



Department of Zoology
Holy Cross College (Autonomous), Nagercoil
Minutes of the Board of Studies meeting held on
27.05.2023 at 11.00 am



Code: ZOO/BOS/2023-24/17

Members of the Board of Studies

Dr. A. Shyla Suganthi
 Head, Department of Zoology
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Chair person

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Ms. Tony Lesline, Kanniyakumari

Alumna

Ms. Arul Selvan Arul Deepika

II M.Sc.

Department Members

Dr. S. Mary Mettilda Bai, Assistant Professor

Dr. F. Brisca Renuga, Associate Professor

Dr. J. Vinoliya Josephine Mary, Assistant Professor,

Dr. P.T. Arokya Glory, Assistant Professor

Dr. Jeni Chandar Padua, Assistant Professor

Dr. C. Josephine Priyatharshini, Assistant Professor

Dr. A. Punitha, Assistant Professor

Dr. X. Venci Candida, Assistant Professor

Dr. S. Prakash Shoba, Assistant Professor

Dr. C. Anitha, Assistant Professor

On 27th May 2023, the Department hosted the 17th Board of Studies meeting in Zoology, which commenced at 10.30 am. The meeting began with a moment of silence. The Head of the Department Dr. A. Shyla Suganthi, chaired the meeting and introduced all the board members with warm words of welcome and presented the agenda of the meeting.

Except the industrialist, the rest of the members of the Board of Studies which includes the University nominee, Subject Experts, Alumna, and members of the Department of Zoology attended the meeting.

The meeting agenda includes the following items:

1. Prayer
2. Welcome by the Chairperson
3. Reading of the minutes of the previous meeting
4. Introduction of UG School
5. Revamping / Revision of curriculum for UG with PEOs, POs, PSOs and COs.
6. Revision of syllabus for UG Semester I and II
7. Ratification of curriculum structure 2020-23
8. Syllabus for Value Added Courses
9. Introduction of PG School
10. Revamping / Revision of curriculum for PG with PEOs, POs, PSOs and COs.
11. Revision of syllabus for PG Semester I and II
12. Classification of New Courses / Multidisciplinary / Industry 4.0
13. Classification of courses as Employability / Entrepreneurship / Skill Development
14. Classification of courses as Local / National / Regional / Global
15. Classification of courses as Crosscutting Issues Gender Equity / Environment and Sustainability / Human Values / Professional Ethics

16. Recommendation of books and journals for UG and PG
17. Suggestion for innovative teaching and evaluation techniques for UG and PG
18. Conduct of seminars / workshops in collaborations with Government Agents / Universities / NGOs.
19. New measures to be undertaken by the department
20. Feedback and action taken
21. Next meeting of BoS
22. Any other.

The following items in the agenda were discussed by the members of the Board:

Item 01/ BoS27.05/03: Approval of the of the minutes of the previous meeting held on 21.01.2020 The minutes of the previous meeting was presented by Dr. F. Brisca Renuga, which was approved by the members of the board.

Item 02/BoS 27.05/04: Approval of the introduction of UG School.

School of Science: Biological Sciences – Botany, Zoology.
The Board did not recommend introducing UG School of Biological Sciences.

Item 03/BoS 27.05/05: Approval of the Revamped / Revised curriculum for UG with Curriculum framework for undergraduate structure with PEOs, POs, PSOs and COs. was approved by the Board.

Course Structure

Course	Curricular Courses						Total	
	S I	S II	S III	S IV	S V	S VI	H	C
Part I: Language	6 (3)	6 (3)	6 (3)	6 (3)	-	-	24	12
Part II: English	6 (3)	6 (3)	6 (3)	6 (3)	-	-	24	12
Part III								
Core Course	6 (6)	6 (6)	4 (4)	4 (4)	5 (4) +	6 (4) +	76	65
Core Lab Course	2 (2)	2 (2)	4 (4)	4 (4)	5 (4) +	6 (4) +		
Core Project			2 (2)	2 (2)	5 (4) +	6 (4) + 2 (1)		
Elective /Discipline					5 (4)			
Specific Elective	4 (3)	4 (3)	2 (2)	2 (2)	4 (3)	4 (3)	36	28
Courses	2 (2)	2 (2)	2 (1)	2 (1)	4 (3)	4 (3)		
Part IV								
Non-major Elective Course	2 (2)	2 (2)	-	-	-	-	4	4
Skill Enhancement Course	-	2 (2)	1 (1)	1 (1)	-	-	8	8
			2 (2)	2 (2)				

Foundation Course	2(2)	-	-	-	-	-	2	2
Value Education	-	-	-	-	2 (2)	-	2	2
Summer Internship /Industrial Training					(2)			2
Environmental Studies	-	-	1	1 (2)	-	-	2	2
Extension activity	-	-	-	-	-	(1)	-	1
Professional Competency Skill						2 (2)	2	2
Total	30 (23)	30 (23)	30 (22)	30 (24)	30 (26)	30 (22)	180	140
Co-curricular Courses								Credits
LST (Life Skill Training)	-	(1)	-	(1)			2	
Skill Development Training (Certificate Course)	(1)						1	
Field Project		(1)					1	
Specific Value-added Course	(1)		(1)				2	
Generic Value-added Course				(1)		(1)	2	
MOOC		(1)		(1)		(1)	3	
Student Training Activity: Clubs & Committees / NSS				(1)			1	
Community Engagement Activity: RUN				(1)			1	
Human Rights Education					(1)		1	
Gender Equity Studies						(1)	1	
							Total	15

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEOs	Upon completion of B.A/B.Sc. degree programme, the graduates will be able to	Mission addressed
PEO 1	apply appropriate theory and scientific knowledge to participate in activities that support humanity and economic development nationally and globally, developing as leaders in their fields of expertise.	M1& M2
PEO 2	inculcate practical knowledge for developing professional empowerment and entrepreneurship and societal services.	M2, M3, M4 & M5

PEO 3	pursue lifelong learning and continuous improvement of the knowledge and skills with the highest professional and ethical standards.	M3, M4, M5 & M6
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PROGRAMME OUTCOMES (POs)

POs	Upon completion of B.Sc. Degree Programme, the graduates will be able to:	PEOs Addressed
PO1	obtain comprehensive knowledge and skills to pursue higher studies in the relevant field of science.	PEO 1
PO2	create innovative ideas to enhance entrepreneurial skills for economic independence.	PEO2
PO3	reflect upon green initiatives and take responsible steps to build a sustainable environment.	PEO 2
PO4	enhance leadership qualities, team spirit and communication skills to face challenging competitive examinations for a better developmental career.	PEO 1 & PEO 3
PO5	communicate effectively and collaborate successfully with peers to become competent professionals.	PEO 2 & PEO 3
PO6	absorb ethical, moral and social values in personal and social life leading to highly cultured and civilized personality	PEO 2 & PEO 3
PO7	participate in learning activities throughout life, through self-paced and self-directed learning to develop knowledge and skills.	PEO 1 & PEO 3

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO	Upon completion, B.Sc. Zoology graduates will be able to:	PO addressed
PSO - 1	deep understanding of the key concepts of Zoology in the areas of Taxonomy, Physiology, Cell Biology, Genetics, Applied Zoology, Aquaculture Ecology and Toxicology, Biochemistry, Biophysics, Biostatistics, Biotechnology, Immunology, Microbiology and Evolution.	PO1, PO3
PSO - 2	perform laboratories experiments with suitable techniques at cellular, molecular, biochemical, physiological, and systematic levels.	PO2, PO3
PSO - 3	apply biological methods to formulate hypothesis, collect, analyze, and evaluate the data to address the problem effectively.	PO4, PO5
PSO - 4	plan their career goals and pursue higher studies in different Zoological disciplines and develop entrepreneurship skills by applying the knowledge gained from courses like Aquaculture, Sericulture, Apiculture, Poultry, Vermitechnology and Clinical Laboratory Technology.	PO1, PO4, PO 6
PSO - 5	to identify societal and environmental problems and solve them with innovative ideas and technologies, which can be patented.	PO3, PO6, PO7

Item 04/ BoS27.05/06: Approval of the revision of syllabus for B.Sc. Semester I and II

The Board suggested to make modification only in the content of Core papers which should be 75% equivalent to the University syllabus. Hence Type study is restricted with selective organ system of Invertebrates and chordates.

Semester I

Course	Course Code	Title of the Course	Credits	Hours/Week
Part I	TU231TL1	Language: Tamil / French	3	6
	FU231FL1			
Part II	EU231EL1	English	3	6
Part III	ZU231CC1	Core Course I: Invertebrata	6	6
	ZU231CP1	Core Lab Course I: Invertebrata	2	2
	ZU231EC1	Elective Course I: Allied Zoology I	3	4
	ZU231EP1	Elective Lab Course I: Lab on Allied Zoology I	2	2
Part IV	ZU231NM1	Non-Major Elective NME I: Ornamental Fish farming and management	2	2
	ZU231FC1	Foundation Course	2	2
Total			23	30

Semester II

Course	Course Code	Title of the Course	Credits	Hours/Week
Part I	TU232TL1	Language: Tamil / French	3	6
	FU232FL1			
Part II	EU232EL1	English	3	6
Part III	ZU232CC1	Core Course II: Chordata	6	6
	ZU232CP1	Core Lab Course II: Lab on Chordata	2	2
	ZU232EC1	Elective Course II: Allied Zoology II	3	4
	ZU232EP1	Elective Lab Course II: Lab on Allied Botany	2	2
Part IV	ZU232NM1	Non-Major Elective NME II: Bio-composting for Entrepreneurship	2	2
	ZU232SE1	Skill Enhancement Course SEC I Animal Behaviour	2	2
Total			23	30

Semester III

Course	Course Code	Title of the Course	Credits	Hours/Week
Part I	TU233TL1	Language: Tamil/French	3	6
	FU233FL1			
Part II	EU233EL1	General English	3	6
Part III	ZU233CC1	Core Course III: Cell Biology	4	4
	ZU233CC2	Core Course IV: Genetics	4	4
	ZU233CP1	Core Lab Course III: Cytogenetics	2	2
	ZU233EC1	Elective Course III: Allied Zoology	2	2
	ZU233EP1	Elective Lab Course II: Allied Zoology	1	2
Part IV	ZU233SE1	Skill Enhancement Course SEC II: Aquarium keeping	1	1
	ZU233SE2	Skill Enhancement Course SEC III: Wild Life Conservation and Management	2	2
	UG234EV1	Environmental Studies	-	1
	Total		22	30

Semester IV

Part	Course Code	List of Courses	Credits	Hours
Part I	TU233TL1	Language: Tamil/French	3	6
	FU233FL1			
Part II	EU234EL1	General English	3	6
Part III	ZU234CC1	Core Course V: Developmental Biology	4	4
	ZU234CC2	Core Course VI: Industry core module: Environmental Toxicology	4	4
	ZU234CP1	Core Lab Course IV: Developmental Biology	2	2
	ZU234EC1	Elective Course IV: Allied Zoology	2	2
	ZU234EP1	Elective Lab Course IV: Allied Zoology	1	2
Part IV	ZU234SE1	Skill Enhancement Course SEC IV Medical Laboratory Techniques	1	1
	ZU234SE2	Skill Enhancement Course SEC V Nano Biology	2	2
	UG234EV1	Environmental Studies	2	1
Total		24	30	

Semester V

Part	Course Code	List of Courses	Credits	Hours
Part III	ZU235CC1	Core Course VII: Evolutionary Biology	4	5
	ZU235CC2	Core Course VIII: Animal Physiology	4	5
	ZU235CC3	Core Course IX: Environmental Biology	4	5
	ZU235PW1	Core Project	4	5
	ZU235DE1	Discipline Specific Elective I: a) Food, nutrition, and health	3	4
	ZU235DE2	Discipline Specific Elective I: b) Endocrinology		
	ZU235DE3	Discipline Specific Elective I: c) Aquatic Biology		
	ZU235DE4	Discipline Specific Elective II a) Radiation Biology	3	4
	ZU235DE5	Discipline Specific Elective II b) Vectors, Diseases and Management		
	ZU235DE6	Discipline Specific Elective II c) Environmental Microbiology		
Part IV	ZU235VE1	Value Education	2	2
	ZU235SI1 / ZU235IT1	Summer Internship / Industrial Training	2	-
		Total	26	30

Semester VI

Part	Course Code	List of Courses	Credits	Hours
Part III	ZU236CC1	Core Course X: Animal Biotechnology	4	6
	ZU236CC2	Core Course XI: Microbiology	4	6
	ZU236CC3	Core Course XII: Immunology	4	6
	ZU236CP1	Core Lab Course V: Microbiology & Immunology	1	2
	ZU236DE1	Discipline Specific Elective III: a) Human Reproductive Biology	3	4
	ZU236 DE2	Discipline Specific Elective III: b) Sericulture		

	ZU236 DE3	Discipline Specific Elective III: c) Apiculture		
	ZU236 DE4	Discipline Specific Elective IV: a) Agricultural Entomology	3	4
	ZU236 DE5	Discipline Specific Elective IV: b) Pest and Pest Management		
	ZU236 DE6	Discipline Specific Elective IV: c) Bio economics		
Part IV	ZU236EA1	Extension Activity	1	-
	ZU236PS1	Professional Competency Skill	2	2
		Total	22	30
		TOTAL	140	180

The alterations made in the syllabus is given below:

Semester I

Core Course I: Invertebrata; Course Code: ZU231CC1

Unit I: Delated Parasitic protozoan Entamoeba. Paramecium: Morphology and Reproduction

Plasmodium: Morphology and Life Cycle

Unit III: Removed Coral and coral reefs, Polymorphism, and Economic importance. Added Morphology and Life cycle for the type study *Obelia* and *Aurelia*.

Unit IV: Removed Nematelminths an added Morphology and Life cycle under type study *Fasciola hepatica* and *Ascaris lumbricoides*

Unit: V: Added Morphology under the type study *Nereis* and *Hirudinaria granulosa*

Unit: I: Added *Penaeus indicus*: Respiratory system and Excretory system

Unit: II: Added *Pila globose*: Morphology, Digestive system, and Nervous system.

Unit: IV: Added *Periplaneta americana*: Morphology, Circulatory system and Reproductive system.

Unit: V: Instead of Pest of Sugarcane: The shoot borer (*Chilo infuscatellus*) and Cauliflower - The diamond black moth (*Plutella xylostella*) added pest of banana: banana root borer (*Cosmopolites sordidus*).

Semester I - Core Course I: Lab Course on Invertebrata : Course Code: Z231CP1

Unit: I: Cockroach: Circulatory system, Leech: Nervous System, Reproductive system, earthworm: Reproductive system, *Pila globosa*: Nervous system and Prawn: Nervous system replaced with Prawn: Digestive system

Unit: III: Removed Freshwater mussel: Pedal ganglia

Unit: IV: Removed Mouth parts – House fly

Unit: V: Removed Protozoa: *Paramoecium*, Binary fission and Conjugation, *Plasmodium vivax*
 Porifera: Sycon, Euspongia, Sycon - T.S & L.S, Coelenterata: *Obelia* – Colony & Medusa, *Aurelia*
 Platyhelminthes: Removed *Fasciola* larval forms – Miracidium, Redia, Cercaria.
 Nematelminthes: *Drancunculus*, *Wuchereria*. Annelida: Aphrodite, Chaetopteurs. Arthropoda:
Palaemon, *Scolopendra*, Larvae - Nauplius, Mysis, Zoea, Mouth parts of male & female
Anopheles and *Culex*; Mollusca: *Pila*, *Pteredo*, *Murex*, Echinodermata: *Ophiothrix*, *Echinus*,
Clypeaster

Semester II

Core course III: Chordata; Course Code: ZU232CC1

Unit: II: Removed Prochordates, Origin of fishes, Affinities of Dipnoi, Pisces and added *Scoliodon sorrakowah* – Circulatory system, Sense organs.

Unit: III: Instead of Origin of Amphibia added *Rana hexadactyla*: Morphology, Digestive system and Urinogenital system.

Unit: IV: Removed origin of reptiles and effects of terrestrialization and added *Calotes versicolor*: Morphology. Snakes of South India: Poisonous snakes - *Naja naja*, King cobra and Viper, Non-poisonous snakes - Python, Rat snake (*Ptyas mucosa*) and Wolf snake (*Lycodon aulicus*).

Item 05/ BoS27.05/07: Approval of the ratification of curriculum structure 2020 -2023

The Board ratified the curriculum structure for 2020 - 2023, which includes an internship in the fourth semester (during holidays) and a project in the fifth semester.

Item 06/ BoS27.05/08: Approval of the syllabus for value-added courses

Generic Value-added Courses (GVC): They are offered in Semesters I, III and V, where students can choose from the courses offered by all the Departments.

Specific Value-added Courses (SVC): They are offered in Semesters II, IV and VI, where students have to undergo the courses offered by the Department.

Specific Value-added Course

S. No.	Course code	Title of the course	Total hours
1	ZU231V01	Pet Keeping and Care	30
2.	ZU232V01	Culture of freshwater organisms	30

The Board approved the syllabus for the value-added courses suggested by the Department. The board suggested to specify a set of semester-wise value-added courses.

Item 07/ BoS 27.05/09: Approval for the Introduction of PG School

School of Science: Biological Sciences – Botany, Zoology.

The Board did not recommend introducing PG School of Biological Sciences.

Item 08/ BoS 27.05/010: Revamping / Revision of curriculum for PG with PEOs, POs, PSOs and COs.

The curriculum framework for Post Graduate - M.Sc. Zoology was evaluated and finally approved by the board. Elective was agreed to be designed as per the localised and personalised needs of the college.

Course Structure

Curricular Courses:						
Course	SEMESTER				Total	
	I	II	III	IV	Hours	Credits
Core- Theory	7 (5) + 7 (5) +	6 (5) + 6 (5) +	6 (5) + 6 (5) + 6 (5) +	6 (5) + 6 (5)	70	53
Core Lab course	4 (2)	4 (2)	6 (4)			
Elective Course	5 (3) + 5 (3)	4 (3) + 4 (3)	3 (3) -	4 (3) -	29	22
Elective Lab Course	2 (2)	2 (2)				
Core Project		-		10 (7)	10	7
Skill Enhancement Course		4 (2)	3 (2)	4 (2)	11	6
Internship/ Industrial Activity			(2)		-	2
Extension Activity				(1)	-	1
Total	30 (20)	30 (22)	30 (26)	30 (23)	120	91
Co-curricular courses					Credits	
Life Skill Training –I	-	(1)	-	-	1	
Life Skill Training –II	-	-	-	(1)	1	
Field Project	(1)				1	
Specific Value-Added Courses	(1)		(1)		2	
Generic Value-Added Courses		(1)		(1)	2	
MOOC		(1)		(1)	2	
Community Engagement Activity (UBA)		(1)			1	

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEOs	Upon completion of B.A/B.Sc. degree programme, the graduates will be able to	Mission addressed
PEO 1	apply appropriate theory and scientific knowledge to participate in activities that support humanity and economic development nationally and globally, developing as leaders in their fields of expertise.	M1 & M2
PEO 2	inculcate practical knowledge for developing professional empowerment and entrepreneurship and societal services.	M2, M3, M4 & M5
PEO 3	pursue lifelong learning and continuous improvement of the knowledge and skills with the highest professional and ethical standards.	M3, M4, M5 & M6

PROGRAMME OUTCOMES (POs)

PO	Upon completion of M.Sc. Degree Programme, the graduates will be able to:	Mapping with PEOs
PO1	apply their knowledge, analyze complex problems, think independently, formulate and perform quality research.	PEO1 & PEO2
PO2	carry out internship programmes and research projects to develop scientific and innovative ideas through effective communication.	PEO1, PEO2 & PEO3
PO3	develop a multidisciplinary perspective and contribute to the knowledge capital of the globe.	PEO 2
PO4	develop innovative initiatives to sustain ecofriendly environment	PEO1, PEO2
PO5	pursue active career, team work and using managerial skills guide people to the right destination in a smooth and efficient way.	PEO 2
PO6	employ appropriate analysis tools and ICT in a range of learning scenarios, demonstrating the capacity to find, assess, and apply relevant information sources.	PEO1, PEO2 & PEO3
PO7	learn independently for lifelong to execute professional, social and ethical responsibilities promoting sustainable development.	PEO3

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO	Upon completion of M.Sc. Programme, the graduates will be able to:	PO addressed
PSO1	explain the various aspects of life sciences including Biochemistry, Cell and Molecular Biology, Biosystematics, Genetics, Evolution, Physiology, Developmental Biology, Exobiology, Immunology, Microbiology, Endocrinology, Bioinformatics, Biotechnology and Nanobiology.	PO1, PO2
PSO2	carryout experimental techniques, analyze statistically, draw conclusions, write report, present effectively and publish in indexed journals effectively	PO2, PO4, PO5, PO6
PSO 3	develop personal and key transferable skills and entrepreneurial skills through industrial / field visits and internships.	PO2, PO3

PSO 4	independently assemble facts, summarize and draw conclusions from scientific text and develop competence in the design and execution of research.	PO1, PO2, PO3, PO4, PO6
PSO 5	discriminate societal and environmental problems, adopt relevant technology, synthesis solution and claim for IPR	PO4, PO5, PO7

Item 09/BoS 27.05/11: Approval of the revision of syllabus for PG Semester I and II
After going through the syllabus in detail, and after an in-depth discussion the board approved the outcome-based syllabus for Postgraduate (M.Sc. Zoology) Semester I & II and value-added courses.

Semester-I

Course Code	Name of the Course	Credit	Hours
ZP231CC1	Core Course - I: Structure and function of Invertebrates	5	7
ZP231CC2	Core Course - II: Comparative Anatomy of Vertebrates	5	7
ZP231CPI	Core Lab Course – I: Lab Course in Invertebrates & Vertebrates	2	4
ZP231EC1	Elective Course – I: a) Molecules and their interaction relevant to Biology	3	5
ZP231EC2	Elective Course – I: b) Forensic Biology		
ZP231EC3	Elective Course – I: c) Wildlife Management		
ZP231EC4	Elective Course – II: a) Biostatistics	3	5
ZP231EC5	Elective Course – II: b) Applied Zoology		
ZP231EC6	Elective Course – II: c) Pest Management		
ZP231EPI	Elective Lab Course -I: Molecules and their interaction relevant to Biology & Biostatistics	2	2
Total		20	30

Semester-II

Course Code	Title of the Course	Credits	Hours / Week
ZP232CC1	Core Course – III: Cellular and Molecular Biology	5	6
ZP232CC2	Core Course – IV: Developmental Biology	5	6
ZP232CPI	Core Lab Course – II: Lab Course in Cell Biology and Developmental Biology	2	4
ZP232EC1	Elective Course – III: a) Economic Entomology	3	4
ZP232EC2	Elective Course – III: b) Parasitology		
ZP232EC3	Elective Course – III: c) Agrochemicals & Pest management		
ZP232EC4	Elective Course – IV: a) Research methodology	3	4
ZP232EC5	Elective Course -IV: b) Apiculture		

ZP232EC6	Elective Course – IV: c) Sericulture		
ZP232EP1	Elective Lab Course – II: Economic Entomology & Research Methodology	2	2
ZP232SE1	Skill Enhancement Course I: Poultry Farming	2	4
	Total	22	30

Semester-III

Course Code	Name of the Course	Credit	Hours
ZP233CC1	Core Course V: Genetics	5	6
ZP233CC2	Core Course VI: Evolution	5	6
ZP233CC3	Core Course VII: Animal Physiology	5	6
ZP233CC4	Core Course VIII: Medical Laboratory Techniques	4	6
ZP233EC1	Elective Course -V a) Stem cell biology	3	3
ZP233EC2	Elective Course -V b) Biotechnology & Nanobiology		
ZP233EC3	Elective Course -V c) Bioinformatics		
ZP233SE1	Skill Enhancement Course - II Dairy Farming	2	3
ZU233S11 /ZU233IT1	Internship/Industrial activity	2	-
	Total	26	30

Semester-IV

Course Code	Name of the Course	Credit	Hours
ZP234CC1	Core Course IX: Immunology	5	6
ZP234CC2	Core Course X: Ecology	5	6
ZP234PR1	Core Project	7	10
ZP234EC1	Elective Course -VI a) Aquaculture	3	4
ZP234EC2	Elective Course – VI b) Biodiversity Conservation and Sustainable development		
ZP234EC3	Elective Course – VI c) Microbiology		
ZP234SE1	Skill Enhancement Course-III Animal behaviours	2	4
ZP234EA1	Extension Activity	1	-
	Total	23	30
		91	120

Value -added Courses

Course code	Semester	Course title	Total hours
ZP231V01	I	Basics of excel	30
ZP232V01	II	Excel pivot table	30

The Board suggested that the syllabus can be updated with respect to any changes in the structure and content as suggested by the University or the college. This includes updates to course content, teaching methodologies, assessment methods, or any other modifications necessary to align with the educational standards and requirements.

Item 10/BoS27.05/12: Classification of New Courses / Multidisciplinary / Industry 4.0.

The Board members classified the courses as new courses, multidisciplinary and Industry 4.0

Course Code	Name of the Course	New Courses	Multi-disciplinary	Industry 4.0
B.Sc. Semester I				
ZU231CC1	Core Course I: Invertebrata	✓		
ZU231CP1	Core Lab Course I: Invertebrata			
ZU231EC1	Elective Course I: Allied Zoology I	✓		
ZU231EP1	Elective Lab Course I: Lab on Allied Zoology I	✓		
ZU231NM1	NME I: Ornamental Fish farming and management	✓	✓	✓
ZU231FC1	Foundation Course: Introduction to Zoology	✓		
B.Sc. Semester II				
ZU232CC1	Core Course II: Chordata	✓	✓	
ZU232CP1	Core Lab Course II: Lab on Chordata	✓		
ZU232EC1	Elective Course II: Allied Zoology II	✓		
ZU232EP1	Elective Lab Course II: Lab on Allied Zoology			
ZU232NM1	NME II: Bio-composting for Entrepreneurship	✓	✓	✓
ZU232SE1	SEC I: Animal Behaviour	✓		
M.Sc. Semester I				
ZP231CC1	Core Course - I : Structure and function of Invertebrates			
ZP231CC2	Core Course - II: Comparative Anatomy of Vertebrates			
ZP231CP1	Core Lab Course – I: Lab Course in Invertebrates & Vertebrates	✓		
ZP231EC1	Elective Course – I: a) Molecules and their interaction relevant to Biology			✓
ZP231EC2	Elective Course – I: b) Forensic Biology			
ZP231EC3	Elective Course – I: c) Wildlife Management	✓		

ZP231EC4	Elective Course – II: a) Biostatistics		✓	
ZP231EC5	Elective Course – II: b) Applied Zoology	✓		
ZP231EC6	Elective Course – II: c) Pest Management	✓	✓	
ZP231EP1	Elective Lab Course -I: Molecules and their interaction relevant to Biology & Biostatistics		✓	✓
M.Sc. Semester I				
ZP232CC1	Core Course – III: Cellular and Molecular Biology	✓		
ZP232CC2	Core Course – IV: Developmental Biology	✓		
ZP232CP1	Core Lab Course – II: Lab Course in Cell Biology and Developmental Biology			
ZP232EC1	Elective Course – III: a) Economic Entomology	✓	✓	
ZP232EC2	Elective Course – III: b) Parasitology			
ZP232EC3	Elective Course – III: c) Agrochemicals & Pest management	✓		✓
ZP232EC4	Elective Course – IV: a) Research methodology		✓	
ZP232EC5	Elective Course -IV: b) Apiculture	✓		
ZP232EC6	Elective Course – IV: c) Sericulture	✓		
ZP232EP1	Elective Lab Course – II: Economic Entomology & Research Methodology	✓		
ZP232SE1	Skill Enhancement Course I: Poultry Farming	✓		

Item 01/BoS27.05/13: Classification of courses as Employability (EM)/ Entrepreneurship (EN) / Skill Development (SD)

The Board classified courses relevant to EM, EN, SD.

Course Code	Name of the Course	EM	EN	SD
B. Sc. Zoology				
ZU231CC1	Core Course I: Invertebrata	✓	✓	✓
ZU231CP1	Core Lab Course I: Invertebrata	✓		✓
ZU231EC1	Elective Course I: Allied Zoology I	✓	✓	✓
ZU231EP1	Elective Lab Course I: Lab on Allied Zoology I	✓		✓
ZU231NM1	NME I: Ornamental Fish farming and management		✓	✓

ZU231FC1	Foundation Course: Introduction to Zoology	✓		✓
ZU232CC1	Core Course II: Chordata	✓	✓	✓
ZU232CP1	Core Lab Course II: Lab on Chordata	✓	✓	✓
ZU232EC1	Elective Course II: Allied Zoology II	✓		✓
ZU232EP1	Elective Lab Course II: Lab on Allied Zoology	✓		✓
ZU232NM1	NME II: Bio-composting for Entrepreneurship	✓	✓	✓
ZU232SE1	SEC I: Animal Behaviour	✓	✓	✓
M.Sc. Zoology				
ZP231CC1	Core Course - I : Structure and function of Invertebrates	✓		✓
ZP231CC2	Core Course - II: Comparative Anatomy of Vertebrates	✓		✓
ZP231CP1	Core Lab Course – I: Lab Course in Invertebrates & Vertebrates	✓	✓	✓
ZP231EC1	Elective Course – I: a) Molecules and their interaction relevant to Biology	✓		✓
ZP231EC2	Elective Course – I: b) Forensic Biology	✓		✓
ZP231EC3	Elective Course – I: c) Wildlife Management	✓		✓
ZP231EC4	Elective Course – II: a) Biostatistics	✓		✓
ZP231EC5	Elective Course – II: b) Applied Zoology	✓	✓	✓
ZP231EC6	Elective Course – II: c) Pest Management	✓	✓	✓
ZP231EP1	Elective Lab Course -I: Molecules and their interaction relevant to Biology & Biostatistics	✓		✓
ZP232CC1	Core Course – III: Cellular and Molecular Biology	✓		✓
ZP232CC2	Core Course – IV: Developmental Biology	✓		✓
ZP232CP1	Core Lab Course – II: Lab Course in Cell Biology and Developmental Biology	✓		✓
ZP232EC1	Elective Course – III: a) Economic Entomology	✓	✓	✓
ZP232EC2	Elective Course – III: b) Parasitology	✓		✓
ZP232EC3	Elective Course – III: c) Agrochemicals & Pest management	✓	✓	✓
ZP232EC4	Elective Course – IV: a) Research methodology	✓		✓
ZP232EC5	Elective Course -IV: b) Apiculture		✓	✓
ZP232EC6	Elective Course – IV: c) Sericulture		✓	✓

ZP232EP1	Elective Lab Course – II: Economic Entomology & Research Methodology	✓	✓	✓
ZP232SE1	Skill Enhancement Course I: Poultry Farming		✓	✓

Item 12/BoS27.05/14: Classification of courses as Local / National / Regional / Global.
The courses relevant to Local/National/ Regional/Global needs were categorised.

Course Code	Name of the Course	Local	Regional	National	Global
B.Sc. Semester I					
ZU231CC1	Core Course I: Invertebrata	✓	✓		✓
ZU231CP1	Core Lab Course I: Invertebrata	✓	✓		✓
ZU231EC1	Elective Course I: Allied Zoology I	✓	✓		✓
ZU231EP1	Elective Lab Course I: Lab on Allied Zoology I		✓	✓	✓
ZU231NM1	NME I: Ornamental Fish farming and management	✓	✓		
ZU231FC1	Foundation Course: Introduction to Zoology	✓	✓		✓
B.Sc. Semester II					
ZU232CC1	Core Course II: Chordata	✓	✓	✓	✓
ZU232CP1	Core Lab Course II: Lab on Chordata		✓		✓
ZU232EC1	Elective Course II: Allied Zoology II	✓			
ZU232EP1	Elective Lab Course II: Lab on Allied Zoology	✓	✓	✓	✓
ZU232NM1	NME II: Bio-composting for Entrepreneurship	✓	✓	✓	
ZU232SE1	SEC I: Animal Behaviour	✓	✓	✓	✓
M.Sc. Semester I					
ZP231CC1	Core Course - I : Structure and function of Invertebrates	✓	✓		
ZP231CC2	Core Course - II: Comparative Anatomy of Vertebrates	✓	✓		✓
ZP231CP1	Core Lab Course – I: Lab Course in Invertebrates & Vertebrates	✓	✓		✓
ZP231EC1	Elective Course – I: a) Molecules and their interaction relevant to Biology	✓	✓	✓	✓
ZP231EC2	Elective Course – I: b) Forensic Biology	✓		✓	✓
ZP231EC3	Elective Course – I: c) Wildlife Management		✓	✓	
ZP231EC4	Elective Course – II: a) Biostatistics	✓			
ZP231EC5	Elective Course – II: b) Applied Zoology	✓	✓	✓	

ZP231EC6	Elective Course – II: c) Pest Management	✓	✓	✓	
ZP231EP1	Elective Lab Course -I: Molecules and their interaction relevant to Biology & Biostatistics	✓	✓	✓	✓
M.Sc. Semester II					
ZP232CC1	Core Course – III: Cellular and Molecular Biology		✓	✓	✓
ZP232CC2	Core Course – IV: Developmental Biology	✓	✓	✓	
ZP232CP1	Core Lab Course – II: Lab Course in Cell Biology and Developmental Biology	✓		✓	
ZP232EC1	Elective Course – III: a) Economic Entomology	✓	✓	✓	
ZP232EC2	Elective Course – III: b) Parasitology	✓	✓	✓	
ZP232EC3	Elective Course – III: c) Agrochemicals & Pest management	✓	✓		
ZP232EC4	Elective Course – IV: a) Research methodology		✓	✓	
ZP232EC5	Elective Course -IV: b) Apiculture	✓	✓		✓
ZP232EC6	Elective Course – IV: c) Sericulture	✓	✓	✓	✓
ZP232EP1	Elective Lab Course – II: Economic Entomology & Research Methodology	✓	✓	✓	✓
ZP232SE1	Skill Enhancement Course I: Poultry Farming	✓	✓		✓

Item 13/BoS27.05/15: Classification of courses as Crosscutting Issues Gender Equity (GE)/ Environment and Sustainability (EVS) / Human Values (HV) / Professional Ethics (PE).

Course Code	Name of the Course	GE	EVS	HVS	PE
B. Sc. Zoology – Semester I					
ZU231CC1	Core Course I: Invertebrata		✓		✓
ZU231CP1	Core Lab Course I: Invertebrata		✓		
ZU231EC1	Elective Course I: Allied Zoology I	✓			✓
ZU231EP1	Elective Lab Course I: Lab on Allied Zoology I	✓			✓
ZU231NM1	NME I: Ornamental Fish farming and management		✓		
ZU231FC1	Foundation Course: Introduction to Zoology				✓
B. Sc. Zoology – Semester II					
ZU232CC1	Core Course II: Chordata		✓	✓	
ZU232CP1	Core Lab Course II: Lab on Chordata		✓	✓	
ZU232EC1	Elective Course II: Allied Zoology II		✓	✓	✓

ZU232EP1	Elective Lab Course II: Lab on Allied Zoology		✓		✓
ZU232NM1	NME II: Bio-composting for Entrepreneurship		✓	✓	
ZU232SE1	SEC I: Animal Behaviour		✓		
M.Sc. Zoology - Semester I					
ZP231CC1	Core Course - I : Structure and function of Invertebrates		✓		
ZP231CC2	Core Course - II: Comparative Anatomy of Vertebrates		✓		
ZP231CP1	Core Lab Course – I: Lab Course in Invertebrates & Vertebrates				
ZP231EC1	Elective Course – I: a) Molecules and their interaction relevant to Biology		✓	✓	
ZP231EC2	Elective Course – I: b) Forensic Biology		✓	✓	✓
ZP231EC3	Elective Course – I: c) Wildlife Management		✓		✓
ZP231EC4	Elective Course – II: a) Biostatistics				
ZP231EC5	Elective Course – II: b) Applied Zoology		✓		
ZP231EC6	Elective Course – II: c) Pest Management		✓		
M.Sc. Zoology - Semester II					
ZP232CC1	Core Course – III: Cellular and Molecular Biology			✓	✓
ZP232CC2	Core Course – IV: Developmental Biology	✓		✓	✓
ZP232CP1	Core Lab Course – II: Lab Course in Cell Biology and Developmental Biology			✓	✓
ZP232EC1	Elective Course – III: a) Economic Entomology		✓	✓	✓
ZP232EC2	Elective Course – III: b) Parasitology		✓	✓	✓
ZP232EC3	Elective Course – III: c) Agrochemicals & Pest management		✓	✓	✓
ZP232EC4	Elective Course – IV: a) Research methodology				✓
ZP232EC5	Elective Course -IV: b) Apiculture		✓	✓	
ZP232EC6	Elective Course – IV: c) Sericulture		✓	✓	
ZP232EP1	Elective Lab Course – II: Economic Entomology & Research Methodology				
ZP232SE1	Skill Enhancement Course I: Poultry Farming		✓	✓	

Item 14/BoS27.05/16: Recommendation of books and journals for UG and PG.

Recommendation of recently published books and journals were done.

Item 15/BoS27.05/17: Suggestion for innovative teaching and evaluation techniques for UG and PG

Item 16/BoS27.05/18: Conduct of seminars / workshops in collaborations with Government Agents / Universities / NGOs.

Suggestions for innovative teaching and evaluation techniques for UG and PG were done. The board suggested to incorporate compulsory MOOC Courses for PG. It was also suggested to encourage active learners to opt for E-Pathashala papers.

Item 17/BoS27.05/19: Conduct of seminars / workshops in collaborations with Government Agents / Universities / NGOs

The board also suggested to organize workshops or seminars in expertise of the faculty of the department to make a mark in their area of specialization.

Item 18/BoS27.05/20: New measures to be undertaken by the Department

No new measures given.

Item 19/BoS27.05/21: The Board went through the feedback and the action taken.

Feedback Received and Action Taken on Curricular Aspects

Department	Stakeholders	Feedback Received	Action Taken
Zoology	Students	II PG student felt Endocrinology paper as heavy	Instead of endocrinology, the other option, "Forensic Biology" has been introduced
	Parents	Demanded skill-oriented courses	Training on silkworm rearing, ornamental fish culture, apiculture was given.
	Teachers	More entrepreneurial courses should be included.	Increased the number of courses.
	Alumni	Demanded skill development courses	Implemented
	Academic Peers	Appreciated the syllabus	-

The students suggested more skill-oriented courses and include field visit for each course. in each semester

III B.Sc. Zoology: Mathija *M. Mathija.*

II M.Sc. Zoology: Arul Selvan Arul Deepika *Arul selvan Arul Deepika.*

Item 20/BoS27.05/22: Next meeting of BoS

The date for the next BoS was fixed as on December, 2023.

Item 21/BoS27.05/23: Any other. - Nil

Name of the member	Designation	Signature
Dr. A. Shyla Suganthi	Chair person	A. Shyla Suganthi 25/5/2023
Dr. L. Jeyaprabha,	University Nominee	L. Jeyaprabha 27.5.23
Dr. D. Radhika	Subject Expert	D. Radhika 27/5/23
Dr. S. Kalidas	Subject Expert	S. Kalidas 27/5/23
Mr. R. Rejith Singh	Industrialist	
Ms. Tony Lesline,	Alumnae	Tony Lesline R
Ms. Reshma, R	Alumnae	R. Reshma
Dr. S. Mary Mettilda Bai,	Member	S. Mary Mettilda Bai 27/5/2023
Dr. .Brisca Renuga	Member	B. Renuga 27/5/2023
Dr. J. Vinoliya Josephine Mary	Member	J. Vinoliya Josephine Mary
Dr. P.T. Arokya Glory	Member	P.T. Arokya Glory
Dr. Jeni Chandar Padua	Member	Jeni Chandar Padua
Dr. C. Josephine Priyatharshini	Member	C. Josephine Priyatharshini
Dr. A. Punitha	Member	A. Punitha 27/5/23
Dr. X. Venci Candida	Member	X. Venci Candida
Dr. S. Prakash Shoba	Member	S. Prakash Shoba 27/5/2023
Dr. C. Anitha	Member	C. Anitha