Course Specifications

Course Title:	**Principles of General Zoology**
Course Code:	**(ZOO 103)**
Program:	**Zoology**
Department:	**Zoology**
College:	**science**
Institution:	**King Saud University**

Table of Contents

A. Course Identification

1. Credit hours:	**3 (2+0+2)**
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☐ Elective ☐
3. Level/year at which this course is offered:	**Third level**
4. Pre-requisites for this course (if any)**:**	**None**
5. Co-requisites for this course (if any)**:**	**None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	22.4	80
2	**Blended**		
3	**E-learning**	5.6	20
4	**Correspondence**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	28
2	**Laboratory/Studio**	28
3	**Tutorial**	
4	**Others** (specify)	
	Total	56
Other Learning Hours*		
1	**Study**	
2	**Assignments**	
3	**Library**	
4	**Projects/Research Essays/Theses**	
5	**Others** (specify)	
	Total	

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description:

2. Course Main Objective

At the end of this course, each student should be able to:

Describe the functions of each organelle in animal cell.

Distinguish between mitosis and meiosis.

Compare between DNA and RNA.

Classify different organisms in different kingdoms.

Define the following terms, zoology, species, carnivores and genotype.

Compare between all animal tissues.

Explain the functions of respiratory and digestive systems for vertebrate and invertebrate organisms.

Examine cell organelles under the microscope.

Dissect mouse to study the body systems.

Compare between animal tissues under the microscope.

Use microscope to compare between mitotic and meiotic stages in animal cells.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	**Study the types and chemical structure of organic molecules.**	
1.2	**Study the properties and structure of animal cell.**	
1.3	**Understand cell divisions.**	
1.4	**Investigate the differences between different animal tissues.**	
1.5	**Classify of living organisms in different Kingdoms.**	
1.6	**Study the functions of different organs in different organisms.**	
1.7	**Understand the basic of the animal genetics.**	
2	**Skills :**	
2.1	**Describe the functions of each organelle in animal cell.**	
2.2	**Distinguish between mitosis and meiosis.**	
2.3	**Compare between DNA and RNA.**	
2.4	**Classify different organisms in different kingdoms.**	
2.5	**Define the following terms, zoology, species, carnivores and genotype.**	
2.6	**Compare between all animal tissues.**	
2.7	**Explain the functions of respiratory and digestive systems for vertebrate and invertebrate organisms.**	
3	**Competence:**	
3.1	**Work in a team to do a specific project.**	
3.2	**Work independently to conduct a specific project.**	
3.3	**Respect each other's and their teacher.**	
3.4	**Help each other in any homework.**	

C. Course Content

No	List of Topics	Contact Hours
1	**Introduction (Importance and branches of Zoology)**	**1**
2	**Bio-molecules** *** Water, carbohydrates, lipids, proteins & Nucleic acids (DNA & RNA).**	**1**
3	**Cell Biology** *** Cell types, animal & plant cells** *** Animal cell: membrane, nucleus & cytoplasm** *** The other types of cell organelles and cell movement**	**4**
4	**Cell Division** *** Cell cycle & Mitosis** *** Cell cycle & Mitosis**	**2**
5	**Genetics** *** Mendel 1** *** Mendel 2** *** DNA**	**2**
6	**Histology** *** Animal tissues: Epithelial and connective tissues** *** Vascular, muscular and nervous tissues**	**2**
7	**First Exam**	**90 min**
8	**Classification** *** Classification: General characters** *** Protista: selected examples** *** Animalia: selected examples** *** Other Phyla: selected examples (continuo)** *** Other Phyla: selected examples (continuo)** *** Other Phyla: selected examples (continuo)** *** Other Phyla: selected examples (continuo)**	**6**
9	**Anatomy**	**2**
10	**Second Exam**	**90 min**
11	**Physiology** *** Homeostasis** *** Nutrition** *** Digestion** *** Blood composition & function**	**10**

Total	43

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Study the types and chemical structure of organic molecules.	Brain storming. Problem solving. Demonstrations. Lecture and discussion. Practical training.	Final exams. Lab reports and examinations. Activities and homework.
1.2	Study the properties and structure of animal cell.		
1.3	Understand cell divisions.		
1.4	Investigate the differences between different animal tissues.		
1.5	Classify of living organisms in different Kingdoms.		
1.6	Study the functions of different organs in different organisms.		
1.7	Understand the basic of the animal genetics.		
2.0	**Skills**		
2.1	Describe the functions of each organelle in animal cell.	Brain storming. Problem solving. Demonstrations. Lecture and discussion.	Midterm and Final exams. Activities during the lecture and homework.
2.2	Distinguish between mitosis and meiosis.		
2.3	Compare between DNA and RNA.		
2.4	Classify different organisms in different kingdoms.		
2.5	Define the following terms, zoology, species, carnivores and genotype.		
2.6	Compare between all animal tissues.		
2.7	Explain the functions of respiratory and digestive systems for vertebrate and invertebrate organisms.		
3.0	**Competence**		
3.1	Work in a team to do a specific project.	Demonstrations. Small group work.	Presentation. Group project.
3.2	Work independently to conduct a specific project.		
3.3	Respect each other's and their teacher.		
3.4	Help each other in any homework.		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	First lab exam	6	15%
2	Second lab Exam	12	15%
3	First theoretical exam	7	15%

#	Assessment task*	Week Due	Percentage of Total Assessment Score
4	second theoretical exam	15	15%
5	Final Exam	17	40%
6			
7			
8			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

*** Direct supervision by staff member over lab. Sessions.**
*** Office hours 7 hr/ week**

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	*** Campbell, N. A. and Reece, J. B. (2002). Biology (6th edition). Pearson Education. Inc. USA** *** Brooker, R. J., Widmaier, E. P., Graham, L. E. and Stiling, P. D. (2008). Biology. McGraw-Hill International Edition.**
Essential References Materials	*** Campbell, N. A. and Reece, J. B. (2002). Biology (6th edition). Pearson Education. Inc. USA** *** Brooker, R. J., Widmaier, E. P., Graham, L. E. and Stiling, P. D. (2008). Biology. McGraw-Hill International Edition.**
Electronic Materials	*** Websites on the internet that are relevant to the topics of the course**
Other Learning Materials	*** Microsoft office package and Josoor Program**

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	*** Optically and electronically facilitated lecture rooms.** *** Microscopically equipped laboratories.**
Technology Resources (AV, data show, Smart Board, software, etc.)	*** Computer room containing at least 50 units**
Other Resources	*** Computer room containing at least 50 units**

Item	Resources
(Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	