

Course Specification

University: Menoufiya

Faculty: Science

Course Specifications:

Programme (s) on which the Course is given: Zoology, Vertebrates,
Comparative Anatomy & Embryology.

Major or Minor Element of Programmes: Major.

Department offering the Program: Zoology.

Department offering the Course: Zoology.

Qualifying course for M.SC. Students

Date of Specification Approval: 2012

A- Basic Information

Title: Evolution

Code: Z644

Credit Hours: 2

Lecture: 2

Tutorial: 0

Practical: 0

Total: 2

B- Professional Information

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

- * Recognize the huge diversity of creatures.
- * Stand upon the superiority of different aspects of animal organization.

* Exploring in a comparative way how vertebrate animals are different.

2- Intended Learning Outcomes of Course (ILOs):

a Knowledge and Understanding:

Student should acquire knowledge and understanding of:

- a1- The adaptive anatomy within the vertebrate creatures.
- a2- The related basic scientific facts, concepts and principles.
- a3- The anatomical differences between chordate animals.
- a4- The related terminology, nomenclature and classification systems.
- a5- Different concepts of chordates as a separate phylum from the animal kingdom.
- a6- . The relation between the studied topics and environment.

b- Intellectual Skills:

Student should be able to:

- b1- Identify the points of similarities within chordates.
- b2- Differentiate between subject-related theories and assess their concepts and principles.
- b3- Identify the points of differences.
- b4- Develop lines of argument and appropriate judgments in accordance with scientific theories and concepts.
- b5- Deduce the superiority of the holy creator.
- b6- Construct several related integrated information to confirm, make evidence and test hypotheses.

c- Professional and Practical Skills:**Student should be able to:**

- c1- Distinguish between the creation and the so-called evolution.
- c2- Design, process and report on the investigated data, using appropriate techniques and considering scientific guidance.
- c3- Write notes on development of chordates in a comparative manner.
- c4- Make clear, labeled drawings for some vertebrate skulls.
- c5- Solve problems using a range of formats and approaches.
- c6- Identify and criticize the different methods used in addressing subject related issues.

d- General and transferable Skills:**Student should be able to:**

- d1- Enhance the capability of making comparison and deduce facts.
- d2- Use the internet for scientific research.
- d3- Develop scientific writing skills.
- d4- Use effectively information and communication technology.
- d5- Think independently, set tasks and solve problems on scientific basis.
- d6- Work in group effectively; manage time, collaborate and communicate with others positively.
- d7- Acquire self- and long life-learning.
- d8- Deal with scientific patents considering property right.
- d9- Consider community linked problems.

3- Contents

Topic	No. of Hours	Lecture	Tutorial / Practical
Concept of the so-called organic evolution and origin of life	4	2	-
Theories of the so-called evolution (fact of creation- catastrophism- Lamarkism - Darwinism and mutation theory)	4	2	-
The false evidences of the so-called evolution(Geological, Embryonic, Comparative anatomy, Biochemical, Genetics, Biogeographic, Physiological and taxonomic false	6	3	-

evidences)			
Speculation of the mechanism of the so-called evolution	4	2	-
Natural selection-adaptation-migration and genetic drift	6	3	-
Species and subspecies categories and origin of species.	4	2	-

4- Teaching and Learning methods

4.1- Lectures

4.2- Writing essays.

4.3- Oral presentation.

5- Student assessment methods

1-Essays to assess ability of writing

2- Oral exam to assess the degree of understanding

3- Mid-term to assess the degree of following up.

4-Final exam to assess the whole performance.

Assessment schedule

Assessment 1 Essays Twice/term

Assessment 2 Oral exam Twice/ term

Assessment 3 midterm Week 7 Midterm

Assessment 4 final exam

Week 15 final exam

Weighting of assessments

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Mid-term examination	30%
Final-term examination	40%
Oral examination	10%
Semester work	20%
Other type of assessment	00%
Total	100%

Any formative only assessments

5- List of references

- 5.1- Recent books published in the field of Evolution.
- 5.2- Scientific papers related to the subject of Evolution.
- 5.3- Related web sites.

6- Facilities required for teaching and learning

- * Lecture room provided with a white board.
- * Dark room provided with a projector or data show.

Course coordinator: Dr. Gamal M Badawy

Head of Department: Prof. Dr. Saber Sakr

