جامعة البحرين
University of Bahrain
مركز ضمان الجودة والاعتماد الأكاديمي
Quality Assurance and Accreditation Center

# Academic Course Specification Form

## استمارة توصيف المقرر الأكاديمي

**القسم الخاص بالطالب**
**Section Concerning the Student**

| | | |
|---|---|---|
| **1. Course Code:** | BIOLS 340 | **1. رمز المقرر:** |
| **2. Course Title** | General Ecology | **2. اسم المقرر:** |
| **3. College:** | Science | **3. الكلية:** |
| **4. Department:** | Biology | **4. القسم:** |
| **5. Academic Program:** | Bachelor of Science in biology | **5. البرنامج الأكاديمي:** |
| **6. Course Credits:** | 2-2-3 | **6. عدد الساعات المعتمدة:** |
| **7. Course NQF Level:** | 7 | **7. مستوى المقرر وفقا للإطار الوطني للمؤهلات:** |
| **8. Notional Hours:** | 139 | **8. عدد الساعات الافتراضية:** |
| **9. NQF Credits:** | 14 | **9. عدد الساعات المعتمدة للمقرر وفقا للإطار الوطني للمؤهلات:** |
| **10. Prerequisite:** | BIOLS 103 | **10. المتطلب السابق للمقرر:** |
| **11. Lectures Timing & Location:** | | **11. وقت المحاضرة ومكانها:** |
| **12. General Mode of Teaching and Learning** | Traditional تقليدي | **12. النمط العام للتعليم والتعلّم:** |

| | | |
|---|---|---|
| **13. Course Coordinator:** | | **13. منسّق المقرر:** |
| **14. Course Instructor:** | | **14. مدرّس المقرر:** |
| **15. Office Hours and Location:** | | **15. الساعات المكتبية ومكانها:** |
| **16. Instructor's Email:** | | **16. البريد الإلكتروني لمدرّس المقرر:** |
| **17. Academic Year:** | | **17. السنة الأكاديمية:** |
| **18. Semester:** | | **18. الفصل الدراسي:** |

| | |
|---|---|
| **19. Textbook(s):** | **19. الكتب الدراسية للمقرر:** |
| Molles, M. (2018). Ecology: Concepts and Applications, 7th Edition, McGraw Hill.<br>Smith R. L. & Smith T. M. (2021). Elements of Ecology. Person. | |
| **20. References:** | **20. المراجع:** |
| Fundamentals of Ecology, Odum, E.<br>Principles of Ecology, Putman, R. & Wratten, S. | |
| **21. Other Learning Resources Used (e.g. e-learning, field visits, periodicals, software, etc.):** | **21. مصادر التعلّم الأخرى (مثال: التعلّم الإلكتروني، زيارات ميدانية، دوريات، برمجيات، إلخ....)** |
| Related journal articles will be reviewed during the course. | |
| **22. Course Description (as published in the College Catalogue):** | **22. توصيف المقرر (حسب ما ورد في دليل الكلية):** |
| The study of the interrelationships and interactions of organisms and their environments. Topics include population dynamics, interspecific relationships, community structure and function, nutrient cycling, energy flow in ecosystems and ecological implications of climate change. | |
| **23. Course Intended Learning Outcomes (3 to 5 CILOs):** | **23. مخرجات التعلّم للمقرر (CILOs) (3 إلى 5 مخرجات تعلّمية):** |
| 1. Distinguish basic principles, and major concepts of ecology. | |
| 2. Contrast major ecological processes and functions. | |
| 3. Analyze the characteristics of population, community, and ecosystem. | |
| 4. Perform effectively lab and filed exercises and communicate the findings. | |
| **24. Course Assessment Percentages (as per Regulations of Study and Examination at the University of Bahrain):** | **24. أساليب التقييم ونسبها المئوية (بحسب نظام الدراسة والامتحانات في جامعة البحرين):** |

| Assessment<br>التقييم | Type<br>النوع | Percentage<br>النسبة | Assessment Date<br>تاريخ التقييم |
|---|---|---|---|
| *Test 1* | Individual<br>فردي | *20%* | |
| *Test 2* | Individual<br>فردي | *20%* | |
| *Lab Assignments* | Group جماعي | *20%* | |
| *Final Exam* | Individual<br>فردي | *40%* | |
| **Total** | **100%** | | |

| **25. Description of Topics Covered** | **25. وصف الموضوعات التي ينبغي تناولها:** |
|---|---|
| ***Topic Title***<br>***(e.g. chapter/experiment title)***<br>**الموضوع** | ***Description***<br>**التفصيل** |
| What is Ecology | Definition of ecology and the subjects of ecology. |
| Temperature Relations | Macroclimate interacts with the local landscape to produce microclimatic variation in temperature. |
| Water Relations | The movement of water down concentration gradients in terrestrial and aquatic environments determines the availability of water to organisms. |
| Population Distribution and Abundance | The physical environment limits the geographic distribution of species. On small scales, individuals within populations are distributed in patterns that may be random, regular, or clumped; on larger scales, individuals within a population are clumped. |
| Species Abundance and Diversity | The lognormal Distribution. A combination of the number of species and their relative abundance defines species diversity |
| Species Interactions and Community Structure | A food web summarizes the feeding relations in a community. Indirect interactions between species are fundamental to communities. The feeding activities of a few keystone species may control the structure of communities. |
| Primary Production and Energy Flow | The interactions between organisms and their environments are fueled by complex fluxes and transformations of energy.<br>Terrestrial primary production is generally limited by temperature and moisture. Studies on aquatic primary production have revealed a positive relationship between nutrient availability and rate of primary production in aquatic ecosystems. |
| Nutrient Cycling and Retention | Use, transformation, movement, and reuse of nutrients in ecosystems; phosphorus, nitrogen, and carbon cycles. |
| Succession and Stability | Community changes during succession include increases in species diversity and changes in species composition. Ecosystem changes during |

| | | | | |
|---|---|---|---|---|
| | | | succession include increases in biomass, primary production, respiration, and nutrient retention. | |
| **26. Weekly Schedule** | | | | **26. الجدول الأسبوعي** |
| **Week**<br>**الأسبوع** | **Date**<br>**التاريخ** | **Topics Covered**<br>**الموضوعات المتناولة** | **CILOs**<br>**مخرجات التعلُّم للمقرر (CILOs)** | **Teaching/Assessment Mode and Method**<br>**منهجية ونمط التدريس/التقييم** |
| **1** | | **Chapter 1:** Introduction to Ecology<br>**Chapter 5:** Temperature Relations | **1** | Traditional تقليدي |
| **2** | | **Chapter 5:** Temperature Relations<br><br>LAB**:** Overview of the lab sessions, Safety, Risk assessment | **1, 3** | Traditional تقليدي |
| **3** | | **Chapter 6:** Water Relations<br><br>LAB: Scientific method, report, presentation, plagiarism | **1, 3** | Traditional تقليدي |
| **4** | | **Chapter 6:** Water Relations<br><br>LAB: Geomorphology Bahrain | **1, 3** | Traditional تقليدي |
| **5** | | **Chapter 9:** Population Distribution and Abundance<br><br>LAB: Terrestrial and marine habitats of Bahrain | **2, 3** | Traditional تقليدي |
| **6** | | **Chapter 9:** Population Distribution and Abundance<br><br>LAB**:** Sampling Design and sampling strategies in ecological Studies | **2, 3** | Traditional تقليدي |

| | | | | |
|---|---|---|---|---|
| **7** | | **Chapter 16:** Species Abundance and Diversity<br><br>LAB: Quadrat: population estimation | **2, 4** | Traditional تقليدي |
| **8** | | **Chapter 16**: Species Abundance and Diversity<br><br>LAB: Quadrat: species importance | **2, 4** | Traditional تقليدي |
| **9** | | **Chapter 17:** Species Interactions and Community Structure<br><br>LAB: Disturbance and species diversity | **2, 4** | Traditional تقليدي |
| **10** | | **Chapter 17:** Species Interactions and Community Structure<br><br>LAB**:** Sediment analysis (Chemical factors) | **2, 4** | Traditional تقليدي |
| **11** | | **Chapter 18: Primary** Production and Energy Flow<br><br>LAB: Sediment analysis (Physical factors) | **2, 3, 4** | Traditional تقليدي |
| **12** | | **Chapter 18:** Primary Production and Energy Flow<br><br>LAB: Seagrass in Bahrain (productivity) | **2, 3, 4** | Traditional تقليدي |
| **13** | | **Chapter 19:** Nutrient Cycling and Retention<br><br>LAB: LAB: Seagrass in Bahrain (nursery) | **2, 3, 4** | Traditional تقليدي |
| **14** | | **Chapter 19:** Nutrient Cycling and Retention<br><br>LAB: Keystone species | **2, 3, 4** | Traditional تقليدي |

| | | | | |
|---|---|---|---|---|
| **15** | | **Chapter 20:** Succession and Stability<br><br>LAB: Food web | **2, 3, 4** | Traditional تقليدي |
| **16** | | | | |

| **27. Academic Integrity Statement** | **27. بيان النزاهة الأكاديمية** |
|---|---|
| Students are to observe the highest level of honesty and academic ethics in pursuit of their academic goals as per UOB Regulations of Student Conduct and Academic Integrity, Anti-plagiarism Policies, and Students' Rights and Responsibilities Handbook. The consequences for cheating, plagiarism, unauthorized collaboration, and other forms of academic dishonesty can be very serious and will be dealt with as per the aforementioned policies and regulations. | يتعيّن على الطلبة الالتزام بأعلى مستويات الصدق والأمانة والأخلاق الأكاديمية في سعيهم لتحقيق أهدافهم الأكاديمية وفقًا للوائح سلوك الطلاب والنزاهة الأكاديمية، سياسات مكافحة الانتحال، ودليل حقوق الطلبة وواجباتهم، المعمول بها في جامعة البحرين. يمكن لعواقب الغش والسرقة الأدبية والتعاون غير المصرح به وغيرها من أشكال عدم الأمانة الأكاديمية أن تكون خطيرة للغاية وسيتم التعامل معها وفقًا للسياسات واللوائح المذكورة آنفا. |
| **28. Attendance and Absence Regulations** | **28. نظام الحضور والغياب** |
| Students are required to adhere to regular attendance for class lectures and practical sessions, as determined by the nature of the course, as per Article (33) of Regulations of Study and Examination at the University of Bahrain. | يجب على الطلبة الالتزام بالحضور المنتظم للمحاضرات الصفية والعملية، حسبما تحدده طبيعة المقرر الدراسي، ووفقا للمادة (33) من نظام الدراسة والامتحانات في جامعة البحرين. |