Global Learning Semesters
Course Syllabus
Course: BIOL-260 Immunology
Department: Health and Life Sciences
Host Institution: University of Nicosia, Nicosia, Cyprus

Course Summary		
Course Code	**Course Title**	**Recommended Credit Hours**
BIOL-260	Immunology	3
Semester Offered	**Contact Hours**	**Prerequisites**
Please contact us	42-45	BIOL -101, BIOL -102
Department	**Level of Course**	**Language of Instruction**
Health and Life Sciences	Lower Division	English

Course Description

This course introduces the student to immunobiology and innate immunity, the recognition of antigen, the development of mature lymphocyte cell and receptor repertoires, the adaptive immune response, the immune system in health and disease, and the evolution of the immune system. At the end of the course the student is expected to: Know the basis for immunity and the type of cell repertoire involved in the immune system; About immune tolerance; Immune hypersensitivity; Autoimmunity and Immune Diseases. The course format will be lectures, assigned literature readings and 1h per week tutorials with discussions on experimental data and on case studies of immune diseases.

Prerequisites

BIOL-101, BIOL-102

Topic Areas

1. Overview of Immunity and the Immune System; Cells, Tissues, and Organs of the Immune System
2. Antibodies and Antigens
3. Maturation of B Lymphocytes and Expression of Immunoglobulin Genes
4. The Major Histocompatibility Complex
5. Antigen Processing and Presentation
6. T-Lymphocyte Antigen Recognition and Activation
7. B-Lymphocyte Activation and Antibody Production
8. Immunologic Tolerance
9. Cytokines
10. Innate Immunity
11. Effector Mechanisms of Cell-Mediated Immunity
12. Effector Mechanisms of Humoral Immunity
13. Immunity to Microbes
14. Transplantation Immunology; Immunity to Tumors
15. Autoimmunity and Autoimmune Diseases; Immunodeficiencies

Tutorials

Through 1 hour tutorials the student learns about raising of antibodies, screening of antibodies, interpretation of ELISA assays, how to look at relevant scientific literature thought the web and about specific human immune diseases through case studies presentations and discussions.

Readings and Resources

Textbook Required

1. Schaum's Outline Of Immunology by George Pinchuk Publisher: McGrow Hill, 2001 ISBN: 0-07-137366-7

2. Immunobiology by Charles Janeway (Editor), Paul Travers Garland Pub; ISBN: 081533642X; 5th edition (June 21, 2001)

Textbook Recommended

1. The Immune System by Peter Parkham, Peter Parham Garland Pub; ISBN: 081533043X; 1st edition (January 15, 2000)

2. Cellular and Molecular Immunology by Abul K. Abbas, Jordan S. Pober, Andrew H. Lichtman Publisher: W B Saunders; 5th edition (February 14, 2003) ISBN: 0721600085

3. How the Immune System Works by Lauren M. Sompayrac Publisher: Blackwell Science Inc; 1st edition (January 15, 1999) ISBN: 0632044136

4. Immunology by Ivan M. Roitt (Editor), Jonathan Brostoff (Editor), David K. Male (Editor) Publisher: Mosby, Inc.; 6th edition (July 9, 2001) ISBN: 0723431892

5. Superantigens: Molecular Biology, Immunology, and Relevance to Human Disease by Donald Y. M. Leung, Brigitte T. Huber, Patrick M. Schlievert Publisher: Marcel Dekker; 1st edition (January 15, 1997) ISBN: 082479813