

**The Kelkar Education Trust's**  
**V. G. Vaze College of Arts, Science & Commerce (Autonomous)**  
**Affiliated to University of Mumbai**

**(Re Accredited By NAAC with Grade A)**

**Revised Syllabus for SYBSc**  
**Based on NEP-2020 Guidelines**

**Program: B.Sc.**

**Course: ZOOLOGY**

**To Be Implemented From**

**Academic Year 2024-25**

**S.Y.B.Sc. (Zoology)**

**Semester: III**

**Open Elective (OE) - Science of Evolution**



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**Programme:** S.Y.B.Sc.

**Semester:** III

**Course:** Zoology - Open Elective (for Arts)

**Course code:** VGVUOE307

**Credits:** 02 credits

Teaching Scheme (Hrs/Week)				Continuous Internal Assessment (CIA) 40 marks					End Semester Examination	Total
L	T	P	C	CIA-1	CIA-2	CIA-3	CIA-4	Lab	Written	
2	-	-	2	15	15	10	-	-	60	100
<b>Max. Time, End Semester Exam (Theory) - 2Hrs.</b>										

**Prerequisite**

1. Basic knowledge about Zoology
2. Curiosity regarding aspects of the animal kingdom

### Course Objectives

1. Enables learners to understand how evolutionary theory can be used to understand different aspects of the human experience.
2. Learners will be able to understand the complexity of human behavior resulting from both biological and social factors.
3. Learners will gain a historical perspective on the evolution of evolutionary theory, tracing its development from early ideas to current understandings.



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**SEMESTER III**

<b>Course Content</b>			
<b>Unit No.</b>	<b>Module No.</b>	<b>Content</b>	<b>Lectures</b>
<b>VGVOE307 - Science of Evolution</b>			
<b>1</b>	I, II, III	<b>Psychology and evolution</b> I. Introduction to psychology and evolution II. Amygdala - center of emotions, psychosomatic behavior, conscious mind, subconscious mind, III. Altruism, sexual selection, adaptiveness of human behavior, Nature vs Nurture.	<b>10</b>
<b>2</b>	I, II, III	<b>Sociology and evolution</b> I. Introduction to sociology and evolution II. Concepts of Darwinian evolution - natural selection, adaptation, Social Darwinism III. Broca's and Wernicke's Areas, Evolution of brain size and intelligence IV. Social knowledge in primates, Language and the Evolution of Communication Skills, The cultural evolution and ecology of institutions	<b>10</b>
<b>3</b>	I, II, III	<b>The history of evolution</b> I. Evolution of horses, the interaction of Horses and humans and how it shaped modern society, II. Evolution of Elephants, role of elephants in ancient and modern human society III. Evolution of Humans, The influence of evolutionary history on human health and disease	<b>10</b>
<b>Total No. of Lectures</b>			<b>30</b>

**Beyond the syllabus**

**Tutorial activities: Student's presentations, Use of E-learning and M-learning, Use of animations.**



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**Course Outcome**

After the completion of the course, students will able to

CO1 know the scientific reasoning behind how human emotions evolved

CO2 understand the role of evolution in shaping social structures

CO3 undertsand the history of how early animals evolved

**Recommended resources**

1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8126459/>
2. Wuketits, F. M., & Antweiler, C. (Eds.). (2008). Handbook of evolution: The evolution of human societies and cultures. John Wiley & Sons.
3. The Oxford handbook of evolutionary psychology. Edited by R.I.M. Dunbar and Louise Barrett.
4. Benton, M. L., Abraham, A., LaBella, A. L., Abbot, P., Rokas, A., & Capra, J. A. (2021). The influence of evolutionary history on human health and disease. Nature Reviews Genetics, 22(5), 269-283.

