**Benha University**

**Faculty of Science**

**Zoology Department**

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| **Course Specification****101 Z: General Zoology (2)**  |
| **A- Affiliation** |
| **Relevant program:** | General B.Sc. Program |
| **Department offering the program:** | Zoology Department |
| **Department offering the course:** | Zoologe Department |
| **Academic year/level:**  | First Level |
| **Date of specifications approval:** | 27/4/2011 |
| B - Basic information |
| **Title:** General Zoology (2) | **Code:** 101 Z | **Year/level: :** First level /second semester |
| **Teaching Hours:** | **Lectures:** 2 | **Tutorial:** 0 |
|  | **Practical:** 3 | **Total:** 3 |
| C - Professional information |
| **1 – Course Learning Objectives:** |
| The objective of this course is to enable the students to:* Know a background on animal taxonomy; general characters of animal Kingdom and phyla (from Protozoa to Nematoda).
* Distinguish the structure and function of different human systems.
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| **2 - Intended Learning Outcomes (ILOS)** |
| **a - Knowledge and understanding:**a1- Understand the animal taxonomy in Protozoa to Nematoda.a2- Identify the structure of the animal species in Protozoa to Nematoda.a3-Define the life cycle of the parasitic animals in Protozoa to Nematoda. a4- Discover food elements, digestion, absorption and metabolism. a5- Identity the function of the liver. a6- Recognise the components and functions of blood, blood vessels and heart.  a7- Recognise respiratory system structure, functions, regulation and mechanism of action. a8- Memorise the excretory system structure, function, regulation and mechanism of action. a9- Memorise the nervous system structure, neuron and nerve impulse. a10- Describe the the function of endocrine glands. |
| **b - Intellectual skills:**On successful completion of the course, the student should be able to.b1- Link between animals in each class, order and family.  b2- Compare general characters of Protozoa to Nematoda.  b3- Interpret life cycle of the parasitic animals. b4- Combine the structure and function of different body systems. b5- Interpret mechanism of action of respiratory, excretory and nervous system. |
| **c - Practical and professional skills:**On successful completion of the course, the student should be able to:c1- Identity animal species in Protozoa to Nematoda.c2- Draw Ascaris and Bufo regularis body systems.c3- Dissect Ascaris and Bufo regularis body systems.c4- Describe morphology and life cycle of different animal species in Protozoa to Nematoda. |
| **d - General skills:**On successful completion of the course, the student should be able to:d1- Collaborate effectively with teamwork members.d2- Effectively manages tasks, time, and resources. d3- Search for information and engage in life-long self learning discipline. d4- Exhibit the sense of beauty and neatness. |
| **3 - Contents** |
| **Topic** | **Lecture hours** | **Tutorial hours** | **Practical hours** |
| * Systematic Zoology
* Phylum Protozoa.
* Phylum Sarcomastigophora
 | 2 | 0 | 3 |
| * Phyla Ciliophora & Sporozoa
 | 2 | 0 | 3 |
| * Phylum Porifera.
 | 2 | 0 | 3 |
| * Phylum Coelenterata*.*
 | 2 | 0 | 3 |
| * Phylum Platyhelminthes.
* Class Trematoda.
 | 2 | 0 | 3 |
| * Class Cestoda.
 | 2 | 0 | 3 |
| * Phylum Nematoda.
 | 2 | 0 | 3 |
| * Food and nutrition
* Digestion
 | 2 | 0 | 3 |
| * Absorption, metabolism and liver.
 | 2 | 0 | 3 |
| * Blood and circulation.
 | 2 | 0 | 3 |
| * Respiration.
 | 2 | 0 | 3 |
| * Excretion.
 | 2 | 0 | 3 |
| * Nervous system and muscle action.
 | 2 | 0 | 3 |
| * Endocrine glands.
 | 2 | 0 | 0 |
| **Total hours** | **28** | 0 | **39** |

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| **4 - Teaching and Learning methods:** |

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| **Intended Learning Outcomes** | **Lecture** | **Presentations & Movies** | **Discussions & Seminars** | **Practical** | **Problem solving** | **Brain storming** |
| **Knowledge & Understanding** | a1 | Understand the animal taxonomy in Protozoa to Nematoda. | x | x | x | x | x | x |
| a2 |  Identify the structure of the animal species in Protozoa to Nematoda. | x | x | x | x | x | x |
| a3 | Define the life cycle of the parasitic animals in Protozoa to Nematoda. | x | x | x | x | x | x |
| a4 | Discover food elements, digestion, absorption and metabolism. | x | 0 | x | 0 | 0 | x |
| a5 | Identity the function of the liver. | x | 0 | x | 0 | 0 | x |
| a6 |  Recognise the components and functions of blood, blood vessels and heart.  | x | 0 | x | 0 | 0 | x |
| a7 | Recognise respiratory system structure, functions, regulation and mechanism of action. | x | 0 | x | 0 | 0 | x |
| a8 | Memorise the excretory system structure, function, regulation and mechanism of action. | x | 0 | x | 0 | 0 | x |
| a9 | Memorise the nervous system structure, neuron and nerve impulse. | x | 0 | x | 0 | 0 | x |
| a10 |  Describe the the function of endocrine glands. | x | 0 | x | 0 | 0 | x |
| **Intellectual Skills** | b1 | link between animals in each class, order and family.  | x | **x** | **x** | 0 | **x** | **x** |
| b2 | Compare general characters of Protozoa to Nematoda. | x | **x** | **x** | 0 | **x** | **x** |
| b3 |  Interpret life cycle of the parasitic animals. | x | **x** | **x** | **x** | **x** | **x** |
| b4 | Combine the structure and function of different body systems | x | 0 | x | 0 | 0 | x |
| b5 | Interpret mechanism of action of respiratory, excretory and nervous system. | x | 0 | x | 0 | 0 | x |
| **Practical and professional skills** | c1 | Identity animal species in Protozoa to Nematoda. | 0 | 0 | 0 | x | x | 0 |
| c2 | Draw *Ascaris* *and Bufo regularis* body systems. | 0 | 0 | 0 | x | 0 | 0 |
| c3 |  Dissect *Ascaris* and *Bufo regularis* body systems. | 0 | 0 | 0 | x | 0 | 0 |
| c4 |  Describe morphology and life cycle of different animal species in Protozoa to Nematoda. | 0 | 0 | 0 | x | 0 | 0 |
| **General Skills** | d1 | Collaborate effectively with teamwork members. | 0 | 0 | x | x | x | x |
| d2 | Effectively manages tasks, time, and resources. | 0 | 0 | 0 | x | x | 0 |
| d3 | Search for information and engage in life-long self learning discipline. | x | 0 | 0 | x | x | x |
| d4 | Exhibit the sense of beauty and neatness | x | x | x | x | 0 | 0 |

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| **5- Students’ Assessment Methods and Grading:** |

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| **Tools:** | To Measure | **Time schedule** | **Grading** |
|  Mid-Term Exam | a1 to a10, b1 to b5, c4, d2 and d4 | sixth week | 12 |
| Term papers, quizzes and seminars | a1 to a10, b1 to b5, d1 to d4 | Bi-weekly | 16 |
| Practical exams | a1, a2, b1 to b5, c1 to c4,d2 and d4 | Fourteenth week | 24 |
| Written exam | a1 to a10 and b1 to b5 | Sixteenth week | 48 |
| Total | 100 |

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| **6- List of references:** |
| **6-1 Course notes**Notes approved by Department of Zoology.**6-2 Required books** -Principles of Systematic Zoology, Ernst Mayr and Peter D Ashlock, 1997.-A manual of the Sub-kingdom Coelenterata Joseph Reay Greene, 1861.-Biology of Protozoa, D.R. Khanna, 2004-A text book of invertebrate zoology: Protozoa, Porifera, Coelenterata, Platyhelminthes & Nemathelminthes, for B.-SC. students of Indian universities, Volume 1, 1962.-Freeliving Freshwater Protozoa, D. J. Patterson, 1996.  بيولوجية الحيوان العملية (الجزء الثاني)- 1962- تأليف : د.أحمد الحسيني و د.أميل دميان- القاهرة . **6-3 Recommended books**-Principles of systematic zoology, Ernst Mayr 1969-Biological Systematics: Principles and Applications, 2nd Edition Andrew V. Z. Brower, 2009.-The biology of protozoa, Michael A. Sleigh, 1973-A manual of the sub-Kingdom Coelenterata By Joseph Reay Greene, 1861-Platyhelminthes, Mario Benazzi, Giuseppina Benazzi Lentati, 1976.**6-4 Periodicals, Web sites, etc.**http://books.google.com.eg/books?id=\_XbrBcFGv1EC&source=gbs\_similarbookshttp://en.wikipedia.org/wiki/Systematic\_Biology |

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| **7- Facilities required for teaching and learning:** |
| * Computer, Data show.
* Animals’ samples and microscopic slides.
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| **Course coordinator:** | Pro.Dr. Aziza El-Shafey Dr. Dalia Hamza |  |
| **Head of the Department:** | Prof. Dr. Salwa Ebrahim Abd Elhady |  |
| **Date:** | 2015-2016 |  |