



## Course Specifications (Postgraduate Degree)

<b>Course Title:</b>	<b>Threats to Biodiversity</b>
<b>Course Code:</b>	<b>BIOD 509</b>
<b>Program:</b>	<b>M. Sc. Biodiversity</b>
<b>Department:</b>	<b>Biology</b>
<b>College:</b>	<b>Science</b>
<b>Institution:</b>	<b>University of Tabuk</b>

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## A. Course Identification

<b>1. Credit hours:</b> 3 Credit Hours (2 Theoretical + 1 Practical)
<b>2. Course type</b> <input checked="" type="checkbox"/> Required <input type="checkbox"/> Elective
<b>3. Level/year at which this course is offered:</b> Level 3/Second year
<b>4. Pre-requisites for this course (if any):</b> BIOD 501
<b>5. Co-requisites for this course (if any):</b> 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)	
<b>Total</b>		52

## B. Course Objectives and Learning Outcomes

### 1. Course Description

- This course describes the main threats to biodiversity, the risks of human activities pose to biodiversity. It also, analyze different risks and threats that cause habitat losses and damages, the distribution of species, and the consequences of biodiversity loss of organism species on humans life, as well as on the environment. Also, it discusses the impact of overhunting; overfishing, and over-harvesting on the loss of biodiversity with some historical examples. Besides, it also provides topics on environmental pollution, climatic change, exotic species, and disturbance of the ecosystem.

### 2. Course Main Objective

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

- Describe the main threats to biodiversity.
- Describe the risk of human activities to biodiversity.
- Analyze different risks and threats that cause loss of habitat and render the distribution of species.
- Analyze the consequences of biodiversity loss of species on ecosystems.
- Identify the impact of overhunting, overfishing, and over-harvesting on biodiversity.
- Discuss the effect of environmental pollution and climate changes on biodiversity.
- Explain the importance of exotic species and disturbance of the ecosystem.

### 3. Course Learning Outcomes

Course Learning Outcomes (CLOs)		Aligned PLOs*
<b>1</b>	<b>Knowledge and Understanding:</b>	
1.1	Describe the general considerations of biodiversity threats.	K1
1.2	Record natural threats to biodiversity.	K1
1.3	Record the anthropogenic threats to biodiversity.	K4
1.4	Outline the different wildlife habitats and distribution of species.	K1
1...		
<b>2</b>	<b>Skills:</b>	
2.1	Evaluate the threats to biodiversity resulting from human activities and natural conditions (e.g. floods, forest fire, diseases, etc.).	S3
2.2	Measure the effect of the resulting environmental changes on biodiversity in different environments.	S2
2.3	Recognize the international organizations and societies concerned with the protection of natural and biological diversity.	S4
2.4		
2...		
<b>3</b>	<b>Values:</b>	
3.1	Perform research studies on topics related to threats to biodiversity.	V1
3.2	Examine the impact of human and developmental activities on biodiversity.	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	A general account of threats to biodiversity.	2
2	Natural threats to Biodiversity: Cyclone, tsunami, earthquake, landslide, flooding.	2
3	Natural threats to Biodiversity: forest fire, diseases, and competition between species	2
4	Anthropogenic threats to Biodiversity	2
5	Threats of Developmental activities on Biodiversity; electric power generating projects, National highways, Railways, Modern communication technology.	2
6	Threats of Developmental activities on Biodiversity; Habitat loss, Poaching of wildlife and international trade, man-wildlife conflicts, overexploitation.	2
7	Pollution: air, water, and soil pollution.	2
8	Global warming, Ozone depletion, Greenhouse gas emissions	2
9	Sea-level rise, ocean acidification, and eutrophication.	2
10	IUCN threat categories and criteria.	2
11	Wildlife under IUCN threat categories	2
12	Distribution of Wildlife under IUCN	2
13	Effect of Wildlife under IUCN on the existing population	2
<b>Total</b>		<b>26</b>

## D. Teaching and Assessment

### 1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
<b>1.0</b>	<b>Knowledge and Understanding:</b>		
1.1	Describe the general considerations of biodiversity threats.	<ul style="list-style-type: none"> <li>- Lectures.</li> <li>- Group discussions.</li> <li>- Brainstorming.</li> <li>- The use of educational techniques (Videos).</li> <li>- Student's seminars.</li> <li>- Individual presentation.</li> <li>- Lab. demonstrations.</li> <li>- Field study.</li> </ul>	<ul style="list-style-type: none"> <li>- Oral discussions.</li> <li>- Long and short essays.</li> <li>- Exams (Mid and Final)</li> <li>- Homework.</li> <li>- Quizzes.</li> <li>- Demonstrations.</li> <li>- Lab. reports.</li> <li>- Field reports.</li> </ul>
1.2	Record natural threats to biodiversity.		
1.3	Record the anthropogenic threats to biodiversity.		
1.4	Outline the different wildlife habitats and distribution of species.		
1...			
<b>2.0</b>	<b>Skills:</b>		
2.1	Evaluate the threats to biodiversity resulting from human activities and natural conditions (e.g. floods, forest fire, diseases, etc.).	<ul style="list-style-type: none"> <li>- Lectures.</li> <li>- Group discussions.</li> <li>- Brainstorming.</li> <li>- Simulation.</li> <li>- Research paper-based learning.</li> <li>- The use of interactive video.</li> <li>- Lab. demonstrations.</li> <li>- Individual presentation.</li> <li>- Field study.</li> </ul>	<ul style="list-style-type: none"> <li>- Peer assessment.</li> <li>- Self-evaluation.</li> <li>- Oral discussion.</li> <li>- Exams (Mid and Final)</li> <li>- Quizzes.</li> <li>- Individual and group presentations.</li> <li>- Lab. reports.</li> <li>- Field reports.</li> </ul>
2.2	Measure the effect of the resulting environmental changes on biodiversity in different environments.		
2.3	Recognize the international organizations and societies concerned with the protection of natural and biological diversity.		
2....			
<b>3.0</b>	<b>Values:</b>		
3.1	Perform research studies on topics related to threats to biodiversity.	<ul style="list-style-type: none"> <li>- Research activities.</li> <li>- Oral presentations.</li> <li>- An internet search, assignments, and essays.</li> <li>- Group discussion.</li> <li>- Case studies.</li> <li>- Individual, and group presentations.</li> </ul>	<ul style="list-style-type: none"> <li>- Student's essays and assignments.</li> <li>- Group reports.</li> <li>- Group presentations.</li> <li>- Discussion in lectures.</li> <li>- Student's written participation.</li> <li>- Analytical reports.</li> <li>- Lab. reports.</li> <li>- Case studies.</li> <li>- Posters.</li> </ul>
3.2	Examine the impact of human and developmental activities on biodiversity.		
3.3	Operate in a team to conduct group reports and activities.		
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:**

- Academic and office hours (an hour per week).
- Academic advising sessions 1hr/ week per faculty member.

## F. Learning Resources and Facilities

### 1. Learning Resources

<b>Required Textbooks</b>	<ul style="list-style-type: none"> <li>- 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.</li> <li>- Wainer, A., Grabauskaite, O. and Kennet, M. (2014). Biodiversity Loss: The Threat to Life on Earth, pp. 285. The Green Economics Institute. ISBN-13: 978-1907543227.</li> <li>- R M Harrison (Editor), R E Hester (2007) Biodiversity Under Threat (Issues in Environmental Science and Technology, Volume 25) 1st Edition. ISBN-10:0854042512</li> </ul>
<b>Essential Reference Materials</b>	<ul style="list-style-type: none"> <li>- <i>International Journal of Biodiversity and Conservation.</i></li> <li>- <i>International Journal of Biodiversity and Endangered Species.</i></li> <li>- <i>Journal of Biodiversity and Endangered Species.</i></li> </ul>
<b>Electronic Materials</b>	<ul style="list-style-type: none"> <li>- Saudi Digital Library.</li> <li>- UNESDOC Digital Library.</li> <li>- <a href="http://www.sciencedirect.com">www.sciencedirect.com</a></li> </ul>
<b>Other Learning Materials</b>	<ul style="list-style-type: none"> <li>- Multimedia that is associated with the textbook and the relevant websites.</li> </ul>

## 2. Educational and Research Facilities and Equipment Required

Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	<ul style="list-style-type: none"> <li>- A sufficient number of classrooms, well equipped practical laboratories are available to accommodate 30-40 students.</li> </ul>
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	<ul style="list-style-type: none"> <li>- Data show projectors and wireless internet connection available for students and faculties.</li> <li>- Smart blackboard.</li> <li>- Computer Portable PowerPoint presentations.</li> </ul>
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	<ul style="list-style-type: none"> <li>- Lecture slides.</li> <li>- Reference Book.</li> <li>- A Note Book for writing notes.</li> <li>- Well-equipped biology laboratory.</li> </ul>

## G. Course Quality Evaluation

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

**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

<b>Council / Committee</b>	Biology Department Members who constructed the program
<b>Reference No.</b>	Committee members – The academic year 1441/1442
<b>Date</b>	