

Course Specification

University: Menoufiya

Faculty: Science

Course Specifications:

Programme (s) on Which the Course is Given: M.Sc. Zoology (protozoology and invertebrates)

Major or Minor Element of Programmes: Minor

Department offering the Program: Zoology

Department offering the Course: Zoology

Academic Year/ Level: postgraduate

Date of Specification Approval: 2012

A- Basic Information

Title: Comparative Invertebrate Physiology

Code: Z618

Credit Hours: 3

Lecture: 2

Tutorial: 0

Practical: 2

Total: 3

B- Professional Information

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

- * Identify the invertebrate physiology.
- * List the different invertebrate physiology processes, as locomotion; nutrition; reproduction, sensation and development of invertebrates.

2- Intended Learning Outcomes of Course (ILOs):

- * Summarize the effects of water pollution on aquatic biology.
- * know the different invertebrate phyla (protozoa to echinodermata) physiology processes

a- Knowledge and Understanding:

- a1- Identify the different physiological processes in invertebrates.
- a2- Understand the mechanisms by which the invertebrate moves, reproduce, eat, excrete; and the vital organs playing important roles in their physiology.

b- Intellectual Skills:

- b1- Build the student's capability to identify the physiological processes.

c- Professional and Practical Skills:

- c1- Understand the function of energy production from the metabolism and the balance in invertebrate physiology.

d- General and transferable Skills:

- d1- Improve internet experience to build the course material.
- d2- Enhancing writing ability and oral communication during the course.

3- Contents

Topic	No. of Hours	Lecture	Tutorial / Practical
Digestion & metabolism in different invertebrates	6	2	2
Nervous system in different invertebrates	6	2	2
Respiration in different invertebrates	6	2	2
Excretion in characteristic invertebrates	6	2	2
reproduction in different invertebrates	6	2	2
Sense organs in different invertebrates	6	2	2

4- Teaching and Learning methods

- 4.1- Lectures
- 4.2-.Research assignment
- 4.3- Oral Presentation.

5- Student assessment methods

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

Assessment schedule

- Assessment 1 Report. Week: 1report every 2 Weeks
- Assessment 2 Report oral defense. Week 2
- Assessment 3 Mid-term. Week: Mid-term
- Assessment 4 Final term. Week: Final term

Weighting of assessments

Mid-term examination	15%
Final-term examination	60%
Oral examination	5%
Practical examination	20%
Total	100%

6- List of references

6.1- Course notes

- * Part of course to be handed out to students part by part, but the rest of the course is library-based.

6.2- Essential books (text books)

- * Recent text books and references are recommended.

6.3- Periodicals, Web Sites, ...etc

- * Journal of invertebrate pathology

7- Facilities Required for Teaching and Learning:

- * Slides and overhead projector.
- * lecture room
- * Microscopes
- * Data show

Course coordinator: Prof. Dr. Ahmad Mostafa Mohammed
Prof. Dr. Gamalat Othman

Head of Department: Prof. Dr. Saber Sakr