

Course Specification

Programme on which the course is given: M.Sc. Zoology (Genetic engineering and molecular biology).

Major or Minor Element of Programme:

Department offering the programme: Zoology

Department offering the course: Zoology.

Academic Year/Level: 2012

Date of Specification approval: 2012

A- Basic Information

Title: *Immunogenetic diseases*

Code: *Z6616*

Credit Hours: 2

Lecture: 2

Tutorial: 2

Practical: -

Total: 2

B- Professional Information

1- Overall aims of the course: By the end of this course, the student will be able to:

Demonstrate knowledge of basic concepts in immunology, globulin gene, gene disorder and immune disease.

2- Intended Learning Outcomes (ILOs):

a- Knowledge and Understanding:

- a1- Summarize the events of immunology.
- a2. Illustrate the globulin gene.
- a3. List gene disorder.
- a4. Explain the immunedisorder.

b- Intellectual Skills:

- b1- Conclude the main parameters of immuno-system.
- b2. Analyze and predict cases associated with globuling genes disorders.
- b3. Determine the mechanism of immuno system against antigens.
- b4. Evaluate the main immune diseases.

c- Professional Skills:

- c1- Identify different immunogenetic diseases.
- c2- Use methods for genetic diagnosis for finding out causes of immunogenetic disorders.
- c3- Use appropriate equipment for DNA isolation for bone marrow and blood collection for diagnosing the immunogenetic disorders.

d- General and Transferable Skills:

- d1- Write reports for immunogenetic diseases and syndromes.
- d2- Computer-based mining of databases for immunogenetic disorders.

d3- PowerPoint- based presentations for reports in seminars or group meetings.

d4- Work coherently and successfully as a part of team in projects and assignments.

d5- Study and find information independently, and finding realistic solutions through right analysis and anticipation.

3- Contents:

Topic	No. of hours	Tutorial/ Practical	Lecture
Introduction to Immunology	2	-	2
Introduction to Immunology	2	-	2
Introduction to Immunology	2	-	2
Genes and receptors: Immunological implications	2	-	2
Genes and receptors: Immunological implications	2	-	2
Genes and receptors: Immunological implications	2	-	2
Genetic disorders and immune diseases	2	-	2
Genetic disorders and immune diseases	2	-	2
Genetic disorders and immune diseases	2	-	2
Genes and autoimmune disorders	2	-	2
Genes and autoimmune disorders	2	-	2
Genetic bases of hypersensitivity	2	-	2
Genetic bases of hypersensitivity	2	-	2

4- Teaching and Learning Methods

4.1- Lectures

4.2- Oral presentations.

4.3- Research assignment.

4.4- Exams.

5- Student Assessment Methods

- 5.1- Reports to assess collection of course material.
- 5.2- Mid-term exam to assess mid-term performance.
- 5.3- Final exam to assess final term performance.

Assessment Schedule

Assessment 1: Reports	a report/ three weeks.
Assessment 2: Report defense	a presentation/ three weeks.
Assessment 3: Mid-Term	week 8 (Mid-Term week)
Assessment 4: Final term exam	week 15 -16 (final-Term week)

Weighing of Assessments

Mid-term examination:	20 %.
Final-term examination	60 %.
Oral examination	00%
Practical examination	00%
Semester work	20%
Other types of assessment	00%
Total	100%

6- List of references

6.1. Essential Books

- Immunogenetics of Autoimmune Disease. By: Jorge R. Oksenberg, David Brassat, 2006.
- Immunological Diseases of Liver and Gut, By: M. Lukáš, 2004.
- Autoimmune diseases in endocrinology. By: Anthony P. Weetma, 2008.

6.2. Recommended Books:

- Comprehensive immunogenetics. By: W. H. Hildemann, E. A. Clark, R. L. Raison, 1981.
- The Immunogenetics of Autoimmune Diseases. By: Nadir R. Farid, 1990.
- Gene therapy: the use of DNA as a drug. By: Gavin Brooks, 2002.

6.3. Periodicals, Websites,etc

- Google books: <http://books.google.com/bkshp?hl=en&tab=wp>
- <http://www.sciencedirect.com/>
- <http://www.ncbi.nlm.nih.gov/pubmed/>
- The Immunogenetics database:
<http://www.ebi.ac.uk/imgt/>

7- Facilities Required for Teaching and Learning:

- Dark class room equipped with Data show device.
- Molecular biology lab equipped with: PCR cyclers, electrophoresis units, trans-illuminator, incubator and water bath-shaker.

Course coordinator: Prof. Sobhy Hassab El-naby

Head of Department. Prof. Saber Sakr