



4Y B.Sc. (Honours) (Major in Zoology) (2025 Pattern) Programme

Minutes of the PAC Meeting held on 10.06.2024

Date: 10th June, 2024

Time: 10.30 am to 04.30 pm

The PAC Meeting for 4Y B.Sc. (Honours) (Major in Zoology) (2025 Pattern) Programme as per NEP 2020 of **School of Sciences** was held offline & online on **Monday, 10-06-2024 at 10:30 AM** at school meeting hall. Following members and invitees were present in person,

01	Dr. Chetana Kamlaskar	(Chairperson) and Member
02	Prof. (Dr.) Resham Bhalla	Member
03	Prof. (Dr.) Chetan Jawale	Member
04	Dr. Somnath Waghmare	Member
05	Mr. Ravindra Bharsat	Academic Coordinator (Zoology Programme) and Invitee
06	Dr. Dnyaneshwar Bhusanur	Invitee
07	Dr. Jagruti Chavan	Invitee
08	Ms. Minakshi Kadel	Invitee
09	Dr. Bharat More	Invitee
10	Mr. Nandkishor Sangle	Invitee
11	Ms. Tejaswi Kadam	Invitee

Following members could not attend the meeting due to their other engagements.

01	Dr. Sunanda More	Member
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Dr. Chetana Kamlaskar, Chairperson and Member of the PAC first welcomed PAC members and introduced the members about the purpose of the meeting. During the meeting following items were discussed.

SN	Details of Items	Resolution
1	Agenda 1: To finalize and approve proposed BSc (Honours) (Major in Zoology) programme - credit distribution details, second and third year (semester 03 to 06).	The PAC members unanimously finalized and approved the proposed programme structure and credit distribution details for all second- and third-year courses at semester 03 to 06 detailed syllabus related to Major, Minor courses of Zoology, and their evaluation pattern for all first, second and third year courses at semester 01 to 06 of the following 02 programmes as per NEP2020 guidelines, with few suggestions about courses in programme structure: i) 4 Year B.Sc. (Honours) (Major in Zoology and Minor in Chemistry) ii) 4 Year B.Sc. (Honours) (Major in Zoology and Minor in Botany) For Major in Zoology programmes, the following Suggestions are given by the PAC members: 1. For the First year (Semester 01 and 02) of proposed B.Sc. programme, PAC members suggested the following changes in first-year courses of 4Y B.Sc. (Honours) (Major in Zoology) • In Semester 01, ZOO101: Animal Diversity course - enrich the references. • In Semester 02, ZOO103: Anatomy & Developmental Biology of Vertebrates course - it has been advised to rename course title as 'ZOO103: Comparative Anatomy & Developmental Biology of Vertebrates'. This shall also reflect in respective course lab activity. 2. For the Second year (Semester 03 and 04) of proposed B.Sc. programme, PAC members suggested the following changes • In semester 03, ZOO201: Animal Physiology & Ecology- it has been advised to rearrange sequence of units within credit 01 & 02 to maintain the logical flow of the content covered. This shall also reflect in respective course lab activity with some addition of practicals. • In course ZOO202: Wildlife Conservation it has been advised

		to rearrange two units of credit 01. • In semester 04, ZOO205: Microbiology - it has been advised to rename units of 01-02, 01-03 & 02-02 and revise them with slight modifications. 3. For the Third year (Semester 05 and 06) of proposed B.Sc. programme, PAC members suggested the following changes • In semester 05, ZOO301: Mammalian Histology - it has been advised to slightly modify the course content of units 02-04, 03-03, 03-04, 04-03 & 04-04. This shall also reflect in respective course lab activity with some addition of practicals. • In semester 06 course ZOO306: Pest Management & Parasitology, advised to merge and update the content of units 02-03 & 02-04. This shall also reflect in respective course lab activity. 4. It is also suggested that course content of major shall be used for providing Zoology as Minor for other programmes.
	Action Taken: Programme structure and syllabus has been updated as per the discussion in PAC meeting. Refer Appendix I & II for updated programme structure & syllabus.	
2	Agenda 2: Finalization and approval of Syllabus of Elective courses (DSE), OE/VSC courses etc related to Zoology	1. The PAC members unanimously finalized and approved the syllabus of the proposed Major in Zoology courses with few suggestions, which were retained after the finalization of the programme structure. • Course content for the following Elective courses: ZOO304: Techniques in Medical Forensic Zoology, ZOO305: Apiculture and Sericulture, ZOO310: Economic Zoology, first draft will be prepared by Dr. Jawale sir, it gets finalization by other PAC members. 2. The selection of Elective courses (DSE) related to Zoology have been discussed and approved after fruitful deliberations among all PAC members. 3. The OE/VSC courses etc. related to Zoology have been discussed and in which some courses are suggested which will be open for

		all faculties. The detail discussion regarding OE/VSC will be finalised in next PAC meeting. - The PAC members Suggested OE course title are given below: - i. Vermicomposting Management ii. Poultry Management iii. Sericulture Management iv. Public health and hygiene.
	Action Taken: Syllabus has been updated as per the discussion in PAC meeting. Refer Appendix II for updated syllabus.	
3	Agenda 3: Framing guidelines for OJT/FP and RP Courses	The PAC members agreed to guide time to time regarding the OJT/FP and RP courses. A booklet of OJT/FP will be proposed by School of Sciences for all UG courses, which will be finalized in due course of time. It was also resolved to authorize the Director of this School to enrich and update the OJT, Field Project (FP), and Research Project (RP) guidelines from time to time as per the University Policy decisions/norms.
4	Agenda 4: Identification of Writers/ Editors for SLM development task	The PAC members unanimously gave their consent for the writing/editing of the Self Learning Material (SLM) for the proposed B.Sc. (Honours) (Major in Zoology) programme. For a few courses, the PAC members have given their consent for SLM development. They also agreed to recommend experts for the new courses, in due course of time. It was also resolved to authorize the Director of this School to enrich and update the list of writers/editors for the Self Learning Material (SLM) development task from time to time as per the University Policy decisions/norms.

Meeting ends with vote of thanks by **Dr. Jagruti Chavan.**

Thanks...



(Dr. Chetana Kamlaskar)

Chairperson, PAC of B.Sc. (Honours) (Major in Zoology) Programme

APPENDIX I: PROGRAMME STRUCTURE
ZOOLOGY: MAJOR, ELECTIVES, MINOR, OE, VSC, IKS COURSES

Abbreviations: Yr.: Year; Sem.: Semester; Cumulative Credits: Cum. Cr. ; T- Theory Course;P- Practical course; TW-Term Work; PW- Project Work

Level	Sem	Major				Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem	
		Mandatory		Electives													
4.5	I	ZOO101: Animal Diversity (T)	4	-		-		(ZOO) OE-I	2		2		2		2	22	
		ZOO102: Lab Activity on ZOO101 (P)	2					(ZOO) OE-II	2		2	IKS101: Biology in Ayurveda	2				
	II	ZOO103: Comparative Anatomy & Developmental Biology of Vertebrates (T)	4	-		ZOO103: Comparative Anatomy & Developmental Biology of Vertebrates(T)	2	(ZOO) OE-III	2	VSC102: Lab Activity ZOO103 (P)	2		2		2	22	
		ZOO104: Lab Activity ZOO103 (P)	2					(ZOO) OE-IV	2		2						
Cum. Cr.		12		00		02		08		08		10		04		44	
5.0	III	ZOO201: Animal Physiology & Ecology (T)	4			ZOO201: Animal Physiology & Ecology (T)	4	(ZOO)OE-V	2	VSC201: Lab Activity on Animal Physiology & Ecology (P)	2		2	Field Project		2	22
		ZOO202: Wildlife Conservation (T)	2														
		ZOO203: Lab Activity on ZOO201 (P)	2														
	IV	ZOO204: Genetics & Evolutionary Biology (T)	4			ZOO204: Genetics & Evolutionary Biology (T)	4	IPR	2		2		2		2	22	
		ZOO205: Microbiology (T)	2												2		
		ZOO206: Lab Activity on ZOO204(P)	2												2		
Cum. Cr.		28		00		10		12		12		14		12		88	

Level	Sem	Major				Minor	OE		VSC, SEC (VSEC)	AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem		
		Mandatory		Electives												
5-5	V	ZOO301: Mammalian Histology (T)	4	ZOO304: Techniques in Medical Forensic Zoology (T) OR ZOO305: Apiculture & Sericulture (T)	4	ZOO301: Mammalian Histology(T)	4			VSC207: Lab Activity on Mammalian Histology (P)	2			FP/CEP	2	22
		ZOO302: Marine Ecology (T)	2													
		ZOO303: Lab Activity on ZOO301(P)	4													
	VI	ZOO306: Pest Management & Parasitology (T)	4	ZOO309: Aquarium & Poultry Management (T) OR ZOO310: Economic Zoology(T)	4	ZOO307: Pest Management & Parasitology (T)	4						OJT	4	22	
		ZOO307: Welfare and behaviour of Domesticated Animals (T)	2													
		ZOO308: Lab Activity on ZOO306 (P)	4													
Cum. Cr.		48		08		18		12		14		14		18		132

Level	Sem	Major				Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum . Cr. / Sem		
		Mandatory		Electives														
6.0	VII	ZOO401: Biochemistry (T)		4	ZOO406: Development Biology (T) OR ZOO407: Entomology (T)		4	RES405: Research Methodology (T)		4			FP/CEP		2	22		
		ZOO402: Cell Biology (T)		2														
		ZOO403: Applied Zoology Part -I (T)		4														
		ZOO404: Lab Activity on Biochemistry, Cell Biology & Applied Zoology Part-I (P)		4														
	VIII	ZOO409: Molecular Biology (T)		4	ZOO415: Animal Biotechnology (T) OR ZOO416: Toxicology (T)		4					ZOO413: OJT		4	22			
		ZOO410: Genetics (T)		2														
		ZOO411: Applied Zoology Part-II (T)		4														
		ZOO412: Lab Activity on Molecular Biology, Genetics & Applied Zoology Part-II (P)		4														
Cum. Cr.		76			16			22		12		14		14		22		176

Programme Structure: B.Sc. (Honours) (Major in Zoology and Minor in Botany) (2025 Pattern)

Level	Sem	Major				Minor	OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem	
		Mandatory		Electives												
4.5	I	ZOO101: Animal Diversity (T)	4	-		-		OE-I	2	VSC101: Basic Instrumentation Skills (TW)	2	AEC101: English Communication -1 (T)	2	CC101: Yoga (TW)	2	22
		ZOO102: Lab Activity ZOO101(P)	2					OE-II	2	SEC101: IT & e-Learning Skills (TW)	2	VEC101: Value Education (T)	2			
	II	ZOO103: Comparative Anatomy & Developmental Biology of Vertebrates (T)	4	-		BOT103: Evolution and Diversity of Pteridophytes and Gymnosperms (T)	2	OE-III	2	VSC102: Lab Activity on Evolution and Diversity of Pteridophytes and Gymnosperms (P)	2	AEC102: English Communication -2 (T)	2			
		ZOO104: Lab Activity on ZOO103 (P)	2					OE-IV	2	SEC102: Solar Panel System (TW)	2	VEC102: Environmental Science (T)	2			
Cum. Cr.		12		00		02		08		08		10		04		44
Exit option: Award of UG Certificate in ZOOLOGY as Major with 44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor																
5.0	III	ZOO201: Animal Physiology & Ecology (T)	4			BOT301: Angiosperm Morphology, Taxonomy and Diversity (T)	4	OE-V	2	VSC201: Lab Activity on Angiosperm Morphology, Taxonomy and Diversity (P)	2	AEC201: Modern Indian Language-1 (T)	2	Field Project	2	22
		ZOO202: Wildlife Conservation (T)	2											CC201: Conference & Event Management (TW)	2	
		ZOO203: Lab Activity on ZOO201 (P)	2													
	IV	ZOO204: Genetics & Evolutionary Biology (T)	4			BOT304: Plant Physiology and Metabolism (T)	4	IPR	2	SEC201: Financial & Investment Skills (TW)	2	AEC202: Modern Indian Language – 2 (T)	2	CEP	2	22
		ZOO205: Microbiology (T)	2											CC202: Personality & Career Skills (TW)	2	
		ZOO206: Lab Activity on ZOO204 (P)	2													
Cum. Cr.		28		00		10		12		12		14		12		88
Exit option: Award of UG Diploma in ZOOLOGY as Major and BOTANY as Minor with 88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor																

Level	Sem	Major				Minor	OE		VSC, SEC (VSEC)	AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem		
		Mandatory		Electives												
5•5	V	ZOO301: Mammalian Histology (T)	4	ZOO304: Techniques in Medical Forensic Zoology (T) OR ZOO305: Apiculture & Sericulture (T)	4	BOT 206: Cell Biology & Genetics (T)	4			VSC207: Lab Activity on Cell Biology & Genetics(P)	2			FP/CEP	2	22
		ZOO302: Marine Ecology (T)	2													
		ZOO303: Lab Activity on ZOO301 (P)	4													
	VI	ZOO306: Pest Management & Parasitology (T)	4	ZOO309: Aquarium & Poultry Management (T) OR ZOO310: Economic Zoology (T)	4	BOT 306: Analytical Techniques in Plant Science & Horticulture (T)	4							OJT	4	22
		ZOO307: Welfare and behaviour of Domesticated Animals(T)	2													
		ZOO308: Lab Activity on ZOO306(P)	4													
Cum. Cr.		48		08		18		12		14		14		18		132
Exit option: Award of UG Degree in ZOOLOGY as Major with 132 credits OR Continue with Major and Minor																

Leve l	Sem	Major				Minor	OE	VSC, SEC (VSEC)	AEC, VEC, IKS	OJT, FP, CEP, CC, RP	Cum. Cr. / Sem					
		Mandatory		Electives												
6.0	VII	ZOO401: Biochemistry (T)	4	ZOO406: Development Biology (T) OR ZOO407: Entomology (T)	4	RES405: Research Methodology (T)	4				2	22				
		ZOO402: Cell Biology (T)	2													
		ZOO403: Applied Zoology Part -I (T)	4													
		ZOO404: Lab Activity on Biochemistry, Cell Biology & Applied Zoology Part-I (P)	4													
	VIII	ZOO409: Molecular Biology (T)	4	ZOO415: Animal Biotechnology (T) OR ZOO416: Toxicology (T)	4					ZOO413: OJT	4	22				
		ZOO410: Genetics (T)	2													
		ZOO411: Applied Zoology Part-II (T)	4													
		ZOO412: Lab Activity on Molecular Biology, Genetics & Applied Zoology Part-II (P)	4													
Cum. Cr.		76		16		22		12		14		14		22		176
Four Year UG Honours Degree in ZOOLOGY as Major and BOTANY as Minor with 176 credits																

Programme Structure: B.Sc. (Honours) (Major in Zoology and Minor in Chemistry) (2025 Pattern)

Level	Sem	Major				Minor	OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem		
		Mandatory		Electives													
4-5	I	ZOO101: Animal Diversity (T)	4	-		-		OE-I	2	VSC101: Basic Instrumentation Skills (TW)	2	AEC101: English Communication -1 (T)	2	CC101: Yoga (TW)	2	22	
		ZOO102: Lab Activity on ZOO101 (P)	2					OE-II	2	SEC101: IT & e-Learning Skills (TW)	2	VEC101: Value Education (T)	2				
												IKS101: Biology in Ayurveda (T)	2				
	II	ZOO103: Comparative Anatomy & Developmental Biology of Vertebrates (T)	4	-		CHE103: Physical & Organic Chemistry-I (T)	2	OE-III	2	VSC102: Lab Activity on Physical & Organic Chemistry-I (P)	2	AEC102: English Communication -2 (T)	2	CC102: Drawing & Sketching (TW)	2	22	
		ZOO104: Lab Activity on ZOO103 (P)	2					OE-IV	2	SEC102: Solar Panel System (TW)	2	VEC102: Environmental Science (T)	2				
	Cum. Cr.		12		00		02		08		08		10		04		44
Exit option: Award of UG Certificate in ZOOLOGY as Major with 44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor																	
5-0	III	ZOO201: Animal Physiology & Ecology (T)	4			CHE301: Physical & Organic Chemistry-II (T)	4	OE-IV	2	VSC201: Lab Activity on Physical & Organic Chemistry-II (P)	2	AEC201: Modern Indian Language – 1 (T)	2	Field Project		2	22
		ZOO202: Wildlife Conservation (T)	2											CC201: Conference & Event Management (TW)		2	
		ZOO203: Lab Activity on ZOO201 (P)	2														
	IV	ZOO204: Genetics & Evolutionary Biology (T)	4			CHE304: Analytical Chemistry (T)	4	IPR	2	SEC201: Financial & Investment Skills (TW)	2	AEC202: Modern Indian Language – 2 (T)	2	CEP(TW)		2	22
		ZOO205: Microbiology (T)	2											CC202: Personality & Career Skills (TW)		2	
		ZOO206: Lab Activity on ZOO204(P)	2														
	Cum. Cr.		28		00		10		12		12		14		12		88
Exit option: Award of UG Diploma in ZOOLOGY as Major and CHEMISTRY as Minor with 88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor																	

Level	Sem	Major				Minor	OE		VSC, SEC (VSEC)				AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem
		Mandatory		Electives													
5-5	V	ZOO301: Mammalian Histology (T)	4	ZOO304: Techniques in Medical Forensic Zoology (T) OR ZOO305: Apiculture & Sericulture (T)	4	CHE206: Physical & Inorganic Chemistry (T)	4			VSC207: Lab Activity on Physical & Inorganic Chemistry (P)	2			FP/CEP	2	22	
		ZOO302: Marine Ecology (T)	2														
		ZOO303: Lab Activity on ZOO301(P)	4														
	VI	ZOO306: Pest Management & Parasitology (T)	4	ZOO309: Aquarium & Poultry Management (T) OR ZOO310: Economic Zoology (T)	4	CHE306: Green Chemistry (T)	4					OJT	4	22			
		ZOO307: Welfare and behaviour of Domesticated Animals (T)	2														
		ZOO308: Lab Activity on ZOO306 (P)	4														
Cum. Cr.		48		08		18		12		14		14		18		132	
Exit option: Award of UG Degree in ZOOLOGY as Major with 132 credits OR Continue with Major and Minor																	

Level	Sem	Major				Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum . Cr. / Sem		
		Mandatory		Electives														
6.0	VII	ZOO401: Biochemistry (T)		4	ZOO406: Development Biology (T) OR ZOO407: Entomology (T)		4	RES405: Research Methodology (T)		4					2	22		
		ZOO402: Cell Biology (T)		2														
		ZOO403: Applied Zoology Part -I (T)		4														
		ZOO404: Lab Activity on Biochemistry, Cell Biology & Applied Zoology Part-I (P)		4														
	VIII	ZOO409: Molecular Biology (T)		4	ZOO415: Animal Biotechnology (T) OR ZOO416: Toxicology (T)		4							ZOO413: OJT	4	22		
		ZOO410: Genetics (T)		2														
		ZOO411: Applied Zoology Part-II (T)		4														
		ZOO412: Lab Activity on Molecular Biology, Genetics & Applied Zoology Part-II (P)		4														
Cum. Cr.		76			16			22		12		14		14		22		176
Four Year UG Honours Degree in Major in ZOOLOGY and Minor in CHEMISTRY with 176 credits																		

APPENDIX II:

SYLLABUS OF VXXX: B.Sc. (MAJOR IN ZOOLOGY) {2025 PATTERN}

Refer the syllabus file attached with this mail separate

