Birla Institute of Technology and Science, Pilani
Hyderabad Campus

FIRST SEMESTER 2021-22
Course Handout

Dated: August 20, 2021

Course No : **BIO F313**
Course Title : **Animal Physiology**
Instructor-In charge : **Dr. K. NAGA MOHAN**
Co-instructor : Anuhya Anne

1. Course Description:

Fundamentals underlying the working of tissues and organ systems in animals with emphasis on mammalian systems and integration of organ systems at the level of the whole organism. Important physiological systems will be taught such as respiratory, circulatory, nervous, endocrine, excretory, muscles, skeletal and reproductive systems.

2. Scope & Objective:

This course attempts to bring the awareness to the students regarding major features of physiological system in animals with focus on human physiology. Emphasis will be given to the function and adaptations as related to the survival of organisms in their ecosystem.

Text Book:
Sherwood, L., Klandorf, H. and Yancey, P.H., Animal Physiology: From Genes to Organisms, 2005, Brook/Cole Cengage Learning., Singapore

Reference books:
1.Sherwood L: Principles of Human Physiology. Brook/Cole Cengage Learning., Indian edition

2.Christopher D. Moyes and Patricia M. Schulte, Principles of Animal Physiology.2nd edition Pearson Education, 2016

Course plan*:

Lect.	Learning objective	Topics to be covered	Chapter in the Text Book
1-2	What is Homeostasis?	Introduction to Physiology and Homeostasis	TB: Chap 1&2 RB1: Chap 1
3-6	How are electric signals generated and transmitted?	Neuronal Physiology	TB: Chap 4
7-11	Organization of Brain, nerves and the spinal cord	Nervous system	TB: Chap 5 RB2: Chap 7
12-14	How do we sense a stimulus?	Sensory Physiology	TB: Chap 6
15-18	Support and movement of the body	Muscles Physiology	TB: Chap 8

19-22	Hormones and their function	Endocrine system	TB: Chap 7
23-26	Self-maintenance and exchange of metabolites	Circulatory system	TB: Chap 9
27-30	Breathing and exchange of gases	Respiration system	TB: Chap 11
31-33	Organ system and glands involved in food processing	Digestive system	TB: Chap 14
34-37	Regulating the internal environment and removing the waste	Excretory system	TB: Chap 12
38-40	How animals multiply?	Reproductive system	TB: Chap 16

***** Some components of the topics related to brain, sensory physiology and reproduction will be also given as self-study for open book/ take home evaluations

Evaluation scheme:

Component	Duration	Weightage % (Total marks-200)	Date & Time	Venue	Remarks
Mid Semester Test		30 (60M)	21/10/2021 11.00 - 12.30PM		CB
Multiple Quizzes + Open Book evaluations[+]	Variable	20 (40M) 15 (30M)	Announced in class		CB OB
Comprehensive		35 (40M) (30M)	18/12 FN		CB OB

[+] Quizzes are announced, a total of three quizzes will be taken. Students will be given topics to be read from whatever material they can access and then will be asked to give a written document on the basis of their understanding on a scheduled day.

CB- Closed Book
OB- Open Book
Chamber consultation hour: To be announced in the class.

Notices:

All notices/ announcements regarding this course shall be displayed in Course Management System

Grading policy: Award of grades will be guided in general by the histogram of marks. Decision on border line cases will be taken based on individual's sincerity, student's regularity in attending classes, and instructor's assessment of the student.

Make-up policy:
Make-ups will be granted for mid semester test or comprehensive test only if candidate is sick and hospitalized. No make-up will be granted for quizzes/assignments under any circumstances.

Academic Honesty and Integrity Policy:
Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

Instructor-in- charge
BIO F313