Programme: M. Sc. (Zoology)
Course Code: ZOC-304 **Title of the Course:** Environmental Physiology
Number of Credits: 4
Effective from AY: 2018-19

Prerequisites for the course:	Basic knowledge of Animal Physiology and biochemistry	
Objective:	To learn the meaning of adaptation To understand how the various physiological processes adjusted during the fluctuation of the various environmental parameters.	
Content:	**Module 1**: Nature and levels of adaptation; Mechanism of adaptation; Capacity adaptation; Biochemical and physiological effects of temperature; regulation of heat gain and heat loss, Role of nervous system and endocrine system in thermal biology; homeoviscous adaptation Biochemical and physiological effects of salinity; regulation and movements of water and solute; osmoregulatory organs and their excretory products; cost and energy of regulation of water and ions. **Module 2:** Strategies and mechanism in physiological adaptation with reference to Deep sea, high altitude, desert, cave and endo -parasitic organisms.	12 hours 12 hours
Pedagogy:	Lectures/ tutorials/assignments/self-study	
References/Readings	1. Hochachka PW and Somero GN, Biochemical Adaptation, Oxford University Press, Oxford. 2. Nielsen S, Animal Physiology: Adaptation and Environment, Cambridge University Press, Cambridge. 3. Wilimer P, Stone G and Johston IA, Environmental Physiology. of Animals,Wiley Blackwell Publishing Co, USA	
Learning Outcomes	1. Understanding the concept of adaptation. 2. Understanding the life processes at various environmental condition.	