هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications
(Postgraduate Degree)

Course Title:	**Biodiversity and Conservation in Saudi Arabia**
Course Code:	**BIOD 540**
Program:	**M. Sc. Biodiversity**
Department:	**Biology**
College:	**Science**
Institution:	**University of Tabuk**

Table of Contents

A. Course Identification

1. Credit hours: 3 Credit Hours (2 Theoretical + 1 Practical)
2. Course type ☐ Required ☒ Elective
3. Level/year at which this course is offered: Level 4/Second year
4. Pre-requisites for this course (if any)**: BIOD 503**
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**	4	100
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
1	**Lecture**	26
-2	**Laboratory/Studio**	26
3	**Seminars**	
4	**Others** (specify)	
Total		52

B. Course Objectives and Learning Outcomes

1. Course Description

- This course studies biodiversity and conservation and the national strategies for the conservation of biodiversity in the Kingdom of Saudi Arabia (KSA). It also includes in-situ and ex-situ conservation of plants and animals as well as conservation, and development of natural resources in KSA. Besides, it studies regulate access to genetic resources, the convention on biological diversity, member countries, national biodiversity authority, and conservation acts and legislations. Also, it introduces the modern methods used for wildlife conservation, habitat management ecological sustainability, and environmental education in KSA.

2. Course Main Objective

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

- Describe biodiversity and conservation in Saudi Arabia.
- Support the development of practical skills in habitat assessment and species identification.
- Describe in-situ and ex-situ conservation of plants and animals.
- Describe Convention on biological diversity.
- Know national biodiversity authority and conservation acts.
- Describe the environmental protection act and the wildlife protection act.
- Apply modern methods used for wildlife conservation, habitat management ecological sustainability, and environmental education in Saudi Arabia.

3. Course Learning Outcomes

	Course Learning Outcomes (CLOs)	Aligned PLOs*
1	**Knowledge and Understanding:**	
1.1	Describe methods and means of conserving and managing the plant and animal biodiversity in KSA.	K4
1.2	Outline the in-situ and ex-situ conservation of biodiversity.	K1
1.3	Describe the impact of national/international laws on biodiversity and conservation.	K2
1.4	Recognize the national/international organizations to protect and conserve natural resources and ecosystems.	K1
1..		
2	**Skills:**	
2.1	Demonstrate the floral and faunal diversity and strategies for its conservation in the KSA.	S3
2.2	Explain the concept of in-situ and ex-situ conservation of plant and animal species.	S4
2.3	Recognize methods for the conservation of important plant and animal species in selected areas of Saudi Arabia.	S2
2.4	Evaluate the impact of national/international biodiversity conservation laws.	S2
2…		
3	**Values**	
3.1	Perform research studies on issues related to the teaching topics.	V1
3.2	Examine data and information on the Saudi Arabian biodiversity records.	V2
3.3	Prepare detailed strategies and action plans.	V3
3…		

* Program Learning Outcomes

C. Course Content

No	List of Topics	Contact Hours
1	Purpose and Scope of the National Strategy on Biodiversity	2
2	The Convention on Biological Diversity	2
3	Principles for Conserving Biodiversity	2
4	Status of and threats to biodiversity	2
5	Strategic goals for conservation and sustainable use of biodiversity	2
6	In-situ Conservation of biodiversity - Inside Protected Areas	2
7	In-situ Conservation of biodiversity - Outside Protected Areas	2
8	Ex-situ Conservation of biodiversity - Botanic / Zoological Gardens	2
9	Conserve and Develop Forests, Woodlands, Deserts	2
10	Conserve and Develop Marine Resources	2
11	Regulate Access to Genetic Resources	2
12	Environmental Legislation, Education, and Awareness	2
13	Nature-Based Tourism (Eco-tourism)	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	Describe methods and means of conserving and managing the plant and animal biodiversity in KSA.	- Lectures. - Group discussions. - Brainstorming. - The use of educational techniques (Videos). - Student's seminars. - Individual presentation. - Lab. demonstrations. - Field surveys.	- Oral discussions. - Long and short essays. - Exams (Mid and Final) - Homework. - Quizzes. - Demonstrations. - Lab. reports. - Field reports.
1.2	Outline the in-situ and ex-situ conservation of biodiversity.		
1.3	Describe the impact of national/international laws on biodiversity and conservation.		
1.4	Recognize the national/international organizations to protect and conserve natural resources and ecosystems.		
1….			
2.0	**Skills**		
2.1	Demonstrate the floral and faunal diversity and strategies for its conservation in the KSA.	- Lectures. - Group discussions. - Brainstorming. - Simulation. - Research paper-based learning. - The use of interactive video. - Lab. demonstrations. - Individual presentation. - Field surveys.	- Peer assessment. - Self-evaluation. - Oral discussion. - Exams (Mid and Final) - Quizzes. - Individual and group presentations. - Lab. reports. - Field reports.
2.2	Explain the concept of in-situ and ex-situ conservation of plant and animal species.		
2.3	Recognize methods for the conservation of important plant and animal species in selected areas of Saudi Arabia.		
2.4	Evaluate the impact of national/international biodiversity conservation laws.		
2….			
3.0	**Values**		
3.1	Perform research studies on issues related to the teaching topics.	- Research activities. - Oral presentations. - An internet search, assignments, and essays. - Group discussion. - Case studies. - Individual and group presentations.	- Student's essays and assignments. - Group reports. - Group presentations. - Discussion in lectures. - Student's written participation. - Analytical reports. - Lab. reports. - Case studies.
3.2	Examine data and information on the Saudi Arabian biodiversity records.		
3.3	Prepare detailed strategies and action plans.		
3…			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Activities and Short Quizzes	Distributed over 8 weeks	10
2	Pre-Final Practical Exam	8	10
3	Pre-Final Theoretical Exam	8	25
4	Final Practical Exam	15	15
5	Final Theory Exam	16	40
6			
7			
8			
9			
	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:

- Eight office hours per week per faculty member.
- Academic advising sessions 1hr/ week per faculty member.

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	- Al-Abdulkader, A., Loughland, R. A. and (2019). Ecosystems and Biodiversity of the Arabian Gulf, Saudi Arabian Waters: fifty years of Scientific Research. Saudi Aramco & King Fahd University of Petroleum & Minerals. ISBN: 978-603-02-7862-6. - Gherardi, F., Corti, C. and Gualtieri, M. (2010). Biodiversity Conservation and Habitat Management, Vol. II. EOLSS Publications. - AbuZinada, A. H., Robinson, E.R. Nader, I. A. and Al Wetaid, Y. I. (2005). Convention on Biological Diversity. The National Strategy for Conservation of Biodiversity in the Kingdom of Saudi Arabia. The National Commission for Wildlife Conservation and Development, Saudi Arabia. https://www.cbd.int/doc/world/sa/sa-nbsap-01-en.pdf
Essential Reference Materials	- *Biodiversity and Conservation.* - *International Journal of Biodiversity Science, Ecosystems Services & Management.*
Electronic Materials	- Saudi Digital Library. - UNSEDOC Digital Library. - Saudi Arabia-National Wildlife Saudi Arabia Research Center. King Khalid Library National Centre.
Other Learning Materials	- Multimedia that is associated with the textbook and the relevant websites.

2. Educational and Research Facilities and Equipment Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	- A sufficient number of classrooms, well equipped practical laboratories are available to accommodate 30-40 students.
Technology Resources (AV, data show, Smart Board, software, etc.)	- Data show projectors and wireless internet connection available for students and faculties. - Smart blackboard. - Computer Portable PowerPoint presentations.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	- Lecture slides. - Reference Book. - A Note Book for writing notes. - Well-equipped laboratory.

G. Course Quality Evaluation

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

Evaluation Areas/Issues (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 Members who constructed the program
Reference No.	Committee members – The academic year 1441/1442
Date	