ST. ALOYSIUS' COLLEGE (AUTONOMOUS), JABALPUR

Reaccredited 'A++ 'Grade by NAAC(CGPA:3.58/4.00)
College with Potential for Excellence by UGC
DST-FIST Supported & STAR College Scheme by DBT

Part A Introduction (Theory)			
Program: Certificate	**Class:** B.Sc.	**Semester:** I	**Session:** 2025-26
Subject: Zoology Major – I			

1	**Course Code**		
2	**Course Title**	**Animal Diversity I: Lower Non-Chordata**	
3	**Course Type (Core Course/ Discipline Specific Elective/)**	**Major – I**	
4	**Pre-requisite (if any)**	To study this course, a student must have the subject Biology in 12th Class	
5	**Course Learning outcomes (CLO)**	After the completion of the course the learners will be able to understand: 1. Animal classification according to Indian knowledge-based system. 2. Identify lower non-chordates. 3. In practical learner enhance knowledge by group discussion, collaborative learning and by project work.	
6	**Credit Value**	**06**	
7	**Total Marks**	Max. Marks: 30 + 70	Min. Passing Marks: 35

23/08/25
Dr. Jitendra Vaverya

3.8.2025
(Dr. Sunita Sharma)

Dr. Madhuri Saxena

Dr. Priyanka Soni

Dr. Runa Paul

Dr. Daya Shankar Chaturvedi

Dr. Manju Dixit

Ms. Amita Saxena

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Part B- Content of the Course		
Total No. of Lectures-Tutorials-Practical (in hours per week): 2 hours / Week L-T-P		
Unit	**Topics**	**No. of Lectures**
Unit 1	**Taxonomy and Historical Background of Lower Non-Chordates –** 1. Classification of Lower Non-Chordates by Charak (Reference Charak Samhita, Sutrasthan 27/34-45) on the basis of their Habitat and Nutrition. 2. Correlation between Mythological Avatars and Evolution of Animals 3. Outline Classification of Animal Kingdom. 4. Rules of Nomenclature. **Keywords/Tags:** Classification, Nomenclature, Mythology, Evolution.	12
Suggestive Activity	1. Role plays of Pauric Avatars related to Biological Evolution. 2. Making of Flow Chart of Animal kingdom.	
Unit 2	**Phylum - Protozoa and Porifera** 1. Habitat Mentioned in "Shri Ram Charit Manas ki Vaigyanik Teeka"; by Dr. S. P. Gautam. 2. Characteristics and Outline Classification up to Classes according to Parker and Haswell 7th edition revised by Marshall and Williams 3. Protozoa and Disease. 4. Cellular Organization and Canal System in Porifera 5. Medicinal and Economic uses of Sponges **Keywords/Tags:** Protozoa, Disease, Porifera, Canal system, Cellular organization	12
Suggestive Activity	1. Submit an assignment on Protozoa and Disease 2. Making of poster of different Canal system of Porifera	

Unit 3	**Phylum - Coelenterata-** 1. Habitat of Coelenterates mentioned in "Shrimad Bhagwat me Vigyan". 2. Characteristics and Classification up to Classes by Parker and Haswell 7th edition revised by William Marshall. 3. Polymorphism and Metagenesis. 4. Role of Corals in Marine Ecosystem as mentioned in Rigveda (Reference: Rigveda 1.71.2.) 5. Coral: Medicinal, Cultural and its Economic Importance. **Keywords/Tags: Coelenterata,** Polymorphism, Metagenesis, Coral	12
Suggestive Activity	**1.** Making of chart of Obelia Life-History **2.** Collect pictures of Corals and write their Zoological Names	
Unit 4	**Phylum - Platyhelminthes** 1. Its habitat mentioned in Shrimad Bhagwat mein Vigyan. 2. Characteristics and Classification up to Classes by Parker and Haswell 7th edition revised by William Marshall. 3. Fasciola - External Structure, Excretory System, Reproductive System. 4. Fasciola – Life Cycle and Parasitic Adaptations. 5. Antiparasitic and Antimicrobial Properties of Platyhelminths **Keywords/Tags:** Platyhelminthes, Excretory system, Reproductive system, Life Cycle, Parasitic Adaptations	12
Suggestive Activity	1. Make placards of Parasitic Adaptations Roundworms and Flatworms.	

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Unit 5	**Phylum - Aschelminthes** 1. Characteristics and Classification up to Classes by Parker and Haswell 7th edition revised by William Marshall. 2. Concept of Pseudocoel. 3. Study of Pathogenic Helminthes. 4. Medicinal uses of Round Worms. **Keywords/Tags:** Aschelminthes, Pseudocoel, Pathogenic, Round Worms.	12
Suggestive Activity	1.Group discussion on hygiene and Pathogenic Helminthes	

Part -C: Assessment & Evaluation (Theory)		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Continuous Comprehensive Evaluation (CCE): 30 Marks University Exam (UE) 70 marks		
Internal Assessment: Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	30
External Assessment: Exam Section Time: 03.00 Hours	**Section(A):** Very Short Questions **Section (B):** Short Questions **Section (C):** Long Questions	70

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Part A Introduction (Practical)			
Program: Certificate	Class: B.Sc.	Semester : First	Session: 2025-26
Subject: Zoology Major – I			

1	Course Code		
2	Course Title	Animal Diversity I - Lower Non-Chordate	
3	Course Type (Core Course/ Discipline Specific Elective/ Elective/ Generic Elective /Vocational/)	Major – I	
4	Pre-requisite (if any)	To study this course, a student must have had the subject Biology in 12th Class.	
5	Course Learning outcomes (CLO)	**Upon completion of the course students should be able to understand -** 1. The identification of the lower non-chordate animals through study of museum specimens and slides. 2. The pathogenic lower non-chordates. 3. Enhance collaborative learning and communication skills through practical sessions, team work, group discussions, assignments and projects.	
6	Credit Value	02	
7	Total Marks	Max. Marks: 30+70	Min. Passing Marks:35

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Part B- Content of the Course		
Total No. of Lectures-Tutorials-Practical (in hours per week): L-T-P:		
Unit/S. No.	**Topics**	**No. of hours**
1	Study of Museum Specimens and Slides of Lower Non-Chordates.	**10**
2	Fasciola - Excretory System and Reproductive System. Demonstration (Only through You Tube, Models or Charts)	**05**
3	Examination of Pond Water for study of different kinds of Microscopic Organisms.	**05**
4.	Study of Pathogenic Protozoa.	**05**
5.	Study of Pathogenic Helminthes.	**05**
Keywords/Tags: Museum Specimens, slides, Excretory system, Reproductive system, Microscopic Organisms, Pathogenic		

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Part -C: Assessment & Evaluation (Practical)				
Suggested Continuous Evaluation Methods:				
	Internal Assessment	**Marks**	**External Assessment**	**Marks**
1 2 3	Class Interaction/Quiz Attendance Practical Record File Assignments (Charts/Model Seminar/Rural Service /Technology Dissemination/ Report of Excursion /Lab Visit/Survey/ Industrial visit)	30	Viva Voce on Practical Table work/Experiments	70
	Total	**30**		**70**
Any remarks/Suggestions: e- Demonstrations & e- procedures can be opted.				

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