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| **Course Code** | ZYU4300 |
| **Level** | 4 |
| **Course Title** | Animal Form and Function |
| **Credit value** | 03 |
| **Core/Optional** | Core |
| **Prerequisites** | ZYU3500 (EL/CR) |
| **Hourly breakdown** | **Theory** | **Practical** | **Independent Learning** | **Assessment** | **Total** |
| Sessions 21 X 2 = **42 hrs** | Ds hrs = **12 hrs**  | Lab = **21 hrs** | * Sessions (21x 3) = **63hrs**
* Online and other learning resources = 3 **hrs**
* Lab/field/other (21x 0.5) = **10.5hrs**
 | * Continuous Assessments (CA)= 2hrs
* Practical assessments (PA) = 0.5hrs
 | 154 hrs |
| **Course Aim/s.** | To provide knowledge on structural organization of animals to carry out fundamental living processes, provide basic laboratory skills in animal physiology and anatomy, provide necessary skills and understanding to explore further how animals live and function in their own environment, develop the ability to solve problems, analyse, interpret information and to engage in effective communication |
| **PLOs addressed by course**  | **PLO1: Knowledge:** Explain the fundamental, principles and broader knowledge pertaining to the chosen science disciplines offered for the degree.**PLO2: Practical Knowledge and Application**. Demonstrate the competency to use the knowledge and practical skills appropriately.**PLO3: Communication**: Demonstrate the competency in communicating efficiently and effectively to present information, ideas and concepts to the scientific community as well as to the wider society.**PLO4: Individual Work, Team Work and Leadership**: Demonstrate the competency in working independently and in groups in addressing issues in multi-disciplinary environments and completing the tasks on time through collaborative learning while exhibiting leadership. **PLO5: Creativity and Problem Solving:** Identify and analyze problems using quantitative and/or qualitative approaches using scientific methodology to provide valid conclusions. **PLO6: Adaptability and Flexibility:** Demonstrate the ability to adapt to diverse working environments using flexible approaches and strategies. **PLO7: Information and Communication Technology Literate**: Demonstrate the competency of using Information and Communication Technology for numerical and statistical analysis, and in day to day applications.  |
| **Course Learning Outcomes (CLO)** | Upon completion of this course, students will be able to:CLO1: Describe the basic structural organization in the animal body in relation to fundamental living processes (PLO1)CLO2: Describe the structure and function of the digestive, respiratory, circulatory, excretory, endocrine, reproductive and defense systems in the animal kingdom (PLO1)CLO3: Explain structural and functional adaptations shown in organs/systems of various animal phyla to maximize their efficiency (PLO1)CLO4: Demonstrate practical skills in fundamental laboratory techniques to explain principles of animal physiology and anatomy (PLO1-PLO7)CLO5: Application of knowledge to understand deviations of physiological/health conditions (PLO1-PLO7)CLO6: Communicate effectively and accurately in written form (PLO1-3, PLO5-7) |
| **Content** **(Main topics, sub topics)**  | **Animal organization, Digestion and Nutrition***:* Focuses on structural organization of animals and obtaining essentials for life via digestion and nutrition**Gaseous exchange and internal transport:** Deals with the structure and function of the respiratory and circulatory systems. **Controlling the internal environment:**Understanding the concepts of homeostasis, osmoregulation and structure & function of excretory system which maintain a stable internal environment.**Coordination, movement, and continuation of life***:* Understanding the mechanisms of body coordination through the functions of nervous system and endocrine system. Concepts of body movements through muscular system and continuation of species through the function of reproductive system. |
| **Teaching Learning methods** | Self-Learning/Independent learning of Self-study (IL) * Course material in print and web based material
* practical exercises related to group work
* Additional reading material / recommended reading
* Online interactivity through MOODLE LMS (some activities will contribute towards OCAM) (OL)

Contact sessions* Day schools (discussion classes) Non- compulsory
* Laboratory practical exercises (compulsory)
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| **Assessment strategy** | Overall CA Mark (OCAM): 40 % OCAM | Final Assessment: 60% |
| Continuous Assessment (CA) Detail:OCAM=50% of the best NBT + 20% of the other NBT + 30% Practical (spot test) | Theory: 100%1 paper (Essay) – 2hrs |
| **Recommended** **Readings:** | 1. Sherwood, L., Klandorf, H., & Yancey, P. (2012). Animal physiology: from genes to organisms. Cengage Learning.
2. Rastogi, S. C. (2007). Essentials of animal physiology. New Age International.
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