



Course Specifications (Postgraduate Degree)

Course Title:	Biodiversity Conservation and Management
Course Code:	BIOD 530
Program:	M. Sc. Biodiversity
Department:	Biology
College:	Science
Institution:	University of Tabuk

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A. Course Identification

1. Credit hours: 3 Credit Hours (2 Theoretical + 1 Practical)
2. Course type <input checked="" type="checkbox"/> Required <input type="checkbox"/> 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 cover topics on the conservation and management of the biodiversity of plants and animals in their natural habitats and selected areas. It also supports the development of practical skills in the conservation of animal and plant species, wildlife conservation, habitat management, and ecological sustainability. Also, it provides in-situ and ex-situ conservation of plants, and animals, translocation of animals and plants, the UN Convention on biological diversity and the member countries, national biodiversity authority, and conservation acts. It also describes the environmental protection act and the wildlife protection act. Further, it provides case studies from local and global communities on the conservation and management of biodiversity.

2. Course Main Objective

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

- Describe biodiversity and conservation in the context of a range of natural ecosystems including woodlands, grasslands, and wetlands.
- Support the development of practical skills in habitat assessment and species identification.
- Describe in-situ and ex-situ conservation of plants and animals.
- Describe the UN Convention on biological diversity and the member countries.
- 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.

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 biological diversity of plant and animal populations.	K4
1.2	Outline the relationship between the transfer and settlement of organisms in specific environments and biodiversity.	K1
1.3	Describe the impact of international forest protection laws on biological diversity.	K2
1.4	Recognize the international organizations to protect wildlife and endangered species and their role in preserving nature as well as biological diversity.	K1
1..		
2	Skills:	
2.1	Illustrate the important types of plants, and how to preserve their biological diversity in a certain environment.	S3
2.2	Explain the concept of in-situ and ex-situ conservation of animal species.	S4
2.3	Recognize the conservation methods and important animal species in a certain environment.	S2
2.4	Evaluate the impact of international forest protection laws on biological diversity.	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 national biodiversity records.	V2
3.3	Operate in a team to conduct group reports and activities.	V3
3...		

* Program Learning Outcomes

C. Course Content

No	List of Topics	Contact Hours
1	In-situ and ex-situ conservation of plants, methods, and applications	2
2	Important plant species for conservation in a selected area in KSA	2
3	In-situ and Ex-situ conservation of animals	2
4	Methods of conservation and important animal species of selected areas in KSA	2
5	Animals and plants translocation	2
6	Protected areas and National Parks	2
7	Environmental Protection Act and the Wildlife Protection Act	2
8	Forest Conservation Act	2
9	Organizations, Conventions and Conservation Acts (CITES, IUCN, RAMSAR sites)	2
10	UN Convention on Biological Diversity and Member countries	2
11	National Biodiversity Authority and Conservation Acts	2

12	Biodiversity Boards, Committees and Registers	2
13	Case studies on Biodiversity Conservation and Management	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 biological diversity of plant and animal populations.	<ul style="list-style-type: none"> - Lectures. - Group discussions. - Brainstorming. - The use of educational techniques (Videos). - Student's seminars. - Individual presentation. - Lab. demonstrations. - Field surveys. 	<ul style="list-style-type: none"> - Oral discussions. - Long and short essays. - Exams (Mid and Final) - Homework. - Quizzes. - Demonstrations. - Lab. reports. - Field reports.
1.2	Outline the relationship between the transfer and settlement of organisms in specific environments and biodiversity.		
1.3	Describe the impact of international forest protection laws on biological diversity.		
1.4	Recognize the international organizations to protect wildlife and endangered species and their role in preserving nature as well as biological diversity.		
1....			
2.0	Skills:		
2.1	Illustrate the important types of plants, and how to preserve their biological diversity in a certain environment.	<ul style="list-style-type: none"> - Lectures. - Group discussions. - Brainstorming. - Simulation. - Research paper-based learning. - The use of interactive video. - Lab. demonstrations. - Individual presentation. - Field surveys. 	<ul style="list-style-type: none"> - 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 animal species.		
2.3	Recognize the conservation methods and important animal species in a certain environment.		
2.4	Evaluate the impact of international forest protection laws on biological diversity.		
2....			
3.0	Values:		
3.1	Perform research studies on issues related to the teaching topics.	<ul style="list-style-type: none"> - Research activities. - Oral presentations. - An internet search, assignments, and essays. - Group discussion. - Case studies. 	<ul style="list-style-type: none"> - Student's essays and assignments. - Group reports. - Group presentations. - Discussion in lectures.
3.2	Examine data and information on the national biodiversity records.		
3.3	Operate in a team to conduct group reports and activities.		
3...			

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
		- Individual, and group presentations.	- Student's written participation. - Analytical reports. - Lab. reports. - Case studies. - Posters.

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	<ul style="list-style-type: none"> - Thangadurai, D., Islam, S., Sangeetha, J. and Goh, H. C. (2019). Biodiversity and Conservation: Characterization and Utilization of Plants, Microbes and Natural Resources for Sustainable Development and Ecosystem Management, 1st edition. Apple Academic Press Inc., Canada. ISBN-13: 978-1771887489. - Hawksworth, D. (2010). Management and the Conservation of Biodiversity. Springer. ISBN 978-90-481-3844-9. - Gherardi, F., Corti, C. and Gualtieri, M. (2010). Biodiversity Conservation and Habitat Management, Vol. II. EOLSS Publications.
Essential Reference Materials	<ul style="list-style-type: none"> - <i>Biodiversity and Conservation.</i> - <i>International Journal of Biodiversity Science, Ecosystems Services & Management.</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"> - 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.)	<ul style="list-style-type: none"> - 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.)	<ul style="list-style-type: none"> - 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)	<ul style="list-style-type: none"> - Lecture slides. - Reference Book. - A Note Book for writing notes. - Well-equipped biology laboratory.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
<ul style="list-style-type: none"> - Effectiveness of teaching and assessment. 	<ul style="list-style-type: none"> - Students. 	<ul style="list-style-type: none"> • Indirect - Questionnaires.
<ul style="list-style-type: none"> - Quality of learning resources. 	<ul style="list-style-type: none"> - Program committee. - Staff members. - Students. 	<ul style="list-style-type: none"> • Direct - Questionnaires. - Reports. - Meetings.
<ul style="list-style-type: none"> - The extent of achieving the course learning outcomes. 	<ul style="list-style-type: none"> - Program leaders. - Peer Reviewer. 	<ul style="list-style-type: none"> • 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	