

A- Basic Information

Programme(s) on which the course is given:	MSc of Fish Biology and Aquatic Ecology
Department responsible for offering the course:	Zoology
Department responsible for teaching the course:	Zoology
Academic year:	2012-2013
Course title and code:	Immunobiology Z613
Contact hours (credit hours):	Lecture: 2 hrs Practical: 2hrs Total: 3 hrs
Course coordinator:	Prof. Azza Hassan Mohamed and Dr. Hany. M. Ibrahim

B- Professional Information

The course aim and intended learning outcomes are based on that mentioned in the programme specifications, with more course-related specific details.

1- Overall Aims of Course: By the end of this course, the student should be able to

- * Outline the fundamental principles of immunology.
- * Identify innate and adaptive immune response.
- * List the signaling of immune cells and the interaction between the humoral and cellular immune response.

a- Intended Learning Outcomes of Course (ILOs):

b- Knowledge and Understanding:

- a1- Recognize the significance of the immune system in combating infection and disease.
- a2- Distinguish between the innate (non-specific) and adaptive (specific) immune systems.
- a3- Describe the mechanisms of combating infection/disease (killing pathogens).
- a4- Know the humoral and cellular components of innate immunity.
- a5- Comprehend the mechanism of action of the humoral and cellular components of innate immunity

a6- Identify the pathways and signaling incorporated in the immune response.

c- Intellectual Skills:

c1- Demonstrate skills in identification, characterization immune cells.

c2- Distinguish between different chemokine and cytokine structure and functions.

c3- Diagnose some diseases related to the immune disorders.

d- Professional and Practical Skills:

c1- Demonstrate skills in identification, characterization immune cells.

c2- Distinguish between different chemokine and cytokine structure and functions.

c3- Diagnose some diseases related to the immune disorders.

e- General and Transferable Skills:

d1- Measure the scientific writing ability.

d2- Utilize the oral communication skills.

d3- Use appropriate lab equipment.

d4- Use the appropriate technology such as (Internet) for scientific research.

2- Course Contents

Topic	No. of hours	Tutorial/ Practical	Lecture
Immunology (Introduction)	3	2	2
Innate immune response	3	2	2
Adaptive immune response	6	4	4
Immune cells specificity and activation	6	4	4

3- Teaching and Learning Methods

- Lectures.
- Practical sessions.
- Writing essays.
- Oral presentation.

4- Student Assessment Methods

- Essays
- Oral exms
- Written exams.
- Practical exams.
- Quizzes.

Assessment schedule

Assessment 1	Essay	Week 1 essay/term
Assessment 2	Oral exam	Twice/term
Assessment 3	Mid-term exams	Week 7
Assessment 4	Semester Work Exam	Week 10
Assessment 5	Final term exam	Week 14

Weighting of assessments

Mid-term examination	20%
Final-term examination	40%
Oral examination	10%
Practical examination	20%
<u>Semester work</u>	
Total	100%

6- List of references

1. Course Notes

- 1- Internet and library material.
- 2- Handouts given separately during the course span.

2. Essential Books (Text books):

- 3- Immunology (Ivan Roiit).
- 4- Immunology (Kuby).

3. Recommended Books

- 5- General Physiology.
- 6- Immunology (Hyde).

7- Cellular and Molecular Immunology.

4. Periodicals, web sites,...,etc

8- Journal of Immunology

7- Facilities required for teaching and learning

- * Dark room equipped with overhead and LCD projector.
- * Laboratory slides and specimens.
- * Librarian facilities.
- * Computers with internet Access.

Course coordinator: Prof. Azza Hassan Mohamed
and Dr. Hany. M. Ibrahim

Head of Department: Prof. Saber Sakr

Date: January / 2013