

American University of Beirut
Faculty of Health Sciences
Medical Laboratory Technology Program
MLSP 207
(Immunology and Blood Banking)
Fall Semester 2023-2024

Name	Rolla Al-Khatib	Course Credits:	1 credit
Office Hours:	TWRF. 10:00 a.m. – 12:00 p.m. or by appointment	Mode of delivery	Van Dyck Hall AUDT
Office Location:	Van Dyck, Rm 321	Meeting Time:	TR:1:00-1:50 pm
Extension	4696		
E-mail	ra03@aub.edu.lb		

Course Description:

This is an introductory course in Immunology that is designed to provide a basic knowledge of the immune response and its involvement in health and disease. It introduces students to the basic immunological principles including innate and acquired immunity, humoral versus cell mediated immune responses, role of the complement system in the immune response, cells and organs involved in immune reactions and finally the cooperation between different cells in the clearance of antigen.

Course Objectives:

Upon completion of this course, students should be able to:

1. Compare and contrast innate and acquired immunity.
2. Describe the structure of the lymphoid system.
3. Describe the cells involved in immune responses.
4. Differentiate between the different subpopulations of lymphocyte.
5. Explain the structure of an antibody molecule
6. Describe antibody classes and their functions
7. Describe primary and secondary antibody responses to infection.
8. Explain the role of complement in immunity.
9. Antigen Processing and Cell Cooperation in the Immune Response

COURSE SYLLABUS

Week	Topic	Instructor	Reading
WEEK 1			
M AUG 28	* Introduction	Khatib	Moodle (Lecture)
W AUG 30	* An Overview of Immunology A- Natural Immunity B- Acquired Immunity: • Humoral immune response • Cell mediated immune response C- Characteristics of the immune response D- Immunopathology E- Role of the IS in Health and Disease.	Khatib	Moodle (Lecture)

WEEK 2

M SEP 4	<ul style="list-style-type: none">* Maturation, Clonal expansion and differentiation of lymphocytes* A- Structure of the Lymphoid System<ul style="list-style-type: none">• Primary lymphoid organs• Secondary lymphoid organ* B- Cells of the Immune System:<ul style="list-style-type: none">• Identification of Lymphocyte sub-populations	Khatib	Moodle (lecture)
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W SEP 6	* Stages in T Cell Differentiation and T Cell Markers	Khatib	Moodle (Lecture)
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WEEK 3

M SEP 11	* Stages in B Cell Differentiation and B Cell Markers	Khatib	Moodle (Lecture)
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W SEP 13	<ul style="list-style-type: none">* Antigens* A-Requirements for AntigenicityB-Some Selected Antigens	Khatib	Moodle (Lecture)
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WEEK 4

M SEP 18	<ul style="list-style-type: none">* Antibodies (Immunoglobulins)* A- Structure of ImmunoglobulinsB- Effect of EnzymesC- Classes, Subclasses and Types of Immunoglobulins	Khatib	Moodle (lecture)
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W SEP 20	<ul style="list-style-type: none">* Antibodies (Continuation)* A- Structure of ImmunoglobulinsB- Effect of EnzymesC- Classes, Subclasses and Types of Immunoglobulins	Khatib	Moodle (lecture)
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WEEK 5

M SEP 25	<ul style="list-style-type: none">* D- Physio-Chemical Properties of ImmunoglobulinsE- Biological Properties of Immunoglobulins* Kinetics of the Humoral Immune Response<ul style="list-style-type: none">A- Primary Immune ResponseB- Secondary Immune ResponseC- Antibody Classes Produced in Primary and Secondary Immune Responses	Khatib	Moodle (lecture)
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W SEP 27	Vacation		
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WEEK 6

M OCT 2	* Complement System * A- The Classical Complement System	Khatib	Moodle (Lecture)
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W OCT 4	* B- The Alternative Complement System * C-The MB-Lectin pathway * D- Biologic Effects of Complement Components	Khatib	Moodle (Lecture)
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WEEK 7

M OCT 9	* The Immune Response * Antigen Processing and Cell Cooperation in the Immune Response	Khatib	Moodle (Lecture)
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W OCT 11	* Cytokines and the Immune Response	Khatib	Moodle (Lecture)
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EVALUATION

Final Exam: 100% (meets objectives 1, 2, 3, 4 5, 6, 7,8 & 9)

N.B.: The passing grade for the course is 60

COURSE POLICY

- Attendance:** You are expected to attend all classes and participate in class activities. If you miss a class, it is your responsibility to make up for the material missed, and inquire about any announcements made. If you miss more than one fifth of class sessions, you are subject to withdrawing from the course with a-w-grade. *Please refer to the AUB catalogue.*
- Exams:** Examinations must be taken as scheduled. Make up exams will not be given unless a valid excuse is given. Only authorized medical reports will be accepted (AUBMC/Infirmary).
- Withdrawal date:** Please observe withdrawal dates set by the Registrar's Office.
- Academic integrity:** Cheating and plagiarism will not be tolerated. Review the Student Code of Conduct in your handbook and familiarize yourself with definitions and penalties. If you're in doubt about what constitutes plagiarism, ask your instructor because it is *your* responsibility to know. The American University of Beirut has a strict anti-cheating policy. Penalties include failing marks on the assignment in question, suspension or expulsion from University and a permanent mention of the disciplinary action in the student's records.
- Special needs:** 'AUB strives to make learning experiences as accessible as possible. If you anticipate or experience academic barriers due to a disability (including mental health, chronic or temporary medical conditions), please inform me immediately so that we can privately discuss options. In order to help establish reasonable accommodations and facilitate a smooth accommodations process, you are encouraged to contact the Accessible Education Office: accessibility@aub.edu.lb; +961-1-350000, x3246; West Hall, 314'.
- Non-Discrimination – Title IX – AUB:**
AUB is committed to facilitating a campus free of all forms of discrimination including sex/gender-based harassment prohibited by Title IX. The University's non-discrimination policy applies to, and protects, all students, faculty, and staff. If you think you have experienced discrimination or harassment, including sexual misconduct, we encourage you

to tell someone promptly. If you speak to a faculty or staff member about an issue such as harassment, sexual violence, or discrimination, the information will be kept as private as possible, however, faculty and designated staff are required to bring it to the attention of the University's Title IX Coordinator. Faculty can refer you to fully confidential resources, and you can find information and contacts at www.aub.edu.lb/titleix. **To report an incident**, contact the University's Title IX Coordinator Ms. Mitra Tauk at 01-350000 ext. 2514, or titleix@aub.edu.lb. An anonymous report may be submitted online via Ethics Point at www.aub.ethicspoint.com.