هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TPG-153

# Course Specification
(Postgraduate)

| | |
|---|---|
| **Course Title:** | Terrestrial Biodiversity |
| **Course Code:** | BIOD507 |
| **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 |

## Table of Contents

# A. General information about the course:

## 1. Course Identificationn:

| 1. Credit hours: (3 Hours) | | | | |
|---|---|---|---|---|
| | | | | |
| **2. Course type** | | | | |
| **A.** | ☐University | ☐College | ☒ Department | ☐Track |
| **B.** | ☒ Required | | ☐Elective | |
| **3. Level/year at which this course is offered: (Level 2/First year)** | | | | |
| **4. Course General Description:** | | | | |
| This course describes terrestrial ecosystems, their structure, function, modeling, types, and resources. Floral, faunal, and microbial biodiversity are also described in this course. The course will cover wildlife biology, and 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 also be provided. | | | | |
| **5. Pre-requirements for this course** (if any)**:** | | | | |
| **Principles of Biodiversity (BIOD501).** | | | | |
| **6. Pre-requirements for this course** (if any)**:** | | | | |
| None. | | | | |
| **7. Course Main Objective(s):** | | | | |
| - Discuss the terrestrial ecosystems, their structure, function, modeling, types, and resources.<br>- Describe the Floral, faunal, and microbial biodiversity in terrestrial ecosystems.<br>- Recognize the importance of Deforestation, Desertification, Reforestation, and Sustainable development in terrestrial biodiversity.<br>- Identify the major biomes and hotspots with some case studies. | | | | |

## 2. Teaching Mode: (mark all that apply)

| No | Mode of Instruction | Contact Hours | Percentage |
|---|---|---|---|
| 1 | Traditional classroom | 3 | 100% |
| 2 | E-learning | | |
| 3 | Hybrid<br>• Traditional classroom<br>• E-learning | | |
| 4 | Distance learning | | |

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

| No | Activity | Contact Hours |
|---|---|---|
| 1. | **Lectures** | 3 Hours/Week |
| 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 CLOs aligned with program | Teaching Strategies | Assessment Methods |
|---|---|---|---|---|
| **1.0** | **Knowledge and understanding** | | | |
| 1.1 | Identify key components of terrestrial biodiversity, including species, ecosystems, and ecological processes. | **K1** | - Lectures.<br>- Seminars.<br>- Class discussions.<br>- Problem-solving classes.<br>- Self-learning. | - Written exams (Midterm and Final exams).<br>- Quizzes.<br>- Class discussions. |
| 1.2 | Describe the terrestrial ecosystems, their structure, function, modeling, types, and resources. | **K2** | - Lectures.<br>- Seminars.<br>- Class discussions.<br>- Problem-solving classes.<br>- Self-learning.<br>- Presentations. | - Written exams (Midterm and Final exams).<br>- Quizzes.<br>- Class discussions.<br>- Presentations. |
| ..... | | | | |
| **2.0** | **Skills** | | | |
| 2.1 | Apply theoretical models to assess the effects of deforestation, desertification, reforestation, and sustainable development. | **S3** | - Lectures.<br>- Seminars.<br>- Class discussions.<br>- Problem-solving classes.<br>- Self-learning.<br>- Presentations. | - Written exams (Midterm and Final exams).<br>- Quizzes.<br>- Class discussions.<br>- Presentations. |
| 2.2 | Assess patterns of species distribution and ecosystem functions in | **S2** | - Lectures.<br>- Seminars.<br>- Class discussions. | - Written exams (Midterm and Final exams). |

| Code | Course Learning Outcomes | Code of CLOs aligned with program | Teaching Strategies | Assessment Methods |
|---|---|---|---|---|
| | different terrestrial biomes and hotspots. | | - Problem-solving classes.<br>- Self-learning.<br>- Presentations. | - Quizzes.<br>- Class discussions.<br>- Presentations. |
| 2.3 | Design a theoretical study plan for terrestrial biodiversity, including survey methods and data analysis. | **S4** | - Lectures.<br>- Seminars.<br>- Class discussions.<br>- Problem-solving classes.<br>- Self-learning.<br>- Presentations. | - Written exams (Midterm and Final exams).<br>- Quizzes.<br>- Class discussions.<br>- Presentations. |
| .... | | | | |
| **3.0** | **Values, autonomy, and responsibility** | | | |
| 3.1 | Collaborate effectively in a team to conduct surveys and data collection on terrestrial biodiversity, and prepare reports. | **V2** | - Class discussions.<br>- Presentations.<br>- Assignments.<br>- Reports. | - Class discussions.<br>- Presentations.<br>- Assignments.<br>- Reports. |
| ... | | | | |

## C. Course Content:

| No | List of Topics | Contact Hours |
|---|---|---|
| **1.** | Introduction To Terrestrial Biodiversity. | **3** |
| **2.** | Terrestrial Ecosystem: Structure and Function. | **3** |
| **3.** | Types of Terrestrial Ecosystems. | **3** |
| **4.** | Natural Resources of Terrestrial Ecosystems. | **3** |
| **5.** | Modeling of Terrestrial Ecosystems. | **3** |
| **6.** | Floral Biodiversity in Terrestrial Ecosystems. | **3** |
| **7.** | Faunal Biodiversity in Terrestrial Ecosystems. | **3** |
| **8.** | Microbial Biodiversity in Terrestrial Ecosystems. | **3** |
| **9.** | Wildlife Biology, Adaptations to Habitats. | **3** |
| **10.** | Deforestation, Desertification, Reforestation and Sustainable Development. (Part I). | **3** |
| **11.** | Deforestation, Desertification, Reforestation and Sustainable Development. (Part II). | |

| | | |
|---|---|---|
| **12.** | Major Biomes of The World. | **3** |
| **13.** | Major Terrestrial Hotspots of The World | **3** |
| **14.** | Pollution & Climate Change on Terrestrial Biodiversity & Case Studies on Terrestrial Biodiversity | **3** |
| **15.** | Case Studies on Terrestrial Biodiversity and Its Conservation | **3** |
| **Total** | | **45** |

## D D. Students Assessment Activities:

| No | Assessment Activities * | Assessment timing (in week no) | Percentage of Total Assessment Score |
|---|---|---|---|
| 1. | Quizzes | Distributed over 3-12 weeks | 10 |
| 2. | Assignments, or Reports | Distributed over 14 weeks | 15 |
| 3. | Individual or group presentation | Distributed over 14 weeks | 15 |
| 4. | Midterm Exam | 8 | 20 |
| 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** | - 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<br>- Yeqiao Wang (2020) Terrestrial Ecosystems and Biodiversity 2nd Edition. ISBN-13: 978-1138333918.<br>- Frankham, R., Ballou, J. D., Briscoe, D. A. (2010). Introduction to Conservation Genetics. Second Edition. Cambridge University Press. |
| **Supportive References** | - *Journal of Biodiversity.*<br>- *Terrestrial Ecosystems.*<br>- *Journal of Wildlife Management.* |
| **Electronic Materials** | - Saudi Digital Library.<br>- UNSEDOC Digital Library.<br>- www.sciencedirect.com. |

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| **Other Learning Materials** | - None. |

## 2. Educational and Research Facilities and Equipment Required:

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

## F. Assessment of Course Quality:

| Assessment Areas/Issues | Assessor | Assessment Methods |
|---|---|---|
| **Effectiveness of teaching** | - Students. | - Direct & Indirect. |
| **Effectiveness of student's assessment** | - Course instructors & Course coordinator (Teachers). | - Direct. |
| **Quality of learning resources** | - Students. | - Indirect. |
| **The extent to which CLOs have been achieved** | - Course instructors.<br>- Course coordinator<br>- Quality Committee. | - Direct & Indirect. |
| **Other** | | |

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

Assessment *Methods* (Direct, Indirect)

## G. Specification Approval Data:

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