



Anekant Education Society's

**Tuljaram Chaturchand College
of Arts, Science, Commerce, Baramati
(Autonomous)**

DEPARTMENT OF ZOOLOGY

(Faculty of Science and Technology)

Minutes of Board of Studies Meeting No.06

Date of Meeting: 04/04/2022

Venue: Department of Zoology

April, 2022

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)

Department of Zoology

AGENDA OF THE MEETING

The agenda of the meeting included the following subjects:

1. To confirm the minutes of previous BoS meeting held on 04th December 2021.
2. To design and approve course and credit structure for the B.Sc. and M. Sc. program in accordance with 2022 pattern.
3. To prepare and approve curriculum of F.Y.B.Sc. (Zoology) Semester-I (2022 pattern) to be implemented from the academic year 2022-2023.
4. To prepare and approve curriculum of M.Sc.-I (Zoology) Semester-I (2022 pattern) to be implemented from the academic year 2022-2023.
5. To prepare and approve curriculum of certificate courses.
6. To discuss and incorporate the relevant feedbacks of the stakeholders (students, teachers, parents, alumni and employers) in the curriculum.
7. Any other issue with the permission of the chair.



Head,
Dept. of Zoology

**Anekant Education Society's
Tuljaram Chaturchand College, Baramati
(Autonomous)
Department of Zoology
List of Members Presented for the BOS Meeting**

The following internal and external BoS members were attended the Board of Studies (Zoology) meeting through offline mode held on 04th April, 2022.

Sr. No.	Name of Member	Designation
1.	Mr. Sandip P. Chordiya Assistant Professor, Department of Zoology, T. C. College, Baramati	Chairman
2.	Dr. Vitthal B. Nale Assistant Professor, Department of Zoology, T. C. College, Baramati	Internal Member
3.	Dr. Deepali M. Sangale Assistant Professor, Department of Zoology, T. C. College, Baramati	Internal Member
4.	Dr. Yogesh B. Gaikwad Assistant Professor, Department of Zoology, T. C. College, Baramati	Internal Member
5.	Dr. S. N. Pokale Professor in Zoology, New Arts, Science & Commerce, College, Ahmednagar.	Member, V. C. Nominee
6.	Dr. G. D. Khedkar Professor in Zoology, Dr. B.A.M. University, Aurangabad.	External Member, Other University
7.	Dr. Yogesh A. Karpe Scientist B, Agharkar Research Institute, Pune	External Member
15.	Ms. Tamanna Siraj Tamboli	PG Student
16.	Ms. Tanishka Satish Gaikwad	UG Student

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7. Any other issue with the permission of the chair.

MINUTES OF THE MEETING

As per the Notice no. 403, dated 31/03/2022, issued by the college, the meeting of Board of Studies in Zoology was successfully held on 04th April, 2022 at 11:00 am in the Department of Zoology, T. C. College, Baramati. The meeting took place in offline mode, adhering to the guidelines and protocols set by the college under the guidance of Mr. **Sandip P. Chordiya**, Chairman of the Board of Studies in Zoology. The meeting commenced with a warm welcome to all the esteemed members, followed by a brief introduction of the meeting's objectives

During the meeting, fruitful discussions were held on the items mentioned in the circulated agenda. We are pleased to inform you that the following resolutions were made during the BoS meeting.

01) To confirm the minutes of previous BoS meeting held on 04th December 2021.

Resolution # 02: Minutes of the previous meeting were read aloud by Mr. Sandip Chordiya and were confirmed unanimously.

02) To design and approve course and credit structure for the B.Sc. and M. Sc. program in accordance with 2022 pattern.

Resolution # 02: The meeting commenced with a detailed discussion on designing and approving the course and credit structure for the B.Sc. and M.Sc. programs in accordance with the 2022 pattern.

The credit structure of the same were unanimously finalized as given below-

Class	Pattern	Semester	Course Code	Course Title	Course Type	No. of Credits
First Year						
F.Y.B.Sc	2022	I	USZL 111	Animal Systematics and Diversity -I	Theory	02
F.Y.B.Sc	2022	I	USZL 112	Fundamentals of Cell Biology	Theory	02
F.Y.B.Sc	2022	I	USZL 113	Zoology Practical-I	Practical	02
F.Y.B.Sc	2022	II	USZL 121	Animal Systematics and Diversity -II	Theory	02
F.Y.B.Sc	2022	II	USZL 122	Genetics	Theory	02
F.Y.B.Sc	2022	II	USZL 123	Zoology Practical-II	Practical	02
			Certificate Course			02
Second Year						
S.Y.B.Sc	2022	III	USZL 231	Animal Systematics and Diversity -III	Theory	03

S.Y.B.Sc	2022	III	USZL 232	Applied Zoology-I	Theory	03
S.Y.B.Sc	2022	III	USZL 233	Zoology Practical-III	Practical	02
			Certificate Course			
S.Y.B.Sc	2022	IV	USZL 241	Animal Systematics and Diversity -IV	Theory	03
S.Y.B.Sc	2022	IV	USZL 242	Applied Zoology-II	Theory	03
S.Y.B.Sc	2022	IV	USZL 243	Zoology Practical-IV	Practical	02
			Certificate Course			02
Third year						
T.Y.B.Sc	2022	V	USZL 351	Animal Systematics and Diversity -V	Theory	03
T.Y.B.Sc	2022	V	USZL 352	Mammalian Histology	Theory	03
T.Y.B.Sc	2022	V	USZL 353	Biochemistry	Theory	03
T.Y.B.Sc	2022	V	USZL 354	Environmental Biology & Toxicology	Theory	03
T.Y.B.Sc	2022	V	USZL 355	Parasitology	Theory	03
T.Y.B.Sc	2022	V	USZL 356	A] Cell Biology Or B] General Pathology	Theory	03
T.Y.B.Sc	2022	V	USZL 357	Zoology Practical-V	Practical	02
T.Y.B.Sc	2022	V	USZL 358	Zoology Practical-VI	Practical	02
T.Y.B.Sc	2022	V	USZL 359	Zoology Practical-VII	Practical	02
			Certificate Course			02
T.Y.B.Sc	2022	VI	USZL 361	Biological Techniques	Theory	03
T.Y.B.Sc	2022	VI	USZL 362	Mammalian Physiology & Endocrinology	Theory	03
T.Y.B.Sc	2022	VI	USZL 363	Genetics & Molecular Biology	Theory	03
T.Y.B.Sc	2022	VI	USZL 364	Organic Evolution	Theory	03
T.Y.B.Sc	2022	VI	USZL 365	General Embryology	Theory	03
T.Y.B.Sc	2022	VI	USZL 366	A] Medical Entomology OR B] Public Health & Hygiene	Elective Theory	03
T.Y.B.Sc	2022	VI	USZL 367	Zoology Practical-VIII	Practical	02
T.Y.B.Sc	2022	VI	USZL 368	Zoology Practical-IX	Practical	02
T.Y.B.Sc	2022	VI	USZL 369	Minor Research Project	Project	02
M.Sc. I						
M. Sc.	2022	I	PSZO 111	Biochemistry & Bioenergetics	Theory	04
M. Sc.	2022	I	PSZO 112	Cell Biology	Theory	04
M. Sc.	2022	I	PSZO 113	Fresh Water Zoology & Ichthyology	Theory	04
M. Sc.	2022	I	PSZO 114	Biostatistics & Genetics	Theory	04
M. Sc.	2022	I	PSZO 115	Zoology Practical - I Practicals Corresponding to PSZO	Practical	04

				111 and PSZO 112		
M. Sc.	2022	I	PSZO 116	Zoology Practical - II Practicals Corresponding to PSZO 113 & PSZO 114	Practical	04
M. Sc.	2022	II	PSZO 121	Molecular Biology	Theory	04
M. Sc.	2022	II	PSZO 122	Developmental Biology	Theory	04
M. Sc.	2022	II	PSZO 123	Comparative Animal Physiology and Endocrinology	Theory	04
M. Sc.	2022	II	PSZO 124	Tools and Techniques in Biology	Theory	04
M. Sc.	2022	II	PSZO 125	Zoology Practical - III Practicals Corresponding to PSZO 121 and PSZO 122	Practical	04
M. Sc.	2022	II	PSZO 126	Zoology Practical - IV Practicals Corresponding to PSZO 123 and PSZO 124	Practical	04
M.Sc. II						
M. Sc.	2022	III	PSZO 231 A / B / C	A) Entomology- I / B) Animal Physiology- I / C) Genetics- I	Theory	04
M. Sc.	2022	III	PSZO 232	Physiology, Biochemistry and Ecology of Insects	Theory	04
M. Sc.	2022	III	PSZO 233	Reproductive Physiology, Histology and Histochemistry of Mammals	Theory	04
M. Sc.	2022	III	PSZO 234	Economic Zoology	Theory	04
M. Sc.	2022	III	PSZO 235 A / B / C	Zoology Practical - V Practicals Corresponding to PSZO 231 A / B / C, & PSZO 232	Practical	04
M. Sc.	2022	III	PSZO 236	Zoology Practical - VI Practicals Corresponding to PSZO 233, PSZO 234	Practical	04
			SD 31	Skill Development		02
M. Sc.	2022	IV	PSZO 241 A / B / C	A) Entomology- II B) Animal Physiology-II C) Genetics- II	Theory	04
M. Sc.	2022	IV	PSZO 242	Immunology and Parasitology	Theory	04

M. Sc.	2022	IV	PSZO 243	Pest Control and Toxicology	Theory	04
M. Sc.	2022	IV	PSZO 244	Environmental Biology and Animal Systematics & Diversity	Theory	04
M. Sc.	2022	IV	PSZO 245 A / B / C	Zoology Practical – VII Practicals Corresponding to : PSZO 241 A / B / C, PSZO 242, PSZO 244	Practical	04
M. Sc.	2022	IV	PSZO 246	Research Project	Project	04
			SD 41	Skill Development		02

03) To prepare and approve curriculum of F.Y.B.Sc. (Zoology) Semester-I (2022 pattern) to be implemented from the academic year 2022-2023.

Resolution # 02: The committee discussed and reviewed the proposed curriculum for F.Y.B.Sc. Semester-I as per the 2022 pattern. **Following is summary of deliberations on the syllabus that was unanimously accepted.**

Paper: USZL111 Animal Systematics & Diversity-I

Unit	Subunit No	Proposed Syllabus Details	Suggestions
1. Principles of animal classification (06 Lectures)	1.1	Introduction	Introduction to invertebrates by Dr. G.D.Khedkar
	1.2	Importance of Classification.	Importance of animal classification, Dr. G.D.Khedkar
	1.3 (1.4)	Taxonomy-Basic terminology and Introduction : Alpha, Beta and Gamma levels of taxonomy, Micro-taxonomy	Taxonomy-Basic terminology and Introduction to Alpha, Beta and Gamma levels of taxonomy, Micro-taxonomy Dr. G. D. Khedkar
	1.4 (1.5)	Approaches to various taxonomic methods (Biochemical, molecular) taxonomy, molecular taxonomy, barcoding	Approaches to various taxonomic methods (Biochemical, molecular) Remove barcoding Dr. S.K. Pokale
	1.5 (1.3)	Systematics-Linnaean hierarchy (Phylum, Class, Order, Family, Genus and Species)	Include in 1.3 & name 1.3 as 1.4
	1.6	Binomial nomenclature	Remove Dr. G.D.Khedkar
	1.7	Three Domain & Six kingdom	Keep it in introduction

	(1.1)	classification system	(1.1)
2. Classification with salient features of the following phyla (Up to class level with minimum one example) (6L)	2.1	Protozoa	Keep only classification with salient features
	2.2	Porifera	Specify example of each class
	2.3	Coelenterata (Cnidaria)	Add class 'level'
	2.4	Platyhelminthes	
	2.5	Aschelminthes	
	2.6	Annelida	
3. General topics (06 Lectures)	3.1	Protozoa: Harmful protozoans (Any two)	Use 'pathogenic' protozoans instead of 'harmful'
	3.2	Porifera: : Spicules, its types	Skeleton of Porifera
	3.3	Cnidaria: Coral reefs & Its importance	
4. Study of Earthworm (12L)	4.1	Systematic position, Habits and habitat	Type study: <i>Pheretima posthuma</i>
	4.2	Morphology & Hydrostatic skeleton	
	4.3	Digestive system	
	4.4	Circulatory system in brief.	Remove in brief
	4.5	Excretory system.	
	4.6	Reproductive system	
	4.7	Nervous system and sense organs.	
	4.8	Regeneration	
	4.9	Economic importance	

USZL112: Fundamentals of Cell Biology

Unit No.	Subunit No	Proposed syllabus Details	Suggestions
01. Introduction to Cell Biology (02 Lecture)	1.1	Definition and brief history	
	1.2	Introduction to cell theory	
	1.3	Scope of Cell Biology	
02. Study of Prokaryotic cell and Eukaryotic cell (01 Lecture)	2.1	Size, Shape, Volume, Number, Structure	2.1 Comparative study of Prokaryotic cell and Eukaryotic cell (Size, Shape, Volume, Number, Structure) (Dr. Y.A.Karpe) Add 2.2 Comparative study of plant and animal cell (Dr. GDKhedkar)
	2.2	Comparative study of plant and animal cell	
03. Structure and functions of cell membrane (04 Lecture)	3.1	Chemical composition	
	3.2	Fluid mosaic model	
	3.3	Functions of plasma (Cell) membrane	Use cell membrane
04. Cytoplasm (02 Lectures)	4.1	Physical Organization	
	4.2	Chemical Composition & Biological Properties	

Unit No.	Subunit No	Proposed syllabus Details	Suggestions
05. Study of following cell organelles with respect to structure and functions in brief (10 Lectures)	5.1	Endoplasmic reticulum	Title-Study of cell organelles and their functions
	5.2	Golgi complex	
	5.3	Lysosomes, Peroxisomes and Glyoxysomes	
	5.4	Ribosomes	
	5.5	Mitochondria	
	5.6	Chloroplast	
06. Nucleus (03 Lectures)	6.1	Shape, size, number and position	
	6.2	Ultrastructure of nucleus	
	6.3	Functions of nucleus	
07. Cell division and its significance (06)	7.1	Cell cycle in brief	Title- Cell cycle 7.2 Cell division: 1. Mitosis 2 Meiosis 7.3 Significance of cell division
	7.2	Mitosis	
	7.3	Meiosis	
08. Introduction to Cell Fractionation: (02)	8.1	Introduction to Centrifugation & Density Gradient Centrifugation for Separation of Cell organelles	Title – Introduction to cytological techniques

USZL113: Zoology Practical-I

Sr. No.	Title of Practical	Status	Suggestions
1.	To study the classification with reasons of the following: Phylum Protozoa- <i>Amoeba</i> , <i>Paramecium</i> , <i>Euglena</i> . Phylum Porifera- <i>Spongilla</i> , <i>Sycon</i> , <i>Bath sponge</i> . Phylum Coelenterata (Cnidaria) – <i>Hydra</i> , <i>Aurelia</i> , <i>Tubipora</i> . Identification of protozoans in pond water sample.(remove from here)	Demonstrations	Title: Taxonomic classification upto class level 1. Phylum Protozoa 2. Phylum Porifera 3. Coelenterata Identification of protozoans in pond water sample.
2.	To study the classification with reasons of the following: Phylum Platyhelminthes- <i>Taenia</i> , <i>Planaria</i> . Phylum Aschelminthes- <i>Ascaris</i> , <i>Wuchereria bancrofti</i> . (<i>Filarial worm</i>) Phylum Annelida- <i>Nereis</i> , <i>Leech</i> .	Demonstrations	Title: Taxonomic classification upto class level 1.
3.	Preparation of Culture media & Culturing of Animals: Study of Culture & regeneration in Hydra	Experimental	Title: Culturing of animals(<i>Acanthamoeba</i> / <i>Hydra</i> / <i>Paramecium</i>)

	OR Preparation of A) <i>Paramecium</i> culture & observation of live <i>Paramecium</i> (Cyclosis and Trichocysts)		
4.	Vermiculture: Preparation of small scale Vermiculture bed for vermicomposting from domestic wastes. (Activity based learning)	Experimental	Title: Preparation of vermiculture laboratory unit (Activity based learning)
5.	Study of Earthworm (<i>Pheretima posthuma</i>): Morphology, Digestive and Nervous system of Earthworm	E/D	Dissection of earthworm so as to learn its digestive and nervous system
6.	Make scientific drawings of 5 locally available invertebrate specimens belonging to different phyla	D/E	
7.	Microscopy: Study of Standard Operating Procedure of a Simple and Compound Microscope. (Activity based Learning)	E	
8.	Mountings from Cell Biology: Temporary preparation and observation of Prokaryotic and Eukaryotic cell in a suitable material.	E	Temporary preparation of a bacterial and protozoans on a slide and its observations under the microscope.
9.	Study of different Cell Organelles: Mitochondria, Nucleus, Endoplasmic Reticulum, Golgi complex. (With Picture/Model/Chart)	D	Ultrastructure study of: a. Mitochondria b. Nucleus c. Endoplasmic Reticulum d. Golgi complex (With Picture/Model/Chart)
10.	Study of Cell Division: Study of Mitosis in onion root tip cells	Experimental	Study of mitotic cell division using onion root tips
11.	Demonstrations from cells: Demonstration of Mitochondria by Janus green B OR Demonstration of Barr Body.	Experimental	Title: Demonstration of mitochondria using Janus Green B stain OR Demonstration of Barr Body
12.	Compulsory Zoological Study Tour: A Compulsory Visit to water body / Vermicomposting unit and submission of report.		Title: Study Tour: Visit to established aquatic ecosystem / functional commercial vermicompost unit and submission of detailed tour report.

13.	Identification of any three museum specimens with help of taxonomic identification key.		Title: Museum Study: Platyhelminthes, Aschelminthes, Annelida, (one specimen of each
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All the suggestions are accepted unanimously and the syllabus was unanimously finalized.

3) To prepare and approve curriculum of M.Sc. (Zoology) Semester-I (2022 pattern) to be implemented from the academic year 2022-2023.

Resolution # 03: Syllabi of all courses of M.Sc.-I Semester-I (2022 Pattern) were discussed thoroughly and were finalized and accepted unanimously.

4) To prepare and approve curriculum of certificate courses.

Resolution # 03: Syllabi of the certificate courses- 1) Medical Diagnostics; 2) Ornamental Fishes & Aquarium Management; 3) Mathematics for Life Sciences were discussed, finalised and unanimously accepted for implementation.

5) To discuss and incorporate the relevant feedbacks of the stakeholders (students, teachers, parents, alumni and employers) in the curriculum.

Resolution # 05: All the suggestions from feedback were discussed thoroughly and relevant suggestions were accepted unanimously.

6) Any other issue with the permission of the chair

Resolution # 06: Dr. Pokale suggested implementation of the evaluation pattern as per that of the affiliated colleges of SPPU. However, this suggestion was conveyed to academic council as it was a policy making issue.

The meeting of BoS concluded with the vote of thanks by Dr. Vitthal Nale..

**Chairman
Board of Studies**

**IQAC
Coordinator
Coordinator**

**Internal Quality Assurance Cell
Tuljaram Chaturchand College of
Arts, Science and Commerce,
Baramati (Pune)-413102**

**Principal
Principal
Tuljaram Chaturchand College
Baramati**

