

01.08.19

Course No : BIO F313
Course Title : Animal Physiology
Instructor-In charge : Dr. PRAGYA KOMAL

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 Review articles
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 Review articles
23-26	Self-maintenance and exchange of metabolites	Circulatory system	TB: Chap 9 Review articles
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 Research articles
38-40	Fluid-Acid-Base balance	Osmoregulators and Volume Balance	TB: Chap 13
41-42	How animals multiply?	Reproductive system (Self study)	TB: Chap 16

Evaluation scheme:

Component	Duration	Weightage % (Total marks-200)	Date & Time	Venue	Nature of the Component
Mid Semester Test	1.5 hrs.	30 (60M)	28.09.19 (11.00 – 12.30 PM)		CB
Multiple Quizzes + Home Assignments	Variable	25 (50M) 5 (10M)	Announced in class		CB OB
Comprehensive	3 hrs.	25 (50M) 15 (30M)	02.12.19 (AN)		CB OB

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**