



**Jordan University of Science and Technology**  
**Faculty of Science & Arts**  
**Applied Biological Sciences Department**

BIO336 Immunology & Serology (Laboratory)

First Semester 2017-2018

**Course Catalog**

1 Credit Hours. The purpose of the Immunology lab course is to provide a basic knowledge of the Experimental and serological applications of immunobiology for diagnosis of viral, bacterial and fungal diseases and for investigation of research problems.

**Text Book**

|                          |   |
|--------------------------|---|
| <b>Title</b>             | Clinical Immunology and Serology : A Laboratory Perspective |
| <b>Author(s)</b>         | Christine Dorresteyn Stevens                                |
| <b>Edition</b>           | 3rd Edition   |
| <b>Short Name</b>        | Ref # 1   |
| <b>Other Information</b> |   |

**Course References**

| Short name | Book name            | Author(s)                            | Edition     | Other Information |
|------------|----------------------|--------------------------------------|-------------|-------------------|
| Ref # 2    | Practical Immunology | Frank C. Hay and Olwyn M.R. Westwood | 4th Edition |                   |

**Instructor**

|                 |  |
|-----------------|--|
| Name            | <b>Prof. Nizar Abuharfil</b>   |
| Office Location | PH1L1  |
| Office Hours    | Sun : 10:00 - 11:00<br>Mon : 10:30 - 11:30<br>Wed : 10:30 - 11:30<br>Thu : 09:30 - 10:30<br>Thu : 10:30 - 11:30<br>Thu : 11:30 - 12:30 |
| Email           | harfeil@just.edu.jo  |

| <b>Class Schedule &amp; Room</b>   |
|--|
| Section 1:<br>Lecture Time: Mon : 14:30 - 17:30<br>Room: LAB 10 (PH1 L1) |

| <b>Teaching Assistant</b>       |
|---------------------------------|
| Mrs. Muna Masoud(Sections 1, 2) |

| <b>Tentative List of Topics Covered</b> |   |                   |
|---|---|-------------------|
| <b>Weeks</b>                            | <b>Topic</b>  | <b>References</b> |
| Week 1                                  | Introduction & General Rules                            |                   |
| Week 2                                  | Handling and injection of experimental animals          |                   |
| Week 3                                  | Isolation of lymphocytes and differential WBC count     |                   |
| Week 4                                  | Mancini test  |                   |
| Week 5                                  | Immunodiffusion (Ouchterloney)                          |                   |
| Week 6                                  | Immunoelectrophoresis                                   |                   |
| Week 7                                  | Midterm Exam  |                   |
| Week 8                                  | Direct immunoagglutination: Rosebengal test, Widal test |                   |
| Week 9                                  | Indirect Immunoagglutination: RF, CRP, Pregnancy tests  |                   |
| Week 10                                 | ELISA (Hepatitis)                                       |                   |
| Week 11                                 | Immunofluorescence (ANA test) or MTT test               |                   |
| Week 12                                 | Radioimmunoassay (T3 and T4)                            |                   |

| <b>Mapping of Course Objectives to Program Student Outcomes<sup>1</sup></b>  | <b>Assessment method</b> |
|--|--------------------------|
| Describe the precipitation methods in antigen or antibody detection including primary and secondary immune response [1B]     |                          |
| Describe isolation of lymphocytes and Describe the clinical tests based on direct agglutination of antigen and antibody [1B] |                          |
| Describe the clinical tests based on indirect agglutination of antigen and antibody [1B]                                     |                          |
| Describe the most sensitive immunoassays including ELISA, IFA and RIA [1B]   |                          |

| <b>Relationship to Program Student Outcomes (Out of 100%)</b> |     |   |   |   |   |
|---|-----|---|---|---|---|
| A   | B   | C | D | E | F |
|   | 100 |   |   |   |   |

| <b>Policy</b>    |   |
|------------------|---|
| Class Attendance | Your class attendance is mandatory. Absences in excess of 20% of the total lecture hours will result in your being dropped from the course with a failing grade.  |
| Makeup Exams     | Make-up exam appeals should be filed within one week of the missed exam.  |
| Cell Phones      | Cell phones are completely prohibited during examinations according to the university regulations i.e. you are not allowed to bring your phone into the exam hall |
| Cell Phones      | Cell phones must be turned off during lectures. No incoming or outgoing calls or text messages are allowed  |
| Cheating         | Unethical conduct, including cheating during examinations, will result in punishment by the university administration   |

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