**** The Islamia University of Bahawalpur

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**Tentative Course Plan**

**DEPARTMENT OF LIFE SCIENCES (ZOOLOGY)**

**Class: Semester- Session:**

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| --- | --- | --- | --- |
| **Instructor** | **Dr. Tahira Ruby** | **Email: tahira.ruby@iub.edu.pk** | |
| **Course Title** | **Animal Ecology** | **Program** | **BS-4 years** |
| **Course Number** | **LS-02603** | **Credit Hours** | **3(2+1)** |

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| **Lecture** | | Monday: 1.00-2.00pm, Tuesday,9.30-10.30am Tuesday. 12.00-2.00pm | | | |
| **Course Objective:**  The course imparts knowledge and concepts of ecology mainly based on animal life. The records also provide the information regarding the distribution of animals, preferred habitat, their life history and impact on different life forms.  **Course Outcomes:**   1. Detailed knowledge about the ecological zonation in the environment. 2. Concept of thermodynamics. 3. Present status, Future prospects. | | | | | |
| 1. The class will be conducted in a lecture and discussion environment, where the class teacher will lead discussion and students will be encouraged to participate and ask question at the end of session. The theory part will be supported by presentations and assignments in the field area accordingly. 2. Students will be expected to read assignments in advance and these will be tested through quizzes in class 3. The students will be taught theoretically with the help of audiovisual and conservative techniques 4. Students will be encouraged to deliver a seminar on the topic given to them 5. Teacher will be available for meeting class students immediately after each class | | | | | |
| **Resource Material** | | Odum, E.P.,1994. Fundamentals of Ecology (3rd ed.). W.B. Saunders, N. Jersey .  Moles, M.C. 2002. Ecology: Concepts and Applications. McGraw Hill, Boston.  Ali, S. 2005. Ecology. 2nd ed. Naseem BD Publications, PK. | | | |
| **Office Help Hours** | | All working days of the week | | | |
| **SEQUENCE OF TOPICS TO BE COVERED** | | | | | |
| Session/ Lecture # | Topics (outline of main topics and sub topics) | | Chapter # | Tutorial /Laboratory | |
| **1, 2 & 3** | An overview of the concepts of ecosystem with emphasis on interaction and homeostasis. | |  |  | |
| **4, 5 & 6** | Abiotic and Biotic components of ecosystem | |  |  | |
| **7, 8 & 9** | Basic global ecosystems (atmosphere, hydrosphere, lithosphere and ecosphere). | |  |  | |
| **10, 11 & 12** | Desert Ecosystem, Marine Ecosystem | |  |  | |
| **13, 14 & 15** | Esturine Ecosystem, Terrestrial Ecosystem | |  |  | |
| **16, 17 & 18** | Freshwater Ecosystem, Interactions among different types of ecosystem | |  |  | |
| **19, 20 & 21** | Biogeochemical cycles: nitrogen, phosphorus, | |  |  | |
| **22, 23 & 24** | sulfur, water and carbon nutrient. | |  |  | |
| **25** | **Mid Term Exam** | | Course/Discussion  from session 1 to 14 | | |
| **26, 27 & 28** | Limiting factors; basic concepts, temperature, soil, water and humidity, light and fire. | |  | |  |
| **29, 30 & 31** | Energy: laws of thermodynamics, primary and secondary productions, | |  | |  |
| **32, 33 & 34** | Trophic levels and energy variation with increasing trophic levels, energy flow, food chains and food web. | |  | |  |
| **35, 36 & 37** | Population ecology; basic population characters, growth and growth curves, population dynamics and regulations. | |  | |  |
| **38, 39 & 40** | Community ecology: basic concepts, community analysis, ecotones, inter-population interactions. | |  | |  |
| **41, 42 & 43** | Ecological niche, basic concepts and types. | |  | |  |
| **44, 45** | Applied Ecology. | |  | |  |
| **46, 47** | An overview of the major biomes of the world | |  | |  |
| **48** | **Final Term Exam** | | Course/Discussion  from session 1- 29 | | |

**Student Evaluation criteria:**

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| --- | --- |
| Attendance | 5% |
| Workshop / Assignments/Case study | 5% |
| Surprise Test/Sudden Test , Quizzes | 5% |
| Class Participation | 5% |
| Mid Term Paper | 30% |
| Final Term paper | 50% |
| **Total** | **100%** |

**Student Responsibilities**:

Students must attend class.  Failure to attend class may result in failure in the course.  Students must also arrive on time and remain in class for the entire period.  Cellular Phones and Beeper must be Turned off (Proper classroom decorum [behavior] adopts, Course outlines and calendars explain requirements and assignments, students are responsible for knowing what they say.  Students are also responsible for doing all assigned work on time. Excessive absences (more than 03) will result in “F Grade”. Students may prepare Sketchbook for taking notes and for references.

**Instructor/Tutor**

**Approved by:**

**Dean/ Chairman/ HOD/ Subject Specialist/ Program Coordinator**