

As Per NEP 2020

University of Mumbai



Syllabus for Basket of Open Elective (OE)	
Board of Studies in Zoology	
UG First Year Programme	
Semester - II	
Title of Paper	Credits 2/ 4
I) OE3A: Economic Zoology	2
II)	
III)	
From the Academic Year	2024-25

OE3A: Economic Zoology

Sr. No.	Heading	Particulars
1	Description the course:	This course enables learners to comprehend the economic importance of animals, by developing basic understanding of animal husbandry including dairy, vermicomposting, sericulture, poultry, goat keeping, beekeeping and aquaculture.
2	Vertical :	Major/Minor/Open Elective /Skill Enhancement /Ability Enhancement/Indian Knowledge System (Choose By ✓)
3	Type :	Theory
4	Credit:	2 credits (1 credit = 15 Hours for Theory in a semester)
5	Hours Allotted :	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: The course aims at providing learners with, CO 1. Insights into the economic aspects of zoology. CO 2. Basic knowledge of animal husbandry for exploring entrepreneurship opportunities. CO 3. Basic understanding of modern techniques in animal husbandry.	
8	Course Outcomes: Upon completion of the course, the learners should be able to: OC 1. Comprehend the economic importance of domestic animals. OC 2. Explore entrepreneurship opportunities in Zoology. OC 3. Apply the modern animal husbandry methods to improve welfare and productivity and apply ethical practices.	

OE3A: Economic Zoology

9	Module 1: Economic Zoology-I	15hr
	1.1 Dairy: 1.1.1 Introduction, 1.1.2 Breeds of cows and buffaloes (any three breeds of each). 1.1.3 Milk products	05hr
	1.2 Vermicompost: 1.2.1 Introduction 1.2.2 Different species of earthworms. 1.2.3 Methods of vermicomposting. 1.2.4 Maintenance, harvesting and economic importance.	05hr
	1.3 Apiculture: 1.3.1 Introduction 1.3.2 Varieties of honeybees 1.3.3 Management 1.3.4 Apiculture products and their economic importance.	05hr
	Module 2: Economic Zoology-II	15hr
	2.1 Aquaculture: 2.1.1 General introduction, types (freshwater, mariculture, cage culture, pen culture) 2.1.2 Culture of fresh water fishes and shellfish (Scampi, Rohu and Catla) 2.1.3 Culture of marine fishes and shellfish (Tiger prawn, Sea bass and crab culture) 2.1.4 Pearl culture: Introduction, Types of pearls, Pearl culture: Marine and freshwater, Basic technique. 2.1.5 Economic importance of fish and shellfish culture (products and by products)	05hr
	2.2 Goat farming 2.2.1 Introduction 2.2.2 Indigenous and exotic breeds of goat (any three breeds of each). 2.2.3 Economic importance	04hr
	2.3 Poultry 2.3.1 Breeds of chicken in India, broiler and layers. 2.3.2 Poultry products.	03hr
	2.4 Sericulture 2.4.1 Species of silkworm- <i>Bombax mori</i> and <i>Antheraea assamensis</i> 2.4.2 Types of silk – Mulberry, Eri, Muga, Tussar 2.4.3 Techniques in silk production.	03hr
	* Suggested topics for assignment: Report on any animal husbandry activity; Visit to any animal husbandry industry; Report on the animals animal products; any other topic relevant to the syllabus.	

10.	Text Books: 1. Mathur, S. (2009). Economic Zoology Biostatistics and Animal Behaviour. Deep and Deep Publications. 2. Shukla, G. S., & Upadhyay, V. B. (2010). Economic zoology. Rastogi Publications. 3. Ahsan, J. (1995). A Handbook of Economic Zoology. India: S. Chand Limited.
11.	Reference Books: 1. Morse, R. A. (2014). Comb Honey Production. (n.p.): Wicwas Press. 2. The Complete Book on Beekeeping and Honey Processing -2nd Revised Edition. (2007). India: NIIR Project Consultancy Services. 3. Handbook on Fisheries and Aquaculture Technology. (2003). India: NIIR Project Consultancy Services. 4. Srivastava, U. K. (1993). Freshwater Aquaculture in India. India: Oxford & IBH Publishing Company.

Sign of the BOS
Coordinator
Dr. Vaishali Somani
BOS in Zoology

Sign of the
Offg. Associate Dean
Dr. Madhav R. Rajwade
Faculty of Science &
Technology

Sign of the
Offg. Dean
Prof. Shivram S. Garje
Faculty of Science &
Technology