

Course Specification

(Postgraduate Programs)

Course Title: **Principles of Biodiversity**

Course Code: **BIOD501**

Program: **Master's in Biodiversity**

Department: **Department of Biology**

College: **Faculty of Science**

Institution: **University of Tabuk**

Version: **2**

Last Revision Date: **18/11/1444 H**



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A. General information about the course:

1. Course Identification:

1. Credit hours: 3 Credit hours (3 Theoretical)

2. Course type

A. University College Department Track

B. Required Elective

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

4. Course General 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 management and conservation of biodiversity.

5. Pre-requirements for this course (if any):

- None.

6. Pre-requirements for this course (if any):

- None.

7. Course Main Objective(s):

- Identify and describe the fundamental 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.

2. Teaching Mode: (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100%
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> • Traditional classroom • E-learning 		
4	Distance learning		



3. Contact Hours: (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	45
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	
5.	Others (specify).....	
Total		45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods:

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Understand key concepts and principles of biodiversity, including its definition, measurement, and significance in ecological and evolutionary contexts.	K1	<ul style="list-style-type: none"> - Lectures. - Seminars. - Class discussions. - Problem-solving classes. - Self-learning. 	<ul style="list-style-type: none"> - Written exams (Midterm and Final exams). - Quizzes. Class discussions.
1.2	Recognize the factors influencing biodiversity, including natural processes and human impacts, and their effects on ecosystem stability and function.	K2	<ul style="list-style-type: none"> - Lectures. - Seminars. - Class discussions. - Problem-solving classes. - Self-learning. 	<ul style="list-style-type: none"> - Written exams (Midterm and Final exams). - Quizzes. Class discussions.
2.0	Skills			
2.1	Apply theoretical knowledge to analyze and interpret biodiversity patterns, processes, and threats at genetic, species, and ecosystem levels.	S1	<ul style="list-style-type: none"> - Lectures. - Seminars. - Class discussions. - Problem-solving classes. - Self-learning. - Individual and group 	<ul style="list-style-type: none"> - Written exams (Midterm and Final exams). - Quizzes. - Class discussions. - Individual and



Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
			<ul style="list-style-type: none"> presentations. - Assignments. - Essays. 	<ul style="list-style-type: none"> group presentations. - Assignments. - Essays.
2.2	Analyze the effectiveness and implementation of scientific biodiversity management strategies.	S2	<ul style="list-style-type: none"> - Lectures. - Seminars. - Class discussions. - Problem-solving classes. - Self-learning. - Individual and group presentations. - Assignments. Essays. 	<ul style="list-style-type: none"> - Written exams (Midterm and Final exams). - Quizzes. - Class discussions. - Individual and group presentations. - Assignments. - Essays.
2.3	Evaluate the effectiveness of various conservation strategies and policies in preserving and enhancing biodiversity.	S3	<ul style="list-style-type: none"> - Lectures. - Seminars. - Class discussions. - Problem-solving classes. - Self-learning. - Individual and group presentations. - Assignments. Essays. 	<ul style="list-style-type: none"> - Written exams (Midterm and Final exams). - Quizzes. - Class discussions. - Individual and group presentations. - Assignments. - Essays.
3.0	Values, autonomy, and responsibility			
3.1	Collaborate in teamwork or work independently to evaluate the positive and negative impacts of science and technology on biodiversity.	V2	<ul style="list-style-type: none"> - Class discussions. - Individual and group presentations. - Assignments. - Essays. 	<ul style="list-style-type: none"> - Class discussions. - Individual and group presentations. - Assignments. - Essays.
3.2				
...				



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 different 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), Part I.	3
10.	Biological Diversity (Theories, Measures, and Data sampling techniques, bioindicators), Part II.	3
11.	Importance of Biodiversity and Anthropogenic Impacts.	3
12.	Causes of The Global Loss of Biodiversity, Part I.	3
13.	Causes of The Global Loss of Biodiversity, Part II.	3
14.	Threatened Species.	3
15.	Conservation Biology, Policy, and Management.	3
Total		45

D. Students Assessment Activities:

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quizzes, Class discussions	Distributed over 14 weeks	10
2.	Assignments, Essays	Distributed over 14 weeks	15
3.	Individual or group presentation	Distributed over 14 weeks	10
4.	Midterm Exam	9	25
5.	Final Exam	17	40
Total			100

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)





E. Learning Resources and Facilities:

1. References and Learning Resources:

Essential References	<ul style="list-style-type: none"> - 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.
Supportive References	<ul style="list-style-type: none"> - <i>Journal of Biodiversity.</i> - <i>Journal of Conservation Biology.</i>
Electronic Materials	<ul style="list-style-type: none"> - Saudi Digital Library. - UNSEDOC Digital Library. - www.sciencedirect.com.
Other Learning Materials	<ul style="list-style-type: none"> - None.

2. Educational and Research Facilities and Equipment Required:

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	<ul style="list-style-type: none"> - A sufficient number of classrooms are available to accommodate up to 25 students. Library.
Technology equipment (Projector, smart board, software)	<ul style="list-style-type: none"> - Data show projectors and wireless internet connections available for students and faculties. - Data show projectors and wireless internet connections available for students and faculties. - Smart blackboard. Computer Portable - PowerPoint presentations.
Other equipment (Depending on the nature of the specialty)	<ul style="list-style-type: none"> - None.

F. Assessment of Course Quality:

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	<ul style="list-style-type: none"> - Students. 	<ul style="list-style-type: none"> - Direct & Indirect.
Effectiveness of students' assessment	<ul style="list-style-type: none"> - Course instructors & Course coordinator (Teachers). 	<ul style="list-style-type: none"> - Direct.
Quality of learning resources	<ul style="list-style-type: none"> - Students. 	<ul style="list-style-type: none"> - Indirect.



Assessment Areas/Issues	Assessor	Assessment Methods
The extent to which CLOs have been achieved	- Course instructors. - Course coordinator. - Quality Committee.	- Direct & Indirect.
Other	- None	- NA

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval Data:

COUNCIL /COMMITTEE	Department of Biology Council
REFERENCE NO.	Department Council NO (26)
DATE	26/11/1444 H

