



COURSE CURRICULUM

Course Title: Animal Physiology and Nutritional Ecology

Course Code:

Credit Units: 02

Level: PG

Course Objectives:

The objective of this course is to describe about the feeding ecology of herbivores, carnivores, insectivores and omnivores. To also study the eco-physiology and importance of minerals to animal health, growth and reproduction.

Prerequisites:

Graduate from Biological science Bachelor degree in Science/Zoology/Botany/Anthropology/Veterinary/Environmental Science/Forestry/ Agriculture/Geography/Natural Resources/Ecology and minor in any of these subjects, and understanding of basics of life sciences.

Course Contents/Syllabus:

	Weightage (%)
Module I	50
Feeding ecology of herbivores, carnivores, insectivores and omnivores – food selection, quantity, quality (nutritional value), seasonal variations, relations to food to animal condition. Predator-prey interactions.	
Module II	50
Eco-physiology with special reference to adaptations to water and temperature. Importance of minerals to animal health, growth and reproduction.	

L	T	P/S	SW/FW	TOTAL CREDIT UNITS
2	0	0	0	2

Student Learning Outcomes:

1. Provide an overview of the energy and nutrient requirements of wildlife
2. Identify energetic and nutritional constraints for wildlife, and adaptations to these constraints
3. Assess the adaptive significance of resource acquisition and allocation in wildlife
4. Describe the fundamental methods and techniques for research in wildlife physiological ecology
5. Relate physiological ecology to wildlife ecology, conservation, and management

Pedagogy for Course Delivery:

Class room lectures, PowerPoint presentations, Tutorial sessions, Discussions and Interactions and assignments/tests/term papers/seminars

Assessment / Examination Scheme:

Theory L/T (%)	Lab/Practical/Studio (%)	End Term Examination
30%	NA	70%

Theory Assessment (L&T):

Continuous Assessment/Internal Assessment					End Term Examination
Component (Drop down)	Mid-Term Exam	Project	Viva	Attendance	
Weightage (%)	10	10	5	5	70

References:

1. Principles of Animal Physiology (2nd Edition) Hardcover – October 15, 2007 by [Christopher D. Moyes](#) and [Patricia M. Schulte](#) , ISBN-13: 978-0321501554
2. Animal Physiology by Knut Schmidt-Nielsen (30 April 2008)
3. Essentials of Animal Physiology by S. C. Rastogi (1 December 2008)
4. Animal Physiology by N Arumugam and A Mariakuttikan (2009)
5. Animal Physiology by P.S. Verma, B.S. Tyagi and V.K. Agarwal (30 October 2000)
6. Animal Physiology: Adaptation and Environment by [Knut Schmidt-Nielsen](#), Publisher: [Cambridge University Press](#), Published: 01 May 1997, ISBN 13: 9780521570985 ISBN 10: 0521570980
7. Animal Physiology (2 Vols. Set) by Devyani Khemka (2003)
8. Animal Physiology by K.A. Goyal and K.V. Sastry (1 December 2004)
9. Animal Physiology: Mechanisms & Adaptations by Eckert and Randal (2008)
10. Animal Physiology by Animal Physiology (1 August 2011)
11. Animal Physiology by Dr. K. A. Goyal and Dr. K. V. Sastry (2006)
12. Cunningham JG. 1992. Text book of Veterinary Physiology, WB Saunders.
13. Swenson MJ & Reece WO. 2005. Duke's Physiology of Domestic Animals. Panima.
14. D.C. Church. (1988) Digestive Physiology & Nutrition of Ruminants, Praeice Hall.