Course Specifications

Course Title:	**Fauna of Saudi Arabia**
Course Code:	**4014321-3**
Program:	**General Biology**
Department:	**Department of biology**
College:	**Faculty of Applied Science**
Institution:	**Um Al-Qura University**

Table of Contents

A. Course Identification

1. Credit hours:	**3 hours.**
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered:	**4th Year / Level 7.**
4. Pre-requisites for this course (if any)**:**	**Animal Ecology (4013352-3).**
5. Co-requisites for this course (if any)**:**	**NA.**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	50
2	Blended	-	-
3	E-learning	-	-
4	Correspondence	-	-
5	Other	30	50

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	30
2	Laboratory/Studio	42
3	Tutorial	-
4	Others (specify)	30
	Total	102
Other Learning Hours*		
1	Study	30
2	Assignments	8
3	Library	15
4	Projects/Research Essays/Theses	10
5	Others (specify)	-
	Total	63

* 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

This course teaches basic species knowledge of KSA fauna. The main objectives of the present course are to learn how to identify and classify samples represent families in the surrounding habitats and design simple key for classification. It will cover the principles of biodiversity, sample collection, description, identification, remember the rare species. Learn about the different environments and seasons of reproduction, and understand the general characteristics of its own distinctive, with recognition of some races and types.

2. Course Main Objective

After completing this course, students should be able to:

- **Define the principles and concepts of biodiversity (representative marine and terrestrial species).**
- **Surveys the deferent ecosystems, habitats, distribution within the wildlife, endemic and endangered species in the western region of Saudi Arabia.**
- **Students will learn applied techniques through a combination of lectures, labs, and field trips.**
- **Students will collect and describe the morphological and morphometrical parameters of the collected samples belonging to different animal families to design simple identification key to classify the collecting samples.**
- **Consideration of biological taxonomic systems and consideration of both vegetative features and reproductive features associated with local fauna.**
- **Students will train to work in team and gain experience about collection skills, using traps and other tools during collection.**

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	**Identify the unknown species using morphological characters and the main taxonomic basis that studied in previous courses (invertebrate and vertebrate).**	
1.2	**Employ recent communication and information technologies effectively in different tasks related to animal ecology.**	
1.3	**Learn the morphological and specific internal structures the different species that collected or observed in different Saudian habitats.**	
1.4	**Distinguish the diversity and distribution of obtained species in their habitats. Then Be aware about the proper and applied ways deal with the sample collection from terrestrial and aquatic environments.**	
1.5	**Be able to clearly and concisely speak about and write about the morphological, morphometrical parameters to identify the proper classification of the collected species, in addition, comments, record and describe specific internal structures (palatal and pharyngeal teeth, gill rakers, swim bladder, stomach and intestinal food) to know their habitat, types and nature of their food .**	
1.6	**Learn how to Apply or design and identification key for orders, families or species diversity, as well as, interpret and discuss the obtained data as presentation.**	
1.7	**Draw the collected species and write the specific terms and measurements for each body region to calculate the mean organo-somatic indices for the collected samples such as: diameter of eye wings, legs, bills or the diameter of ear opening and total body length. In special cases, it is necessary to investigate and describe some anatomical structure that help in classification.**	
1.8	**Comprehend the methods and application of collection and record distribution map of collected sample for each habitat.**	
1.9	**Enumerate the characteristics of different wild or aquatic habitats in Arabian Peninsula.**	
2	**Skills:**	

CLOs		Aligned PLOs
2.1	Using the morphology and morphometry to diagnose the systematic position of collected samples.	
2.2	Identify collecting samples according to the published keys of vertebrate classes, orders and families, then use the to develop a special key for Arabian species.	
2.3	Distinguish the common characters of orders, families and species and apply them to configurate a accurate key to orders, families or species represented in an ecosystem.	
2.4	Define the distribution of different samples in their habitat.	
2.5	Apply a strategy to study animal fauna of local regions.	
2.6	Employ recent communication and information technologies effectively to investigate biodiversity in local habitat of Makkah regions.	
2.7	Discuss the distribution and relationships between animal fauna and their environments.	
2.8	Team work activities: Draw, Describe the collected, then discuss this field work as a presentation activity.	
2.9	Use the personal skills, tools and traps to collect terrestrial or aquatic samples.	
3	**Competence:**	
3.1	Developing oral presentations and leader ship activity	
3.2	Communicating personal ideas and thoughts	
3.3	Work independently, Self-learning and as part of a team,	
3.4	To examine, describe, draw, dissect or contribute reports.	

C. Course Content

No	List of Topics (16 weeks)	Contact Hours
1	The concept of biodiversity. The study of the topography, the climate and site of geographical.	2
2	Animal species of KSA in terms of their characteristics, geographic distribution and densities.	2
3	A brief summary to explain the basic fauna and rare animals that resident and migratory, exotic and endangered. Periodical exam (15 min).	2
4	Morphology of representative marine fauna, in term of special structure that will be used to classify the obtained species form field. Field trip to collect marine fauna during weak end.	2
5	How to design simple identification key to identify marine fauna. Apply key steps to classify the collected species.	2
6	Midterm exam	2
7	Discussion the reports and seminars by student groups to explain their activities and reports after field trip to a marine region.	2
8	Morphology of representative terrestrial invertebrate fauna, in term of special structure that will be used to classify the obtained species form field.	2

9	How to design simple identification key for terrestrial invertebrate fauna. Apply key steps to classify the collected species.	2
10	Morphology of representative vertebrate fauna, in term of special structure that will be used to classify the obtained species form field. Field trip 2 during the week end.	2
11	How to design simple identification key for Arabian vertebrate fauna. Apply key steps to classify the collected species.	2
12	How to design and apply keys to orders of Arabian Fishes, amphibians	2
13	How to design and apply keys to orders of Arabian reptiles, birds and mammals.	2
14	Discussion the reports and seminars by student groups to explain their activities and reports after field trip 2 to a terrestrial region. General revision.	2
15	Revision	2
16	Final exam.	
Total		30

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	Using the morphology and morphometry to diagnose the systematic position of collected samples.	1. Lectures and student research papers. 2. The using of visual display such as PowerPoint. 3. Homework assignments. Discussions (connecting what they learn in the class and applying this information in laboratory).	- Homework and Quizzes. - Midterm and final written exams. - Evaluation of reports. - Group discussions and participation in the lecture. Course work reports.
1.2	Identify collecting samples according to the published keys of vertebrate classes, orders and families, then use the to develop a special key for Arabian species.		
1.3	Distinguish the common characters of orders, families and species and apply them to configurate a accurate key to orders, families or species represented in an ecosystem.		
1.4	Define the distribution of different samples in their habitat.		
1.5	Apply a strategy to study animal fauna of local regions.		
1.6	Employ recent communication and information technologies effectively to investigate biodiversity in local habitat of Makkah regions.		
1.7	Discuss the distribution and relationships between animal fauna and their environments.		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.8	**Team work activities: Draw, Describe the collected, then discuss this field work as a presentation activity.**		
1.9	**Use the personal skills, tools and traps to collect terrestrial or aquatic samples.**		
2.0	**Skills**		
2.1	**Collect and Examine the collected samples, from the wild or aquatic habitats.** Then interpret the collected data in a **seminar presentation by the students and web-interactions.**	**1. Interactive lectures.** **2. Seminars.** **3. Participation of students in discussions during the lecture.** **4. Trying to explain the issues in regular and motivated manner.** **Follow up the students in lab and during carryout all analytical techniques.**	**- Exam must contain questions that can measure these skills.** **- Quiz and exams.** **- Discussions after the lecture.** **Practical exam.**
2.2	**Define the concept and basses used to design special keys for classifying the collected species.**		
2.3	**List the common samples, as well as, endangered species then write a special report include its distribution, adult and juvenile numbers and their behavior to save them.**		
2.4	**Read any available references deals with Saudian Fauna that study new collected, new records or zoological review of Arabian species.**		
2.5	**Magnified Photographs selected for some endangered species to document them.**		
3.0	**Competence**		
3.1	**Personal leader ship activity**	• **Oral presentations.** • **Internet search assignments and essays.** • **Incorporating the use and utilization of computer in the course requirements.**	**- Evaluation of student essays and assignments.** **- Marks given to for good reports and presentations.** **Evaluating during the discussion in lecture and reports.** **Part of the grad is put for student's written participation.**
3.2	**Self-learning in teamwork.**		
…	**Reports and presentations**		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	**Periodical Exam(s)**	**4**	**10 %**

#	Assessment task*	Week Due	Percentage of Total Assessment Score
2	Mid Term Exam (Theoretic)	8	20 %
3	Mid Term Exam (practical)	9	10 %
4	Reports and essay	11	5 %
5	Final Practical Exam	15	15 %
6	Final Exam	16	40 %
	Total		100 %

***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 :

2 Office hours/week

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	**Lecture notes prepared by faculty members responsible for the present course.**
Essential References Materials	**Krupp, F. and Mahnert, V. (eds.) 1987 -2018, Fauna of Saudi Arabia , Vols. (9-22), NCWCD, Riyadh , Saudi Arabia.** **Buttiker, W. and Krupp, F. (eds.) 1979 -1987, Fauna of Saudi Arabia, Vols. (1-8), NCWCD, Jeddah, Saudi Arabia.** **Adnan Mohamed Haji, Introduction to the fauna of Saudi Arabia, Al Safa Press, 1413 AH.**
Electronic Materials	**Scientific search engines on the internet.**
Other Learning Materials	**CD prepared by the staff members containing U-tube videos.** **Multi- media associated with the text book and the relevant websites.** **Biological charts.**

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**The areas of class rooms are suitable, concerning the number of enrolled students; and air conditioned. Lecture room equipped with a black board and Data show. Instructors use their own laptop. Ecology lab well equipped.**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Class rooms are already provided with data show, audio-visual equipment.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	**Laboratory instruments for measuring some ecological parameters.**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Student Feedback on Effectiveness of Teaching	Students.	Class room discussions. Questionnaires.
Evaluation of Teaching	Instructor or by the Department	Revision of student answer paper by another staff member. Analysis the grades of students.

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	Prof. Adnan Mohamed Hijji; Prof. Osama Mohamed Sarhan
Reference No.	
Date	21/11/2019