NYU DEPARTMENT OF BIOLOGY

BIOL-UA 50 Immunology

Instructor:
Carol Reiss

Course Description:
This course will introduce the cells and mediators of the immune response, describe the development of the cells from pleuripotential stem cells in the bone marrow, include the architecture of primary and secondary lymphoid organs, discuss the induction and decline of immune responses as well as the development of memory. Specific applications of immune responses included will range from host infections to allergies, autoimmunity, transplantation, and regulation of the magnitude of the reactions.

Pre-requisites:
Molecular and Cell Biology I (BIOL-UA 21)
Molecular and Cell Biology II (BIOL-UA 22)

Textbook and Required Materials:
Murphy & Weaver, Janeway's ImmunoBiology 9th Edition (ISBN: 978-0-815- 34505-3 (paper), 978-0-815- 34445-2 (Hardcover), or 978-0-815-34550-3 (loose-leaf);

Grading:

Midterm	25% each
Final	50%

Topics:
Basic Concepts in Immunology; Innate Immunity
Induced responses of innate immunity
Ag recognition by B & T cells; Generation of lymphocyte receptors
Ag Presentation
Lymphocyte Receptor Signaling
Development of B & T cells
T cell mediated immunity
T-Cell & Humoral immune responses
Integrated dynamics of innate and adaptive immunity
The Mucosal Immune System
Failures of the Host Defense Mechanisms
Allergy and Allergic disease
Autoimmunity and Transplantation
Manipulation of the immune response