MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

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| **Module Information****معلومات المادة الدراسية** |

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| **Module Title** |  Ecology  | **Module Delivery** |
| **Module Type** | core | * **☒ Theory**
* **☒ Lecture**
* **☒ Lab**
* **☐ Tutorial**
* **☐ Practical**
* **☐ Seminar**
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| **Module Code** | / |
| **ECTS Credits**  | / |
| **SWL (hr/sem)** | 75 |
| **Module Level** | UGx11 1 | **Semester of Delivery** | 2 |
| **Administering Department** | Environmental Science |  **College** | College of Energy and Environmental Science |
| **Module Leader** | Muna Taha |  **e-mail** | munataha65@kus.edu.iq |
| **Module Leader’s Acad. Title** | Assistant lecturer | **Module Leader’s Qualification** | Ph.D. |
| **Module Tutor** | / |  **e-mail** | / |
| **Peer Reviewer Name** | / |  **e-mail** | / |
| **Scientific Committee Approval Date** |  | **Version Number** | 1.0 |

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| **Relation with other Modules****العلاقة مع المواد الدراسية الأخرى** |
| **Prerequisite module** | None | **Semester** |  |
| **Co-requisites module** | None | **Semester** |  |

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| **Module Aims, Learning Outcomes and Indicative Contents****أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية** |
|  **Module Objectives****أهداف المادة الدراسية** | 1- Learn about the basics of ecology and its relationship with other living organisms.2- Identify living and non-living components and the interaction between them.3- Understanding the vital connections between living organisms and the surrounding world.4- Knowledge of physical and chemical environmental factors.5- Knowledge of the water cycle and biogeochemical cycles.6- Knowing how energy flows in the ecosystem. |
| **Module Learning Outcomes****مخرجات التعلم للمادة الدراسية** | 1- Identify the components of the ecosystem and the importance of the environment and its uses.2- Studying the physical, chemical and biological properties of environment .3- Identify the types of environments4- Studying the types of living organisms and the factors affecting them. |
| **Indicative Contents****المحتويات الإرشادية** |  |

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| **Learning and Teaching Strategies****استراتيجيات التعلم والتعليم** |
| **Strategies** | LectureDiscussionPractical ExperienceClarification and Ask Questionsreflect on what you have learnedResearch and reports |

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| **Student Workload (SWL)****الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا** |
| **Structured SWL (h/sem)****الحمل الدراسي المنتظم للطالب خلال الفصل** | 75 | **Structured SWL (h/w)****الحمل الدراسي المنتظم للطالب أسبوعيا** | 5 |
| **Unstructured SWL (h/sem)****الحمل الدراسي غير المنتظم للطالب خلال الفصل** | 0 | **Unstructured SWL (h/w)****الحمل الدراسي غير المنتظم للطالب أسبوعيا** | 0 |
| **Total SWL (h/sem)****الحمل الدراسي الكلي للطالب خلال الفصل** | **75** |

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| **Module Evaluation****تقييم المادة الدراسية** |
| **As** | **Time/Number** | **Weight (Marks)** | **Week Due** | **Relevant Learning Outcome** |
| **Formative assessment** | **Quizzes** | 2 | 5% (10) | 5 and 10 | LO #1, #2 and #10, #11 |
| **Assignments** | 2 | 5% (10) | 2 and 12 | LO #3, #4 and #6, #7 |
| **Projects / Lab.** | 1 | 15% (10) | Continuous | All  |
| **Report** | 1 | 5% (10) | 13 | LO #5, #8 and #10 |
| **Summative assessment** | **Midterm Exam** | 2hr | 10% (10) | 7 | LO #1 - #7 |
| **Final Exam** | 3hr | 60% (50) | 16 | All |
| **Total assessment** | 100% (100 Marks) |  |  |

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| **Delivery Plan (Weekly Syllabus)****المنهاج الاسبوعي النظري** |
| **Week**  | **Material Covered** |
| **Week 1** | **Introduction to Ecology and eco system**  |
| **Week 2** | **Eco systems**  |
| **Week 3** | **Ecology has strong ties to other sciences**  |
| **Week 4** | **Functions of eco system** |
| **Week 5** | **Exam 1** |
| **Week 6** | **Eco system structure Abiotic** |
| **Week 7** | **The physical factors as limiting factors**  |
| **Week 8** | **Eco system factors biotic**  |
| **Week 9** | **Population growth Models** |
| **Week 10** | **Eco system structure biotic component ofeco system**  |
| **Week 11** | **eco system Functions energy flow**  |
| **Week 12** | **Exam 2** |
| **Week13**  | **Biogeochemical cycles** |
| **Week 14** | **Gaseous cycles and Carbon cycle** |
| **Week15**  | **Impact of human activates**  |

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| **Delivery Plan (Weekly Lab. Syllabus)****المنهاج الاسبوعي للمختبر** |
| **Week**  | **Material Covered** |
| **Week 1** | Lab 1: How to write test reports |
| **Week 2** | Lab 2: Familiarity with laboratory tools |
| **Week 3** | Lab 3: Laboratory safety symbols |
| **Week 4** | Lab 4: Laboratory equipment and methods |
| **Week 5** | Lab 5: Steps to use the optical and anatomical microscope |
| **Week 6** | Lab 6: Experiments measuring abiotic factors |
| **Week 7** | Lab 7: Chemical experiments |
| **Week 8** | Lab 8: Methods of collecting samples in the aquatic environment |
| **Week 9** | Lab 9: Plankton sample collection methods |
| **Week 10**  | Lab 10: Methods of collecting aquatic organisms |
| **Week 11** | Lab 11: Methods for collecting sediment samples |
| **Week 12** | Lab 12: Measuring factors affecting different environments: temperature, wind speed, light, turbidity, and current speed |
| **Week 13**  | Lab 13: Methods for measuring biodiversity |
| **Week 14** | Lab 14: Complement to the laboratory to measure biodiversity |
| **Week 15** | **Preparatory week before the final Exam** |

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| **Learning and Teaching Resources****مصادر التعلم والتدريس** |
|  | **Text** | **Available in the Library?** |
| **Required Texts** | Environmental Microbiology | No |
| **Recommended Texts** | 1-General ecology. 2- Workulegesse B.S.CM.SC,PHTeklu Mulugeta B. S.CAgaw Ambelu B. S.Civersity /2022 | No |
| **Websites** |  |

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|  **Grading Scheme****مخطط الدرجات** |
| **Group** | **Grade** | **التقدير** | **Marks %** | **Definition** |
| **Success Group****(50 - 100)** | **A -** Excellent | **امتياز** | 90 - 100 | Outstanding Performance |
| **B -** Very Good | **جيد جدا**  | 80 - 89 | Above average with some errors |
| **C -** Good | **جيد** | 70 - 79 | Sound work with notable errors |
| **D -** Satisfactory | **متوسط**  | 60 - 69 | Fair but with major shortcomings |
| **E -** Sufficient | **مقبول**  | 50 - 59 | Work meets minimum criteria |
| **Fail Group****(0 – 49)** | **FX –** Fail | **راسب (قيد المعالجة)** | (45-49) | More work required but credit awarded |
| **F –** Fail | **راسب** | (0-44) | Considerable amount of work required |
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| **Note:** Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above. |