

# *The Hebrew University of Jerusalem*

## *Syllabus*

### *Immunology - 96118*

*Last update 11-11-2019*

*HU Credits: 4*

*Degree/Cycle: 1st degree (Bachelor)*

*Responsible Department: Medicine*

*Academic year: 0*

*Semester: 2nd Semester*

*Teaching Languages: Hebrew*

*Campus: Ein Karem*

*Course/Module Coordinator: Prof. Avi-Hai Hovav*

*Coordinator Email: [avihaih@ekmd.huji.ac.il](mailto:avihaih@ekmd.huji.ac.il)*

*Coordinator Office Hours: Sunday 13:00-14:00*

*Teaching Staff:*

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Prof Avi-Hai Hovav  
Dr. Michal Moyal  
Ms. Sofiya Kandelis  
Ms.  
Ms.  
Ms.  
Ms.  
Ms.  
Mr.  
Ms.

Course/Module description:

The students will learn the structure of the immune system and the basic mechanism of innate and adaptive immune responses. The students will be also introduced to the organization and rearrangements of Immunoglobulins, T-cell receptors and the major histocompatibility complex. We will also learn the development of host response against infections, Immune escape by viral and bacterial pathogens, immunological memory, vaccinology, allergy and autoimmunity. Specific attention will be given to the oral mucosal immunity and Immunology of periodontal diseases.

Course/Module aims:

To provide a comprehensive understanding of basic immunology.

Learning outcomes - On successful completion of this module, students should be able to:

- On successful completion of this course, students should be able to:
- Recognize the structure of the immune system
  - Understand the humoral and cell-mediated arms of the immune system.
  - Describe origins, differentiation, maturation and function of immune cells.
  - Distinguish between adaptive and innate immunity and discuss the molecular and genetic mechanisms involved in adaptive immunity.
  - Compare immune responses mechanisms in viral and bacterial infections.
  - Delineate the mechanisms underlying detrimental immune responses in asthma, allergic reactions, autoimmunity and vaccinology.
  - Recognize the abnormalities of the immune system that cause immunodeficiency.

Attendance requirements(%):

80

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*Teaching arrangement and method of instruction: Frontal lectures and an histology laboratory*

*Course/Module Content:*

- *Introduction to the immune system*
- *Innate immunity*
- *Immunoglobulins*
- *T cell receptor*
- *Antigen presentation*
- *Lymphocyte development*
- *T cell mediated immunity*
- *The Humeral response*
- *Dynamic of Adaptive immunity*
- *Failures of host defense mechanisms*
- *Mucosal Immunity*
- *Vaccines*
- *Immunologically-based research techniques*

*Required Reading:*

*Janeway's Immunobiology, 7th or 8th or 9th Edition*

*Additional Reading Material:*

*none*

*Course/Module evaluation:*

*End of year written/oral examination 95 %*

*Presentation 0 %*

*Participation in Tutorials 0 %*

*Project work 0 %*

*Assignments 0 %*

*Reports 0 %*

*Research project 0 %*

*Quizzes 5 %*

*Other 0 %*

*Additional information:*