यशवंतराव चव्हाण महाराष्ट्र मुक्त विद्यापीठ, नाशिक



नाशिक - ४२२ २२२ (महाराष्ट्र) भारत



Yashwantrao Chavan Maharashtra Open University, Nashik

NAAC Accredited 'A' Grade

Dnyangangotri, Near Gangapur Dam, Govardhan Nashik - 422 222 (Maharashtra) India

संकेतस्थळ Website : • www.ycmou.ac.in • https://ycmou.digitaluniversity.ac इं−मेल E-mail : director.ast@ycmou.ac.in द्रश्वनी Telephone : (0253) 2231473

विज्ञान विद्याशाखा / School of Sciences

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

Minutes of the PAC Meeting held on 11.09.2024

Meeting No.: 02 Date: 11th September, 2024 Time: 3.00 pm to 5.30 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 online on **Wednesday**, **11-09-2024 at 3:00 PM**, 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) and Invitee
06	Dr. Jagruti Chavan	Invitee
07	Ms. Minakshi Kadel	Invitee
09	Ms. Tejaswi Kadam	Invitee

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

01	Dr. Sunanda More	Member
02	Dr. Dnyaneshwar Bhusanur	Invitee

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	Resolu	ution									
1	Agenda Item 1: To finalize and approve the detailed syllabus (semester 01 to 03) related to Open Elective (OE) courses under Zoology programme for other	approvalong for the	PAC members unanimuded the proposed Open with their syllabus in the learners other than lance with NEP2020 gu	Elective (OE) Courses the Zoology discipline Zoology Major, in								
	faculty, as per NEP2020 guidelines.	The P	AC members provided	l the following								
	80.00	sugge	stions:									
		2.	be replaced with a referring'. Additionally, it is suggested	on, Health & Hygiene new course on 'Goat gested to rearrange the active courses to align								
		Se	As per Programme	As per								
		m	Structure	Suggestion								
		OE101: OE101: Vermicomposting Management Management OE102: Poultry OE102:										
		02	OE103: Sericulture Management	OE103: Poultry Management								
			OE104: Nutrition, Health & Hygiene	OE104: Goat Farming								
		03	OE201: Dairy Production & Management	OE201: Dairy Production & Management								
		3.	The list of OE course future as per demand of									
	Action Taken: The Programme strudiscussion in the PAC meeting.		·									
2	Refer Appendix I & II for the revise Agenda Item 2: To discuss &											
2	finalize Discipline specific Indian Knowledge System (IKS) course position within the Zoology programme structure.	position of the proposed Discipline specific Indian Knowledge System (IKS) Course at semester 03, of										
		i) ii)	Zoology and Mino	Honours) (Major in								
		The F	ollowing suggestions w	vere made by the								

PAC members: 1. In semester 03, it is advised that 'ZOO202: Wildlife Conservation' course be modified from 02 credit to 04 credit and offered as Discipline Specific Elective (DSE) course in Semester 05. 2. It is also suggested to introduce a new course 'Biostatistics & Bioinformatics' and to be offered as Discipline Specific Elective (DSE) course in Semester 06. 3. Additionally, it is recommended that 'Skill Enhancement Course (SEC): Vermiculture Management' in the form of Term Work (TW) be offered in Semester II. Action Taken: The Programme structure and syllabus have been updated based on the discussions in the PAC meeting. Refer Appendix II for Programme structure and revised syllabus. **Agenda Item 3:** To finalize the Few courses from the last verticals (SEC, AEC, courses and syllabus from VSC, IKS, CC, CEP etc.) that will be offered verticals (VSC, SEC, AEC, VEC, common for all programmes have been discussed generic IKS, OJT, FP, CEP, CC, and approved along with their syllabus. To finalize RP) that will be offered common these courses at the university level, if required, the for all 4Y UG B.Sc. (Honours) PAC members unanimously gave authority to the programmes of School of Sciences School Director to update the courses in accordance with the university decision as needed. **Action Taken:** The syllabus has been updated as per the discussion in the PAC meeting. Refer **Appendix II** for updated syllabus. **Agenda Item 4:** Identification of The PAC members unanimously gave their consent 4 Writers/ Editors for SLM for the writing/editing of the Self Learning Material development task (SLM) for the proposed B.Sc. (Honours) (Major in Zoology) programme. 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 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 Mr. Ravindra Bharsat

Thanks...

(Dr. Chetana Kamlaskar)

Chairperson, PAC 4Y. B.Sc. (Honours)(Major in Zoology)

$APPENDIX I: Programme Structure of VXXX: B.Sc. (Honours) (Major, Electives, Minor, OE, VSC, IKS In Zoology) \\ \{2025 \, Pattern\}$

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

_		Major														OJT, FP, C	EP.	Cum.
Level	Sem	Mandatory		Electives	Minor		OE			VSC, SEC ((VSEC)		AEC,	VEC, I	KS	CC, RP		Cr. / Sem
	T	ZOO101: Animal Diversity (T)	4	_	_		OE101: Vermicomposting Management		2			2				2	2	22
4.5	1	ZOO102: Lab Activity on ZOO101 (P)	2				OE102: Sericulture Management	e	2			2	IKS101: (General T)	IKS	2		
4.9	п	ZOO103: Comparative Anatomy & Developmental Biology of Vertebrates (T)	4		ZOO103: Comparative Anatomy &	2	OE103: Poultry Management		2	VSC102: Lab Activity ZO (P)		2				2	2	22
		ZOO104: Lab Activity ZOO103 (P)	2	_	Developmental Biology of Vertebrates(T)		OE104: Goat Farming		2	ZOO105: Vermi Management (2				2		22
Cum.	Cr.	12		00	02		08			08				10		04		44
	III	ZOO201: Animal Physiology & Ecology (T) ZOO202: Biology in Ayurveda (IKS) (T)	4		ZOO201: Animal Physiology & Ecology	4		2		C201: Lab ity on ZOO201 (P)	2			2	Z0020)4: Field Project (TW)	2	22
5.0		ZOO203: Lab Activity on ZOO201 (P)	2		(T)		Management										2	4
5.0	***	ZOO205: Genetics & Evolutionary Biology (T)	4		ZOO205: Genetics & Evolutionary Biology		OE202: Intellectual								ZOO20	8: Bee Keeping (TW)	2	
	IV	ZOO206: Microbiology (T)	2		(T)	4	Property Rights 2	2		1	2			2			2	22
		ZOO207: Lab Activity on ZOO205(P)	2				(IPR) (TW)										2	
Cum.	Cr.	28		00	10		12		•	12		,	14		•	12		88

		Ma	jor								AEC,	OJT, FF	,	Cum.
Level	Sem	Mandatory	zOO304: Techniques in Medical Forensic Zoology (T) orine Ecology (T) 2 ZOO304: Techniques in Medical Forensic Zoology (T) OR ZOO305: Apiculture & Sericulture (T) OR 4	Minor		OE	VSC, SEC (VSEC	•)	VEC, IKS	CEP,	,	Cr. / Sem		
		ZOO301: Mammalian Histology (T)	4	Medical Forensic Zoology (T)								Z00307		
	\mathbf{v}	ZOO302: Marine Ecology (T)	Marine Ecology (T) 2 ZOO305: Apiculture & Sericulture (T) OR ZOO306: Wildlife Conservation (T)	ZOO301: Mammalian	4		VSC301: Lab Activity on ZOO301	2		:FP / ZOO30 8:	2	22		
5.5		ZOO303: Lab Activity on ZOO301(P)	4	OR ZOO306: Wildlife Conservation	•	Histology (T)			(P)			Awarenes s of SDG (TW)		
		ZOO309: Pest Management & Parasitology (T)	4	ZOO312: Aquarium & Poultry Management (T)										
	VI	ZOO310: Welfare and behaviour of Domesticated Animals (T)	2	ZOO313: Economic Zoology(T) OR	4	ZOO309: Pest Management & Parasitology (T)	4					ZOO315: OJT (TW)	4	22
		ZOO311: Lab Activity on ZOO309 (P)	4	ZOO314: Biostatistics & Bioinformatics (T)		Turusitology (1)						(111)		
Cum.	Cr.	48		08		18		12	14		14	18		132

Level	Sem	Major				Minor		OE	,	VSC, SEC	AE	C, VEC	,	OJT, FP, C	CEP,	Cum. Cr./
Level	Sem	Mandatory		Electives		WIIIOI		OE		(VSEC)		IKS		CC, RF	•	Sem
		ZOO401: Biochemistry (T)	4	ZOO406: Development Biology		RES405:										
		ZOO402: Cell Biology (T)	2	(T) OR	4	Research Methodology	4								2	22
		ZOO403: Applied Zoology Part -I (T)	4	ZOO407: Entomology (T)	•	(T)										
6.0		ZOO404: Lab Activity on Biochemistry, Cell Biology & Applied Zoology Part-I (P)	4													
		ZOO409: Molecular Biology (T)	4	ZOO415: Animal Biotechnology												
	VIII	ZOO410: Genetics (T)	2	(T) OR	4									Z00413:	4	22
		ZOO411: Applied Zoology Part-II (T)	4	ZOO416: Toxicology (T)	•									OJT (TW)	•	
		ZOO412: Lab Activity on Molecular Biology, Genetics & Applied Zoology Part-II (P)	4													
Cum. Cı	r.	76		16		22		12		14		14		22		176
											L					

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

T1	G	Major			B/C		OF.		Vice are (Vice	(a)	AEC ME	C IVO		OJT, FP,		Cum
Level	Sem	Mandatory	E	lectives	Minor		OE		VSC, SEC (VSE		AEC, VE	C, IKS		CEP, CC, RP		Cr. / Sem
		ZOO101: Animal Diversity (T)	4				OE101: Vermicomposting Management	2	VSC101: Basic Instrumentation Skills (TW)	2	AEC101: E Communica (T)	tion -I	2	CC101: Photograph		
	I	ZOO102: Lab Activity ZOO101 (P)	2	-	-		OE102: Sericulture Management	2	SEC101: MS-Excel with AI (TW)	l 2	VEC10 Environm Education- IKS101: G IKS (T	ental -I (T) <mark>eneric</mark>	2	Techniques & Bird Watching (TW)	2	22
4.5	п	ZOO103: Comparative Anatomy & Developmental Biology of Vertebrates (T)	4	_	BOT103: Plant Ecology &	2	OE103: Poultry Management	2	VSC102: Lab Activity on Plan Ecology & Taxonom (P)		AEC102: E Communica (T)	English	2	CC102: Yoga	2	22
		ZOO104: Lab Activity on ZOO103 (P)	2		Taxonomy (T)		OE104: Goat Farming	2	ZOO105: Vermiculture Management (TW)) 2	VEC10 Environm Education-	ental	2	(TW)		
Cum	. Cr.	12		00	02		08		08		10	•		04		44
Ex	it optio	n: Award of UG Certificate in ZO	OLOG	Y as Maj	or with 44 credits a	nd a	n additional 4 cred	dits c	ore NSQF course/ I	nterns	ship OR Con	tinue v	with	Major and N	Aino	r
		ZOO201: Animal Physiology & Ecology (T)	4		BOT301: Diversity &				VSC201: Lab Activity on)204: Field	2	
	III	ZOO202: Biology In Ayurveda (T)	2		Morphology of Angiosperms	4	OE201: Dairy Production & Management	2	Diversity & morphology of Angiosperms	Mod	EC201: lern Indian guage-I (T)	2	Pro	oject (TW)	_	22
5.0		ZOO203: Lab Activity on ZOO20 (P)	1 2		(T)				(P)		g (-)			o1: Applied ts (TW)	2	
3.0		ZOO205: Genetics & Evolutionary	v _		DOTTO O PILILI				SEC201:					D208: Bee ping (TW)	2	
3.0		Biology (T)	4		BOT304: Plant		OE202:			A	ECooc.	I ∟				1
3.0	IV	ZOO206: Microbiology (T)	2		Systematic- Algae, Fungi & Bryophytes (T)	4	Intellectual Property Rights	2	Financial & 2 Investment Skills	Mod	EC202: lern Indian nage – II (T)	2	Ast	CC202:	2	22
3.0	IV		2		Systematic- Algae, Fungi &	4	Intellectual	2	Financial &	Mod	lern Indian	2	Ast		2	22

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 witl Major and Minor

Level	Sem	Major	4 Medical Forensic Zoology OR 2 ZOO305: Apiculture & Sericulture (T) OR 4 ZOO306: Wildlife Conservation(T) ZOO312: Aquarium & Po Management (T) OR ZOO313: Economic Zool (T) OR			Minor		OE	VSC, SEC (VSEC	,	AEC, VEC,	OJT, FP, CI	EP,	Cum. Cr./
Level	Sem	Mandatory				Willor		OE	VSC, SEC (VSEC	,	IKS	CC, RP		Sem
		ZOO301: Mammalian Histology (T)	4	ZOO304: Techniques in Medical Forensic Zoology (T)		BOT 206: Cell			VSC207: Lab			ZOO307: Field		
	v	ZOO302: Marine Ecology (T)	2		4	Biology & Genetics (T)	4		Activity on Cell Biology & Genetics(P)	2		Project/ ZOO308: Awareness	2	22
		ZOO303: Lab Activity on ZOO301 (P)	4	ZOO306: Wildlife Conservation(T)								of SDG (TW)		
5.5		ZOO309: Pest Management & Parasitology (T)	4	_		BOT 306:								
	VI	ZOO310: Welfare and behaviour of Domesticated Animals(T)	2	ZOO313: Economic Zoology (T)	4	Analytical Techniques in Plant Science &	4					ZOO315: OJT (TW)	4	22
		ZOO311: Lab Activity on ZOO309 (P)	4	ZOO314: Biostatistics & Bioinformatics (T)		Horticulture (T)								
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

		Major							VSC, SEC	١	AEC, VEC,	OJT, FP, CI	R P	Cum.
Level	Sem	Mandatory		Electives		Minor		OE	(VSEC)		IKS	CC, RP	ш т ,	Cr. / Sem
		ZOO401: Biochemistry (T)	4	ZOO406: Development		RES405:								
	VII	ZOO402: Cell Biology (T)	2	Biology (T) OR ZOO407: Entomology	4	Research Methodology	4						2	22
	V-12	ZOO403: Applied Zoology Part -I (T)	4	(T)	-	(T)								
6.0		ZOO404: Lab Activity on Biochemistry, Cell Biology & Applied Zoology Part-I (P)	4											
		ZOO409: Molecular Biology (T)	4	700 44 5 Animal										
	VIII	ZOO410: Genetics (T)	2	ZOO415: Animal Biotechnology (T) OR	4							ZOO413: OJT	4	22
	V 111	ZOO411: Applied Zoology Part-II (T)	4	ZOO416: Toxicology (T)	4							(TW)	4	
		ZOO412: Lab Activity on Molecular Biology, Genetics & Applied Zoology Part-II (P)	4											
Cum. Ci	r.	76		16		22		12	14		14	22		176
		F	T 7 1	IC Hangung Dagnag in M		1 7 7 1		11.	1			1		

Four Year UG Honours Degree in Major and Minor with 176 credits

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

		Major																OJT, FP,		Cum
Level	Sem	Mandatory		Elective	es	Minor		OE			VSC, SEC					C, IKS		CEP, CC, RP		. Cr. / Sem
		ZOO101: Animal Diversity (T)	4					OE101: Vermicompostir Management		2	VSC101: B Instrumenta Skills (TV	tion		1	unica [(T)	tion -	2	CC101: Photograph		
	I	ZOO102: Lab Activity on ZOO101 (P)	2	-		-		OE102: Sericultu Management		2	SEC101: MS- with AI (TW)		el 2	Enviro Educa IKS101:	tion-l	ental I (T)	2	Techniques & Bird Watching (TW)	2	22
4.5	II	ZOO103: Comparative Anatomy & Developmental Biology of Vertebrates (T)	4	_		CHE103 : Physical & Organic	2	OE103: Poultr Management		2	VSC102 Lab Activity of Ecology & Tax (P)	ı Pla					2	CC102: Yoga	2	22
		ZOO104: Lab Activity on ZOO103 (P)	2			Chemistry-I (T)		OE104: Goat Farming	5		ZOO105 Vermiculti Management	ire (TW	v) ²	Envir		ental	2	(TW)		
Cum.		12	00	00		02	3 .	08	. 11.		08			al to OP Co	10		L 3.7.	04		44
E	xit opti	ion: Award of UG Certificate in ZOOL ZOO201: Animal Physiology &	JUG	r as majo	or w	ith 44 credits a	na a	in additional 4 cre	earts		C201: Lab	e/ 1	nterns	snip OK Co	num	ue with	n wa	jor and min	or	T
		Ecology (T)	4		_,	СНЕ301:		OE201: Dairy		A	ctivity on							04: Field	2	
	III	ZOO202: Biology In Ayurveda (T)	2			ysical & Organic Chemistry-II	4	Production &	2		Physical & Organic			1: Modern Language -I	2		Proje	ct (TW)		22
5.0		ZOO203: Lab Activity on ZOO201 (P)	2			(T)		Management		Ch	nemistry-II (P)			(T)		CC2		Applied Arts ГW)	2	
		ZOO205: Genetics & Evolutionary Biology (T)	4			СНЕ304:		OE202:			SEC201:		ΔFC20)2: Modern				08: Bee ng (TW)	2	
	IV	ZOO206: Microbiology (T)	2		(Analytical Chemistry (T)	4	Intellectual Property Rights	2	Financial & Investment Skil (TW)			Indian	Language -	2	CC	202:	Astronomy		22
		ZOO207: Lab Activity on ZOO205 (P)	2					(IPR) (TW)					I	I (T)				eginners ГW)	2	
Cum.	Cr.	28		00		10		12			12			14				12		88
Exit o	option:	Award of UG Diploma in ZOOLOGY a	as M	lajor and	l CH	EMISTRY as M	inoı	with 88 credits a	ınd a	an a	dditional 4 cr	edit	s core	NSQF cour	rse/	Intern	ship	OR Continu	e wi	ith

Major and Minor

		Ma	jor									AEC,	OJT, FP,		Cum.
Level	Sem	Mandatory		Electives		Minor		OE		VSC, SEC (VSEC	()	VEC, IKS	CEP, CC, RP		Cr. / Sem
		ZOO301: Mammalian Histology (T)	4	ZOO304: Techniques in Medical Forensic Zoology (T)						VSC207: Lab			ZOO307: Field		
	v	ZOO302: Marine Ecology (T)	2	ZOO305: Apiculture & Sericulture (T)	4	CHE206: Physical & Inorganic Chemistry (T)	4			Activity on Physical & Inorganic	2		Project / ZOO308:	2	22
		ZOO303: Lab Activity on ZOO301(P)	4	OR ZOO306: Wildlife Conservation(T)		(-)				Chemistry (P)			Awareness of SDG (TW)		
5.5		ZOO309: Pest Management & Parasitology (T)	4	ZOO312: Aquarium & Poultry Management (T)											
	VI	ZOO310: Welfare and behaviour of Domesticated Animals (T)	2	ZOO313: Economic Zoology (T)	4	CHE306: Green Chemistry (T)	4						ZOO315: OJT (TW)	4	22
		ZOO311: Lab Activity on ZOO309 (P)	4	ZOO314: Biostatistics & Bioinformatics(T)									001(111)		
Cum.	Cr.	48		08		18		12		14		14	18		132
		Exit option:	Awar	d of UG Degree in ZOOLOGY as	Major	with 132 credits OR Co	ontin	ue with M	Лајо	r and Minor					

Level	Sem	Major Mandatory		Electives		Minor		OE		VSC, SEC (VSEC)	AEC, VE	EC,	OJT, FP, C		Cum. Cr. / Sem
		ZOO401: Biochemistry (T)	4	ZOO406: Development		RES405:									
	VII	ZOO402: Cell Biology (T)	2	Biology (T) OR	4	Research Methodology	4							2	22
		ZOO403: Applied Zoology Part -I (T)	4	ZOO407: Entomology (T)	•	(T)									
6.0		ZOO404: Lab Activity on Biochemistry, Cell Biology & Applied Zoology Part-I (P)	4												
		ZOO409: Molecular Biology (T)	4	ZOO415: Animal											
	VIII	ZOO410: Genetics (T)	2	Biotechnology (T) OR	4								Z00413:	4	22
	, , , ,	ZOO411: Applied Zoology Part-II (T)	4	ZOO416: Toxicology (T)	7								OJT (TW)	T	
		ZOO412: Lab Activity on Molecular Biology, Genetics & Applied Zoology Part-II (P)	4												
Cum. C	r.	76		16		22		12		14	14		22		176
		Four Year UG Honou	rs De	gree in Major in ZOOLOGY	and I	Minor in CHEMIS	STRY	with 176 (cred	its					

APPENDIX II:

Syllabus of VXXX: B.Sc. (Major in Zoology) {2025 Pattern}

Refer the syllabus file attached with this mail separate