Course Specifications
(Postgraduate Degree)

Course Title:	Principles of Biodiversity
Course Code:	BIOD 501
Program:	M. Sc. Biodiversity
Department:	Biology
College:	Science
Institution:	University of Tabuk

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Table of Contents

A. Course Identification

1. Credit hours:	**3 Credit Hours (3 Theoretical + 0 Practical)**

2. Course type

☒ Required   ☐ Elective

3. Level/year at which this course is offered:-   Level 1/First year

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	3	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	39
2	Laboratory/Studio	
3	Seminars	
4	Others (specify)	
Total		39

B. Course Objectives and Learning Outcomes

1. **Course Description:**
   - This course provides the basic concepts of biodiversity, definitions, the importance of biodiversity, and biodiversity at different levels of ecosystems. It may help in exploring the structure of biodiversity from evolutionary and ecological perspectives, biodiversity on our planet, and threats to biodiversity. Further, it also includes the management and conservation of biodiversity.

2. Course Main Objective
By the end of this course, the students should be able to:
   - Identify and describe the fundamentals concepts of biodiversity.
   - Discuss the different categories of biological diversity.
   - Distinguish levels of biodiversity in ecosystems.
   - Identify the main factors that threaten biodiversity.
   - Describe threats, management, and conservation of biodiversity.

3. Course Learning Outcomes

	Course Learning Outcomes (CLOs)	Aligned PLOs*
1	**Knowledge and Understanding:**	
1.1	Describe the basic concept of biodiversity.	K1
1.2	Recognize the importance of biodiversity.	K2
1.3	Define the plant, animal, and microbial biodiversity in different ecosystems.	K3
1...		
2	**Skills:**	
2.1	Explain the threats that biodiversity confronts.	S1
2.2	Explain values and appreciation for the biodiversity services we receive.	S2
2.3	Analyze scientific biodiversity management strategies.	S4
2...		
3	**Values:**	
3.1	Illustrate the positive and negative aspects of science and technology on biodiversity.	V1
3.2	Evaluate the native and endangered species.	V1
3.3	Appraise management, conservation, and protection of biodiversity.	V2
3...		

* Program Learning Outcomes

C. Course Content

No	List of Topics	Contact Hours
1	Introduction and importance of biodiversity	3
2	The basic concept of biodiversity	3
3	Biodiversity at differents levels of ecosystems.	3
4	Factors affecting biodiversity	3
5	Biodiversity and Ecosystem Services	3
6	Plant biodiversity resources	3
7	Animal diversity resources	3
8	Microbial diversity resources	3
9	Biological Diversity (Theories, Measures, and Data sampling techniques, bioindicators)	3
10	Importance of biodiversity and anthropogenic impacts	3
11	Causes of the global loss of biodiversity	3
12	Threatened species	3
13	Conservation biology, policy, and management	3
Total		39

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 basic concept of biodiversity.	- Lectures. - Group discussions. - Brainstorming. - The use of educational techniques (Videos). - Student's seminars. - Individual presentation.	- Exams. - Oral discussions. - Long and short essays. - Exams (Mid and Final) - Homework. - Quizzes.
1.2	Recognize the importance of biodiversity in human life.		
1.3	Define the plant and animal biodiversity in different ecosystems.		
1..			
2.0	**Skills:**		
2.1	Explain the threats that biodiversity confronts.	- Lectures. - Group discussions. - Brainstorming. - Simulation. - Research paper-based learning. - The use of interactive video. - Individual presentation.	- Peer assessment. - Self-evaluation. - Oral discussion. - Exams (Mid and Final) - Quizzes. - Individual and group presentations.
2.2	Explain values and appreciation for the biodiversity services we receive.		
2.3	Analyze scientific biodiversity management strategies.		
2..			
3.0	**Values:**		
3.1	Illustrate the positive and negative aspects of science and technology on biodiversity.	- 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 - Case studies. - Posters.
3.2	Evaluate the native and endangered species.		
3.3	Appraise management, conservation, and protection of biodiversity.		
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 Exam Theory	8	40
3	Final Exam Theory	16	50
5			
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	- Fitzgerald, J. (2017). Biodiversity: An Introduction. Larsen and Keller Education. ISBN-13: 978-1635490428. - Pandey, P. N. (2017). Biodiversity. Narendra Publishing House. ISBN: 9789389235937. - Kratochwil, A. (2013). Biodiversity in ecosystems: principles and case studies of different complexity levels. Springer Science & Business Media. ISBN 9789401146777.
Essential Reference Materials	- *Journal of Biodiversity.* - *Journal of Conservation biology.*
Electronic Materials	- Saudi Digital Library. - UNSEDOC Digital Library. - www.sciencedirect.com
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.

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	