiology LIFS4060** is a course designed for advanced undergraduate students and graduate students. It aims to introduce to students the fundamental knowledge and mechanisms of Immunology. The key topics include the effectors of innate and adaptive immunity, principles of innate and adaptive immune response, development and activation of B and T lymphocytes, immune diversity, immune tolerance, autoimmunity, infectious diseases, and organ transplantation, etc.

## Course Objectives:

On successful completion of this course, students are expected to be able to:

1. Explain the basic concepts of the immune system.
2. Recall and design experiments demonstrating the basic concepts and principles of immune cell development, immune diversity and immune response.
3. Critically evaluate the relevance of the immune system to social and daily life.
4. Appraise the relevance of biomedical science in preparing for advanced study in life sciences.

## Course Schedule:

Date	Topic	Book (Kuby) Chapter
6 Feb	Overview and Cells and Organs of the Immune System I	1
10 Feb	Cells and Organs of the Immune System II	2
13 Feb	Innate Immunity: Complement System and Phagocytosis I	5
17 Feb	Innate Immunity: Complement System and Phagocytosis II	5
20 Feb	Antigen and Antibody Structure	13, 20
24 Feb	Antigen and Antibody Structure	13, 20
27 Feb	Immune Diversity: Organization and Expression of Antibody I	3, 7, 10
3 Mar	Immune Diversity: Organization and Expression of Antibody II	3, 7, 10
6 Mar	Generation, Activation, and Differentiation of B Cells I	10, 12
10 Mar	Generation, Activation, and Differentiation of B Cells II	10, 12
13 Mar	Tutorial	
17 Mar	<b>Mid-term Exam: 13:30-15:00PM; Room 2306</b>	
20 Mar	Major Histocompatibility Complex and Antigen Presentation I	8
24 Mar	Major Histocompatibility Complex and Antigen Presentation II	8
27 Mar	T Cell Receptors	3, 7
31 Mar	T Cell Maturation and Tolerance I	7, 9
3 Apr	T Cell Maturation and Tolerance II	7, 9
7 Apr	T Cell Differentiation and Activation	11
10 Apr	Cytokine, Leukocyte Activation and Migration I	4, 14
21 Apr	Cytokine, Leukocyte Activation and Migration II	4, 14
24 Apr	Allergy, Hypersensitivities, and Chronic Inflammation	15
28 Apr	Tolerance, Autoimmunity, and Transplantation	16
5 May	Infectious Diseases and Immunodeficiency Disorders	17, 18
	<b>Final Exam: to be confirmed</b>	

Textbook: Kuby Immunology 7th Edition by Owen, Punt & Stranford, Macmillan Education