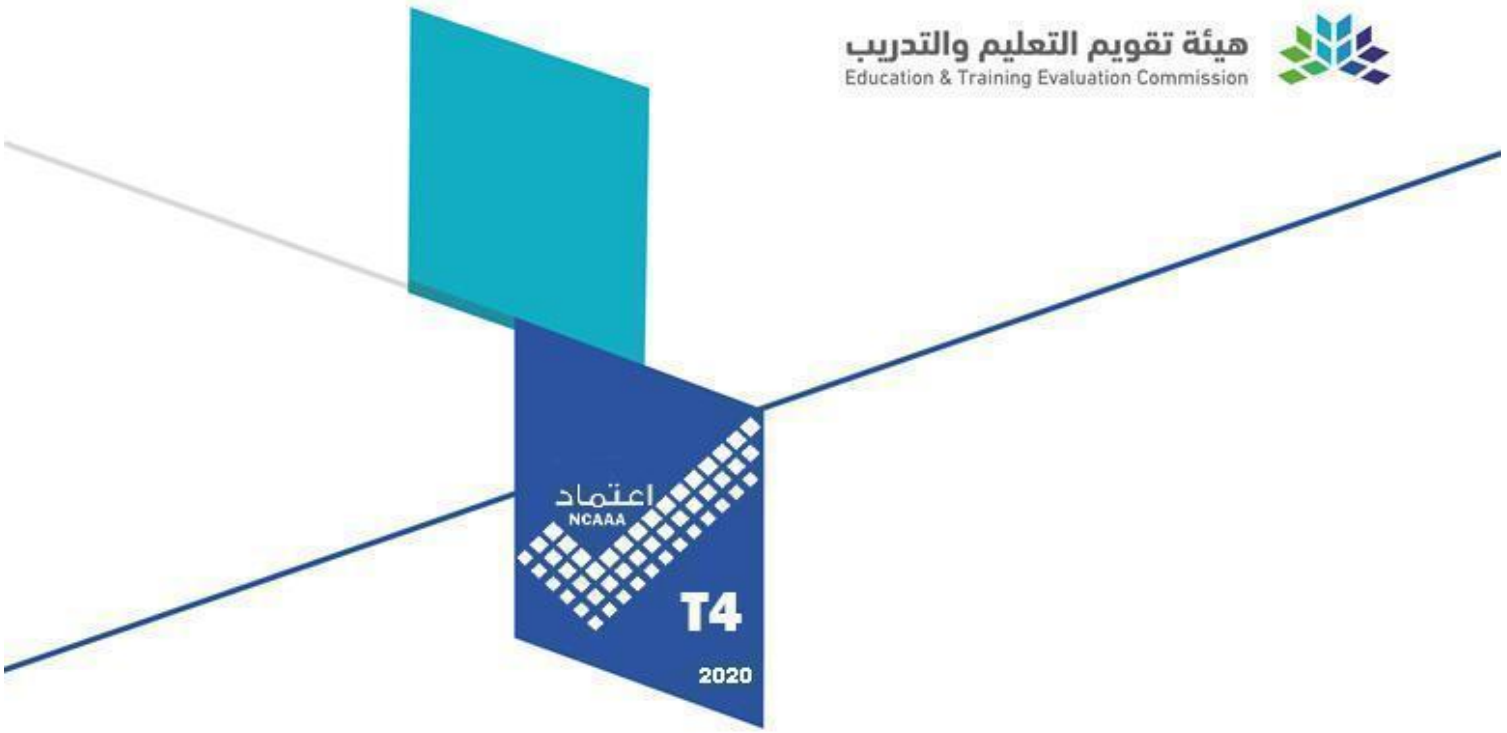
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Course Specifications

Course Title:	**General Zoology 2**
Course Code:	**BIO351**
Program:	**Bachelor of Science in Biology**
Department:	**Department of Biology**
College:	**Faculty of Science**
Institution:	**University of Tabuk**

Table of Contents

A. Course Identification

1. Credit hours: 3 (2 Theoretical + 1 Practical) hours
2. Course type **a.** University ☐ College ☐ Department ☑ Others ☐ **b.** Required ☑ Elective ☐
3. Level/year at which this course is offered: Level 5/ First semester/ Third year
4. Pre-requisites for this course (if any)**: General Zoology (BIO251)**
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**	2	50%
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other (lab work)**	2	50%

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

- This course includes an introduction to the concept, general characteristics and classification of phylum Chordata with emphasis on subphylum vertebrata with some diverse examples; Cephalochordate animals, Urochordata (*Ascidia*), subphylum vertebrata (Agnatha, *Petromyzon*), superclass Ganthostomata (cartilage and dog fishes), bony fishes (*Tilapia*), the adaptability and internal anatomy of Pigeon, Reptiles, Birds, Mammals (Rabbits).

2. Course Main Objective

By the end of this course, the students should be able to:

- Demonstrate the historical background for the development of a private anatomy of vertebrates.
- Explain the basic elements of life of the animal, and mechanisms of the diversity of animal life.
- Monitor the evolution of vertebrates through selective vertebrates.
- Compare and contrast the development, life cycles, anatomical and physiological characteristics of major chordate groups.

- Evaluate the relationships of animals to each other and their environments.
- Describe and identify the main characteristics and classification of samples down to representative of each community.
- Apply the processes of scientific research and experimental design to the diversity of animals.
- Distinguish scientific explanations that show general characteristics for each group of Chordata.
- Prepare and examine preserved dissected animals to identify major body organs.

3. Course Learning Outcomes

	CLOs	AlignedPLOs
1	**Knowledge and Understanding**	
1.1	Describe the external and internal structures of chordate animals.	K2
1.2	Define animals systematically in the Animal Kingdom.	K1
2	**Skills :**	
2.1	Apply the dissection and drawing of some animals.	S2
2.2	Use computers and internet.	S4
3	**Values:**	
3.1	Show cooperation in a team to record notes on anatomical characteristics.	V1
3.2	Show the bioethics rules in dissection.	V2

C. Course Content

No	(List of Topics (Theory part	Contact Hours
1	Review of the invertebrates (previous prerequisite)	2
2	Introduction to Chordata, (General characters and Classification)	2
3	Cephalochordate animals (General features - *Amphioxus*)	2
4	Urochordata (General characters – *Ascidia)*	2
5	Subphylum vertebrata (General features, Agnatha, *Petromyzon*)	2
6	Superclass Gnathostomata (General characters, cartilaginous fishes, the dog fish).	2
7	Bony fishes (General characteristics, examples, *Tilapia*)	2
	Mid Term Exam	
8	The pigeon (external features, adaptability and internal anatomy)	2
9	Amphibians (General features, frog, other examples of amphibians)	2
10	Reptiles (General characters, the lizard, other examples of Reptilia)	2
11	Birds (General features and structure)	2
12	Mammals (General characters, classification)	2
13	Studying an example of mammals (rabbit)	2
	Final Exam	
Total		**26**

No	(List of Topics (laboratory part	Contact Hours
1	Introduction, Lab Safety and Instruments and Facilities in Zoology Lab	2
2	Subphylum: Cephalochordata (Amphioxus) and Subphylum: Urochordata (Ascidia)	2
3	Subphylum of vertebrata: Agnatha	2
4	Subphylum of vertebrata: Chondrichthyes	2
5	Subphylum of vertebrata: Osteichthyes (Boney Fishes) (Dissection)	2
6	Subphylum of vertebrata: Amphibia (Dissection)	2
7	Subphylum of vertebrata: Amphibia (Dissection)	2
	Midterm Exam	
8	Subphylum of vertebrata: Reptilia (Dissection)	2
9	Subphylum of vertebrata: Reptilia (Dissection)	2
10	Subphylum of vertebrata: Aves (Birds) (Dissection)	2
11	Subphylum of vertebrata: Birds (Pigeon) (Dissection)	2
12	Subphylum of vertebrata: Mammalia (Rabbit) (Dissection)	2
13	Subphylum of vertebrata: Mammalia (Rabbit) (Dissection)	2
	Final practical Exam	
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	Describe the external and internal structures of chordate animals.	- Lectures. - Activities and homework.	- Quizzes. - Homework. - Midterm Exam. - Final exam.
1.2	Define animals systematically in the Animal Kingdom.	- Lectures. - Activities and homework.	- Quizzes. - Homework. - Midterm Exam. - Final exam.
2.0	**Skills**		
2.1	Apply the dissection and drawing of some animals.	- Lectures. - Lab demonstration, dissection and drawing skills.	- Lab reports and practical examination.
2.2	Use computers and internet.	- Lectures. - Lab demonstration, dissection and drawing skills.	- Lab reports and practical examination.
3.0	**Values**		
3.1	Show cooperation in a team to record notes on anatomical characteristics.	- Lab demonstration.	- Interactive discussion and participation.
3.2	Show the bioethics rules in dissection		

2. Assessment Tasks for Students

#	*Assessment task	Week Due	Percentage of Total Assessment Score
1	Quizzes + Assignments + Class discussion	1-13	10%
3	Midterm Theoretical Exam	8	25%
	Midterm Practical Exam	8	10%
4	Final Practical Exam	14	15%
5	Final Theoretical Exam	15	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 :

- Office hours 6 hr/ week at least
- Academic guidance for about 30 students as determined by admission and registration
- direct supervision of staff for lab works
- electronic communication through Blackboard and email

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Jordan, E. L. and Verma, P. S. (1983). Chordate Zoology. S Chand & Co Ltd. ISBN: 9788121916394.
Essential References Materials	Kardong, K.V. (2001). Vertebrates-Comparative Anatomy, Function, Evolution, 3rd ed., Dubuque, IA: W.C. Brown
Electronic Materials	Kotpal, R. L. (2000). Modern textbook of Zoology, Vertebrates. Rastogi Publishing, India).
Other Learning Materials	Microsoft office package

2. Facilities Required

Item	Resources
Accommodation Classrooms, laboratories, demonstration) (.rooms/labs, etc	- A sufficient number of classrooms, well equipped - practical laboratories are available to accommodate - students with light microscopes - -Virtual session provided by the blackboard (which allow discussions PowerPoint and video sharing)
Technology Resources (.AV, data show, Smart Board, software, etc)	- Data show - -wireless connection in the building for students and faculties
Other Resources Specify, e.g. if specific laboratory) equipment is required, list requirements or (attach a list	- Anatomy tools. - Microscopes. - Animal samples. - Models of vertebrate animals. - Glass slides of animal chordates samples. - Projectors.

	- Transparencies

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	-Students	Indirect - Questionnaires.
Extent of achievement of course learning outcomes	Program committee. - Staff members. - Students.	Direct - Questionnaires. - Reports. - Meetings
Quality of learning resources	Program leaders. - Peer Reviewer	Direct & Indirect - Questionnaires. - Reports. - Meetings

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	Biology Department Council
Reference No.	
Date	1/6/2022