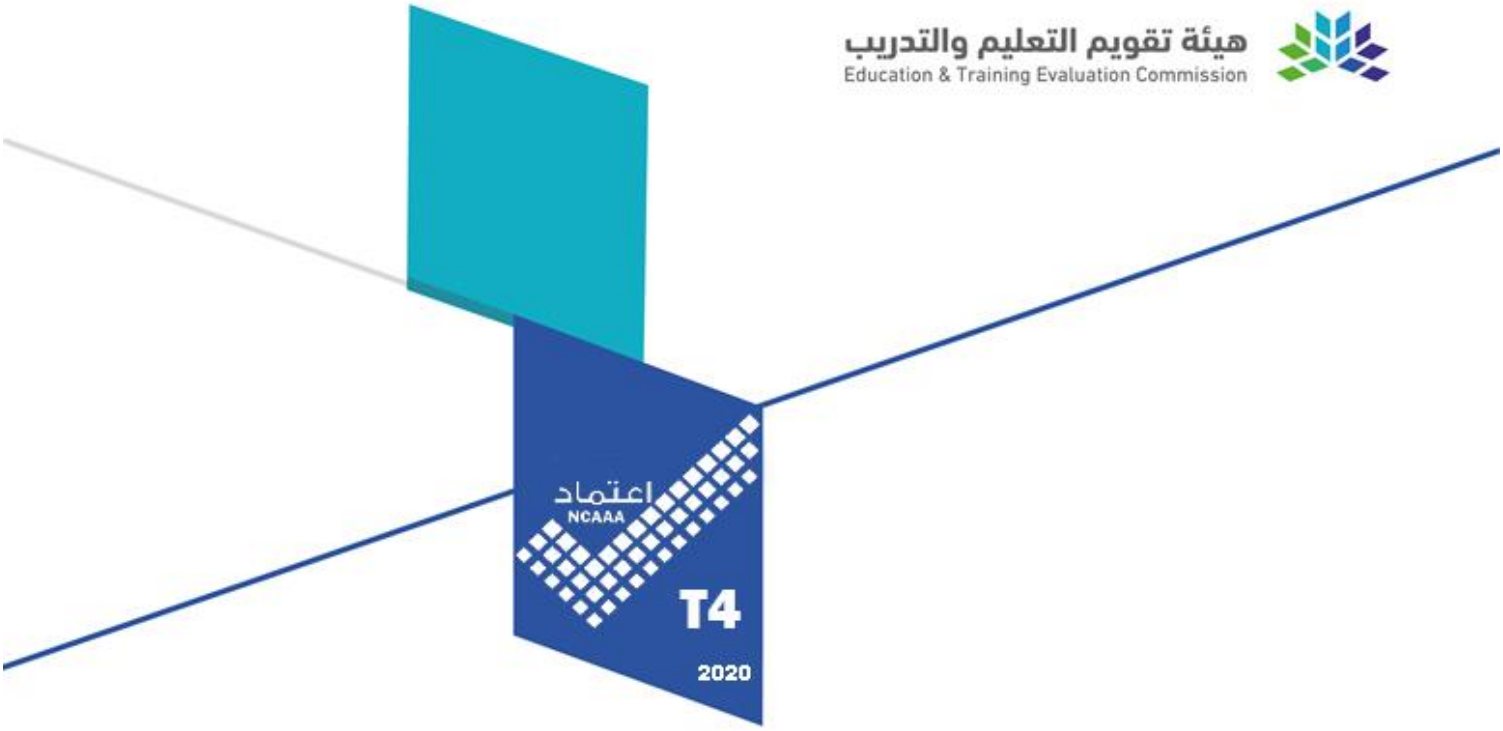
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Course Specifications

Course Title:	General Animal Biology
Course Code:	ZOO 109
Program:	Zoology
Department:	Zoology
College:	College of Science
Institution:	King Saud university

Table of Contents

A. Course Identification

1. Credit hours: 3 (2 + 1)
2. Course type **a.** University [√] College [ ] Department [ ] Others [ ] **b.** Required [ ] Elective [ ]
3. Level/year at which this course is offered: BSc Level
4. Pre-requisites for this course (if any)**:**
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**	26	100
2	**Blended**	-	-
3	**E-learning**	-	-
4	**Distance learning**	-	-
5	**Other**	-	-

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	26
2	**Laboratory/Studio**	26
3	**Tutorial**	
4	**Others** (specify)	
	Total	52

B. Course Objectives and Learning Outcomes

1. Course Description

1. Summary of the main learning outcomes for students enrolled in the course.

Student should have a clear concept of the following:

- **Prokaryotes**
  - Bacteria
  - Viruses
- **Eukaryotes (Basics of cell Biology):**
  - Cell types (Prokaryotes Eukaryotes).
  - Cell organelle
- **Macromolecules:**
  - Carbohydrates
  - Lipids
  - Proteins
- **Enzymes and metabolic control.**
- **Movement of materials into and out of the cell (cellular transport).**
- **Cellular respiration (production of energy).**
- **Cell division (cell cycle):**
  - Mitotic division.
  - Meiotic division (and sexual life cycle).

- **Mendel and the gene idea:**
  - The chromosomal bases of inheritance.
  - First low of Mendel.
  - Second low of Mendel.
  - The genetic diseases, sex-linked disorders and mutations

  Molecular Biology (information codes and genes):
  - DNA and DNA-replication.
  - RNA and RNA-transcription.
  - From gene to protein (RNA translation).
- **Chemical signals in animals (endocrine system and hormonal regulation).**

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Investigate biomolecules and cell structures and functions.	K1
1.2	Study enzymes, cellular respiration, and cell division.	K1
1.3	Study inheritance, bases of DNA-RNA, protein production, and hormones.	K1
2	**Skills:**	
2.1	Recognize the cell, and its organelles and division under the microscope.	S2
2.2	Identify and distinguish between the human blood groups.	S2
2.3	Master dissection of rat and identify histological features of different organs	S2
3	**Values:**	
3.1	Ability to work in teem, express opinion and criticize peers.	V1
3.2	Ability to describe structure of cells, tissues & organs of rats.	V3

C. Course Content

No	List of Topics	Contact Hours
1	Prokaryotes & Eukaryotes (Cell Biology, organelles and cell molecules)	6
2	Energy production (enzymes), Cellular transport and cellular respiration	6
3	Cell division, Mendel lows and genetic diseases	6
4	Molecular bases of DNA & RNA and gene idea	6
5	Chemical signals (Endocrine system)	2
Total		**26**

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 and Understanding**		
1.1	Investigate biomolecules and cell structures and functions.	In class lecturing (using PowerPoint and illustrations).	Three sessional Assessments: 2 mid-term exams. Final exam)
1.2	Study enzymes, cellular respiration, and cell division.		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.3	Study inheritance, bases of DNA-RNA, protein production, and hormones.	At home using e-lectures via LMS. Laboratory practices and microscopic examination. Activities and homework Brief demonstration. Practical experiments Question-Answer session	1st practical exam. 2nd practical exam. Evaluation within the lab.
1.4			
2.0	**Skills**		
2.1	Recognize the cell, and its organelles and division under the microscope.	Use of different Specimens Practical Observations on the plant material. Use of blood groups for identification Analysis of experimental secondary data Dissection of Rat Microscopic study of pre-prepared slides of various mammalian organs	Mid-term and final exams Evaluation of lab notebook and oral discussion. Examination under microscope for identification. Oral presentation and discussion. Dissection and examination for various systems. Microscopic Identification of various tissues/organs.
2.2	Identify and distinguish between the human blood groups.		
2.3	Master dissection of rat and identify histological features of different organs		
2.4			
3.0	**Values**		
3.1	Ability to work in teem, express opinion and criticize peers.	Usage of microscope in biological studies. Laboratory experiments Encouraging students to search on the internet.	Evaluating the laboratory written reports/note-book. Evaluating the laboratory written reports. Evaluating personal activities and lab work.
3.2	Ability to describe structure of cells, tissues & organs of rats.		
3.3			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	First practical exam	Week 6	15
2	Second practical exam	Week 12	15
3	First theoretical exam	Week 6	15
	First theoretical exam	Week 10	15
4	Final Exam	Week 14	40

***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 5 hr/ week

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Campbell, N. A. and Reece, J. B. (2011). Biology (10th edition). Pearson Education. Inc. USA.
Essential References Materials	None
Electronic Materials	• Websites on the internet that are relevant to the topics of the course. • LMS for e-lectures
Other Learning Materials	• LMS on KSU website • Microsoft office package

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Equipped laboratories (partially secured)
Technology Resources (AV, data show, Smart Board, software, etc.)	Data show, Smart Board and DG labs
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	LMS on KSU website Microsoft office package Histological slides, antisera, rats, dissection Box, gloves, mask safety facilities

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of Teaching and assessment.	Students	Indirect: online questionnaire which is mandatory for each student to be filled at the end of course
Extent of achievement of course learning outcomes	Program leader	Direct: feedback from the students and course reports

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Quality of learning resources	Evaluation of the program by the department.	Direct: discussion with group of lecturers who teaches the same courses in the department

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	