

## Course title: Practical Immunology

Credit (Practical): 1

*Prerequisite:* Microbiology

### Department of Immunology , School of Dentistry- International Campus

First Semester of 2023 (1402-1403)

Schedule Time: Mondays 13-15

Instructors: Doctors: Assarehzadegan, Delbandi, Falak, Jazayeri, Khoshmirsafa, Mojtabavi, Safari

Course coordinator: Dr. Safari

Student responsibilities: Active participation in class and laboratory, doing practice and tests, multi-choice exam

**Course Description:** Application of basic principles acquired from immunological procedures performed in research and diagnostic laboratories using molecular and cellular approaches; instruction through lectures, video tapes, and practical exercises in the laboratory.

- Course objectives: The objective is to familiarize students with the various immunological techniques that include antigen-antibody interactions, quantitation of antigens or antibody, ELISA, agglutination reactions etc.

#### **Student Learning Objectives:**

Know and understanding about:

1. Agglutination reactions (application and interpretation of the test)
2. Hemagglutination reactions (application and interpretation of the test)
3. Precipitation reaction (application and interpretation of the test)
4. Labeled immunoassay (ELISA and chemiluminescence)
5. Immunofluorescence and flow cytometry
6. Skin prick test (SPT) and PPD test
7. Separation of peripheral blood mononuclear cells (PBMCs) and HLA Typing
8. Cell culture

#### **Students are expected to:**

Active participation in class and laboratory, doing practice and tests

### Course Plan

Sessi on	Date	Title	Instructors
1	1402/8/29 11/20/2023	Agglutination reactions (application and interpretation of the test)	Dr. Falak
2	1402/9/6 11/27/2023	Hemagglutination reactions (application and interpretation of the test)	Dr. Khoshmirsafa
3	1402/9/13 12/4/2023	Precipitation reaction (application and interpretation of the test)	Dr. Delbandi
4	1402/9/20 12/11/2023	Labeled immunoassay (ELISA and chemiluminescence)	Dr. Safari
5	1402/9/27 12/18/2023	Immunofluorescence and flow cytometry	Dr. Jazayeri
6	1402/10/4 12/25/2023	Skin prick test (SPT) and PPD test	Dr. Assarehzadegan
<b>Exam</b>			

#### References:

**Clinical Immunology and Serology: A Laboratory Perspective. 5th e. 2021. By Christine Dorresteyn Stevens; Linda E Miller**