



Course Specifications (Postgraduate Degree)

Course Title:	Terrestrial Biodiversity
Course Code:	BIOD 507
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 2/First year
4. Pre-requisites for this course (if any): BIOD 501
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 describes terrestrial ecosystems, their structure, function, modeling, types, and resources. Floral, faunal, and microbial biodiversity is also described in this course. The course will cover wildlife biology, some important issues related to terrestrial ecosystems such as Deforestation, Desertification, Reforestation, and Sustainable development. Information on major biomes and hotspots with some case studies will be also be provided.

2. Course Main Objective

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

- Discuss the terrestrial ecosystems, their structure, function, modeling, types, and resources.
- Describe the Floral, faunal, and microbial biodiversity in terrestrial ecosystems.
- Recognize the importance of Deforestation, Desertification, Reforestation, and Sustainable development in terrestrial biodiversity.
- Identify the major biomes and hotspots with some case studies.

3. Course Learning Outcomes

Course Learning Outcomes (CLOs)		Aligned PLOs*
1	Knowledge and Understanding:	
1.1	Describe terrestrial ecosystems, their structure, function, modeling, types, and resources.	K1
1.2	Describe Floral, faunal and microbial biodiversity in terrestrial ecosystems.	K2
1.3	Recognize wildlife biodiversity as a major component of terrestrial ecosystems.	K1
1...		
2	Skills:	
2.1	Recognize the Deforestation, Desertification, Reforestation and Sustainable development in terrestrial biodiversity.	S3
2.2	Recognize the processes that generate and maintain terrestrial biodiversity.	S3
2.3	Recognize major biomes and hotspots with some case studies.	S3
2...		
3	Values:	
3.1	Perform research studies on topics related to terrestrial biodiversity.	V1
3.2	Examine the importance of terrestrial biodiversity as an important natural resource.	V1
3.3	Operate in a team to conduct surveys, data collection, and analysis and prepare reports on terrestrial biodiversity.	V3
3...		

* Program Learning Outcomes

C. Course Content

No	List of Topics	Contact Hours
1	Introduction to terrestrial biodiversity	2
2	Terrestrial Ecosystem: Structure and function	2
3	Types of Terrestrial Ecosystems	2
4	Natural resources of terrestrial ecosystems	2
5	Modeling of terrestrial ecosystems	2
6	Floral biodiversity in terrestrial ecosystems	2
7	Faunal biodiversity in terrestrial ecosystems	2
8	Microbial biodiversity in terrestrial ecosystems	2
9	Wildlife biology, adaptations to habitats	2
10	Deforestation, Desertification, Reforestation and Sustainable development	2
11	Major biomes of the world	2
12	Major terrestrial hotspots of the world	2
13	Case studies on terrestrial biodiversity and its conservation	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 terrestrial ecosystems, their structure, function, modeling, types, and resources.	<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	Describe Floral, faunal and microbial biodiversity in terrestrial ecosystems.		
1.3	Recognize wildlife biodiversity as a major component of terrestrial ecosystems.		
1..			
2.0	Skills:		
2.1	Recognize the Deforestation, Desertification, Reforestation and Sustainable development in terrestrial biodiversity.	<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. - Fields reports.
2.2	Recognize the processes that generate and maintain terrestrial biodiversity.		
2.3	Recognize major biomes and hotspots with some case studies.		
2...			
3.0	Values:		
3.1	Perform research studies on topics related to terrestrial biodiversity.	<ul style="list-style-type: none"> - Research activities. - Oral presentations. - An internet search, assignments, and essays. - Group discussion. - Case studies. - Individual, and group presentations. 	<ul style="list-style-type: none"> - Student's essays and assignments. - Group reports. - Group presentations. - Discussion in lectures. - Student's written participation. - Analytical reports. - Lab. reports. - Case studies. - Posters.
3.2	Examine the importance of terrestrial biodiversity as an important natural resource.		
3.3	Operate in a team to conduct surveys, data collection, and analysis and prepare reports on terrestrial 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 Practical Exam	8	10
3	Pre-Final Theoretical Exam	8	25
5	Final Practical Exam	15	15
6	Final Theory Exam	16	40
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"> - Hegazy A., Lovett-Doust-J (2016) Plant Ecology in the Middle East. Oxford scholarship online. ISBN-13: 9780199660810, DOI:10.1093/acprof:oso/9780199660810.001.0001 - Yeqiao Wang (2020) Terrestrial Ecosystems and Biodiversity 2nd Edition. ISBN-13: 978-1138333918. - Frankham, R., Ballou, J. D., Briscoe, D. A. (2010). Introduction to Conservation Genetics. Second Edition. Cambridge University Press.
Essential Reference Materials	<ul style="list-style-type: none"> - <i>Journal of Biodiversity.</i> - <i>Terrestrial Ecosystems</i> - <i>Journal of Wildlife 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	