यशवंतराव चव्हाण महाराष्ट्र मुक्त विद्यापीठ, नाशिक



Yashwantrao Chavan Maharashtra Open University, Nashik

NAAC Accredited 'A' Grade

ज्ञानगंगोत्री, गंगापूर धरणाजवळ, गोवर्धन नाशिक – ४२२ २२२ (महाराष्ट्र) भारत

नॅक मानांकित 'अ' श्रेणी

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विज्ञान विद्याशाखा / School of Sciences

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

Minutes of the PAC Meeting held on 20.09.2024

Meeting No: 02 Date: 20th September, 2024 Time: 11.20 am to 02.00 pm

The PAC Meeting for 4Y B.Sc. (Honours) (Major in Chemistry) (2025 Pattern) Programme as per NEP 2020 of **School of Sciences** was held online on **Friday**, **20-09-2024 at 11:20 AM**, School meeting hall. Following members and invitees were present in person,

01	Dr. Chetana Kamlaskar	(Chairperson) and Member
02	Dr. Sunanda More	Member
03	Prof. Chetan B. Patil	Member
04	Prof. Ramesh L. Gardas	Member
05	Dr. Dnyaneshwar Bhusanur	Academic Coordinator (Chemistry
		Programme) and Invitee
06	Dr. Jagruti Chavan	Invitee
07	Mr. Ravindra Bharsat	Invitee
08	Ms. Minakshi Kadel	Invitee
09	Ms. Tejaswi Kadam	Invitee

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

01	Prof. Ashok V Borhade	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 Item 1: To finalize and approve the detailed syllabus (semester 01 to 03) related to Open Elective (OE) courses under Chemistry programme for other faulty, as per NEP2020 guidelines.	approved the proposed O along with their syllabus	_
		the proposed cours 'Industrial Safety Man	maintain a logical flow in se content for OE102: agement' course offered in aggested unit sequence is
		As per proposed course syllabus 01-04:Industrial Hazards and Types 02-01: Industrial Hygiene 02-04:Fires and Explosions	As per Suggestion by PAC 01-04: Fires and Explosions 02-01: Industrial Hazards and Types 02-04: Industrial Hygiene
	Action Taken: The Programme str discussion in the PAC meeting.	per demand of the lear	
	Refer Appendix I & II for the revise		
	Agenda Item 2: To discuss & finalize Discipline specific Indian Knowledge System (IKS) course position within the Chemistry programme structure.	position of the proposed Knowledge System (IKS) the following proposed per NEP2020 guidelines, courses in programme struit. 4 Year B.Sc. Chemistry and Bit. 4	Discipline specific Indian Course at semester 03, of Chemistry programmes as with few suggestions about acture of: c. (Honours) (Major in Minor in Mathematics) c. (Honours) (Major in Minor in Physics) c. (Honours) (Major in Minor in Zoology) c. (Honours) (Major in Minor in Botany) ms were made by the PAC
		'Molecular Model 02 credits, be shi 'Nuclear Chemistr	t is advised that CHE202: ling Chemistry' course of fted in place of CHE 206: y' in semester 04. we been suggested that the

		course content of 'CHE206: Nuclear
		Chemistry' 02 credits course of semester 04,
		to be split into the CHE 205: 'Basic
		Analytical Chemistry' at semester 04 and
		'CHE301: Physical & Inorganic Chemistry'
		at semester 05.
	Action Taken: The Programme str	ructure and syllabus have been updated based on the
	discussions in the PAC meeting.	deture and symaous have been updated based on the
	Refer Appendix II for Programme s	structure and revised syllabus
3	Agenda Item 3: To finalize the	1. Few courses from the last verticals (SEC, AEC,
	courses and syllabus from last	VSC, IKS, CC, CEP etc.) that will be offered
	verticals (VSC, SEC, AEC, VEC,	·
	generic IKS, OJT, FP, CEP, CC,	common for all programmes have been discussed
	RP) that will be offered common	and approved along with their syllabus. To
	for all 4Y UG B.Sc. (Honours)	finalize these courses at the university level, if
	programmes of School of Sciences.	required, the PAC members unanimously gave
		authority to the School Director to update the
		courses in accordance with the university
		decision as needed.
		2. In addition, it has suggested to revise lab
		activities of 'CHE105 Food Chemistry' in
		semester 02.
	Action Taken: The syllabus has be	en updated as per the discussion in the PAC meeting.
	Refer Appendix II for updated syllar	
4	Agenda Item 4: Identification of	The PAC members unanimously gave their consent
	Writers/ Editors for SLM	for the writing/editing of the Self Learning Material
	development task.	(SLM) for the proposed B.Sc. (Honours) (Major in
		Chemistry) 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 list of writers/editors
		for the Self Learning Material (SLM) development task from time to time as per the University Policy
		decisions/norms.
1		GOODION HOLLING.

Meeting ends with vote of thanks by Dr. Dnyaneshwar Bhusanur

Thanks...

Dr. Chetana Kamlaskar)

Chairperson, PAC B.Sc. (Honours)

(Major in Chemistry)

APPENDIX I: PROGRAMME STRUCTURE:

CHEMISTRY: MAJOR, ELECTIVES, MINOR, OE, VSC, SEC, IKS COURSES {2025 PATTERN}

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

		Major													Cu
Leve l	Se m	Mandatory	E	lectives	Minor		OE		VSC, SEC (VSEC)	AEC, VEC, IKS	5	OJT, FP, CEP, CC, RP		m. Cr. / Se m
		CHE101: Basic Inorganic & Organic Chemistry (T)	4				OE101: Chemistry in Everyday Life (T)	2		2		2			
	Ι	CHE102: Lab Activities on CHE101 (P)	2	-	-		OE102: Industrial Safety Management (T)	2		2	IKS101: General IKS (T)	2		2	22
4.5	II	CHE103: Physical & Organic Chemistry-I (T)	4	-	CHE103: Physical & Organic	2	OE103: Pesticides Chemistry (T)	2	VSC102: Lab Activities on CHE103 (P)	2		2		2	22
		on CHE103 (P)	2		Chemistry-I (T)		OE104: Food Safety Adulteration and Detection (T)	2	CHE105: Food Chemistry (TW)	2		2			
Cum.	Cr.	12		00	02		08		08		10		04		44
	III	CHE201: Physical & Organic Chemistry-II (T) CHE202: Ancient Indian Chemistry (T) CHE203: Lab Activities on CHE201 (P)	4 2 2		CHE201: Physical & Organic Chemistry-II (T)	4	OE101: Fuel Chemistry (T)	2	VSC201: Lab Activities on CHE201 (P)	2		2	CHE204:Fi eld Project (TW)	2	22
5.0	IV	CHE 205: Basic Analytical Chemistry (T) CHE 206: Molecular Modelling Chemistry (T)	4		CHE204:Basic Analytical Chemistry (T)	4	IPR (T)	2		2		2	CHE208: Bee Keeping (TW)	2	. 22
Consti	C	CHE207: Lab Activities on CHE205 (P)	2		10		10		10					2	9.0
Cum.	cr.	28		00	10		12		12		14		12		88

Level Se Major Minor OE VSC, SEC AEC, OJT, FP, Cum.

	m	Mandatory		Electives						(VSEC)		VEC IKS	,	CEP, CC, RP	RP Ser 07 30 2 nes 0G) 15: 4 22	Cr. / Sem
		CHE301: Physical & Inorganic Chemistry (T)	4	CHE304: Chemistry in Everyday						VSC301: Lab				CHE307 :FP		
	\mathbf{v}	CHE302: Industrial Chemistry-I (T)	2	life (T) OR CHE305: Biochemistry (T) OR	4	CHE301: Physi cal & Inorganic	4	_	_	Activities on CHE301	2	_	_	/CHE30 8:	2	
		CHE303: Lab Activities on CHE301 & CHE302 (P)	4	CHE306: Co-ordination Chemistry(T)	•	Chemistry (T)				(P)				Awarenes s of SDG (TW)		
5.5		CHE309: Green Chemistry (T)	4	CHE3112: Advanced												
		CHE310: Industrial Chemistry-II (T)	2	Agrochemicals, Bio-pesticides & Fertilizers (T) OR		СНЕ306:								CHE315:		
	VI	CHE 311: Lab Activities on CHE309 & CHE310 (P)	4	CHE313: Forensic Chemistry (T) OR CHE314: Application of Computer in Chemistry(T)	4	Green Chemistry (T)	4	-	-	-		-	-	OJT (TW)	4	22
Cum. C	r.	48		08	l	18		12	<u> </u>	14	<u> </u>	14		18		132

Level	Se	Major				Minor		OE	VSC SEC		EC, EC,	OJT, F		Cum. Cr./
20.02	m	Mandatory		Electives	2/22202		02	(VSE		KS	CEP,		Sem	
		CHE401: Inorganic Chemistry-I (T)	4	CHE406: Physical		RES405:								
	VII	CHE402: Physical Chemistry-I (T)	4	Methods in Chemistry (T) OR	4	Research	4	_	_	_		_	2	22
		CHE403: Organic Chemistry-I (T)	2	CHE407: Polymer Chemistry (T)	T	Methodolog y							_	
6.0		CHE404: Lab Activities on CHE401, CHE402 & CHE403 (P)	4	Chemistry (1)		(T)								
		CHE409: Inorganic Chemistry-II (T)	4	CHE415: Basic Analytical										
	VII	CHE410: Physical Chemistry-II (T)	4	Chemistry (T) OR	4							OJT40 1: OJT	4	22
	I	CHE411: Organic Chemistry-II (T)	2	CHE416: Chemical Mathematics	T	-						1, 331	7	
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P)	4	&Biostatistics (T)										
Cum.	Cum. Cr. 76			16		22		12	14	14		22		176
							•	<u>'</u>			<u>'</u>			

Programme Structure: B.Sc. (Honours) (Major in CHEMISTRY and Minor in Mathematics) (2025 Pattern)

Level	Sem	Major	Т		Minor	OE.			VSC SEC (VS	EC)		AEC. VEC	IKS			Ρ,	Cum. Cr./
Level	CHE101: Basic Inorganic & Organic Chemistry (T) CHE102: Lab Activities on CHE101 (P) CHE103: Physical & Organic Chemistry-I (T) CHE104: Lab Activities on CHE103 (P) TOTAL CHE103 (P) CHE201: Physical & Organic Chemistry-II (T) CHE201: Physical & Organic Chemistry-II (T) CHE202: Ancient Indian Chemistry (T) CHE203: Lab Activities on CHE201 (P) CHE205: Basic Analytical Chemistry (T) CHE 206: Molecular Modelling Chemistry (T) CHE207: Lab Activities on CHE205 (P) TOTAL CHE205 (P) TOTAL CHE205 (P) TOTAL CHE101: Physical & Phy	Elective	es	OL			vse, see (vs	LC)		THE, VEC,	110		CC, RP		Sem		
	4	O	4	CC101: Photograph Photogr													
	1		Electives Minor OE VSC, SEC (VSEC) AEC, VEC, IK3 OE101: Chemistry in Everyday Life (T) OE102: Industrial Safety Management (T) OE103: Pesticides Chemistry (T) OE103: Pesticides Chemistry (T) OE104: Food Safety Adulteration and Detection (T) OO OO OO OO OO OO OO OO OO)	2	& Bird Watching	2	22									
4.5	П	• •	4	-		Chemistry (T)	3	2	Mathematical Statis		2	9		2		2	22
		-	2		Mathematics (T)	Adulteration and	-	2			2	Environmental Educa	ation-l	II 2	103(1117)		
Level Sem Mandatory Electives Minor OE VSC, SIEC (VSEC) AEC, VEC, IKS CC, RF			08														
_	Exit opt			CHEMI	STRY as Major with 44 cr	edits and an additi	ional 4	4 cred	lits core NSQF c	cour	se/ I	nternship <mark>OR</mark> Con	tinu	e with	n Major and Mi	nor	
			4				•	VSC a o	1. Practical Rasad					CHE		9	
Organic Chemistry (T) CHE102: Lab Activities on CHE101 (P) CHE103: Physical & Organic Chemistry-I (T) CHE104: Lab Activities on CHE103 (P) CHE104: Lab Activities on CHE103 (P) Cum. Cr. 12 O0 O2 Exit option: Award of UG Certificate in CHEMISTRY as Major with 44 credits and Chemistry-II (T) CHE202: Ancient Indian Chemistry (T) CHE203: Lab Activities on CHE201 (P) CHE 205: Basic Analytical Chemistry (T) CHE 206: Molecular Modelling Chemistry (T) CHE207: Lab Activities on CHE205 (P) CUm. Cr. CHE206: Molecular Modelling Chemistry (T) CHE207: Lab Activities on CHE205 (P) Cum. Cr. Cum. Cr. CHE206: Molecular Modelling Chemistry (T) CHE207: Lab Activities on CHE205 (P) Cum. Cr. Cum.				MAT 103 2				2		(TW)		22					
5.0		Organic Chemistry (T) 4 CHE102: Lab Activities on CHE101 (P) 2 CHE103: Physical & Organic Chemistry-I (T) 4 CHE104: Lab Activities on CHE103 (P) 2 CHE104: Lab Activities on CHE103 (P) 2 CHE103: Physical & Organic Chemistry (T) 4 CHE104: Lab Activities on CHE103 (P) 2 Thundamentals of Mathematics (T) Adultarial management (T) 2 CHE104: Lab Activities on CHE103 (P) 2 Thundamentals of Mathematics (T) Adultarial management (T) 2 CHE105: Prod Safety Adultarial management (T) 2 Thundamentals of Mathematics (T) Adultarial management (T) 2 CHE105: Prod Safety Adultarial management (T) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 CHE105: Food Chemistry (TW) 2 Thundamentals of Mathematics (TW) 2 Thundamentals of Mathematics (TW) 2 Thundamentals Statistics using MS - Excel (P) 2 Thundamentals		2													
3.0	II CHE104: Lab Activities on CHE103 (P) III CHE201: Physical & Organic Chemistry (T) III CHE202: Ancient Indian Chemistry (T) CHE202: Ancient Indian Chemistry (T) CHE203: Basic Analytical Chemistry (T) CHE201: Lab Activities on CHE201 (P) CHE201: Flow Chemistry (T) CHE202: Ancient Indian Chemistry (T) CHE203: Basic Analytical Chemistry (T) CHE201: CHE201: MAT103: Calculus Chemistry (T) CHE202: Ancient Indian Chemistry (T) CHE203: Basic Analytical Chemistry (T) CHE204: Field Chemistry (T) CHE205: Basic Analytical Chemistry (T) CHE206: Molecular Modelling Chemistry (T) CHE207: Lab Activities on CHE201 (P) CHE207: Lab Activities on CHE205 (P) CHE207: Lab Activities on CHE205 (P) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE208: Beach Chemistry (T) CHE207: Lab Activities on CHE205 (P) CHE20		2														
	IV		2	-	1 1	Code: IPR(T)	9			2			2			Pield Project W) pplied Arts W) Bee Keeping W) Astronomy ginners W) 12	22
			2			(TW)											
																	88
Exit o	ption: A	Award of UG Diploma in (CHEM	ISTRY a	s Major and MATHEMAT			edits <mark>a</mark>	and an addition	al 4	cred	its core NSQF cou	rse/	Inter	nship <mark>OR</mark> Cont	inue	with

	V CHE302: Industrial Chemistry-I (T) CHE303: Lab Activities on CHE301 CHE302 (P)	I.	Majo	or						VSC, SEC		AEC,		OJT, FP,		Cum.
Level	Sem	Mandatory		Electives	Minor		OE		(VSEC)		VEC, IKS		CEP, CC, RP		Cr. / Sem	
		CHE301: Physical &Inorganic Chemistry (T) CHE302: Industrial Chemistry-I (T) CHE303: Lab Activities on CHE301 &		CHE304: Chemistry in Everyday life (T)						VSC301:				CHE307:		
	***	Mandatory CHE301: Physical &Inorganic Chemistry (T) CHE302: Industrial Chemistry-I (T) CHE303: Lab Activities on CHE301 &		OR	MAT301:Differenti	4			MAT303:				Field Project /CHE308:			
5.5	V		4	CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry (T)	4	al Equations (T)		-	-	Programming in MATLAB (P)	2	-	-	Awareness of SDG (TW)	2	22
3.3		CHE309: Green Chemistry (T)		CHE312: Advanced Agrochemicals, Bio-	Agrochemicals, Bio-											
	VI	CHE310: Industrial Chemistry-II (T)	2	pesticides & Fertilizers (T) OR CHE313: Forensic Chemistry (T) OR		MATXXX: Numerical Analysis	4	_		_		_		CHE315:	4	22
	"		4	CHE313: Foliable Chemistry (1) OK CHE314: Application of Computer in Chemistry (T)		(T)	4							OJT (TW)	4	
Cum	Cum. Cr. 48			08		18		12		14		14		18		132
			d of	UG Degree in CHEMISTRY as Major with 132 credits OR Continue with Major and Minor												

Level	Sem		M	ajor	Minor		OE	VSC, SE		´		Cum. Cr./
20101		Mandatory		Electives	1122202		02	(VSEC)	VEC,	IKS CEP,		Sem
		CHE401: Inorganic Chemistry-I (T)	4									
	VII CHE402: Physical Chemistry-I (T) CHE403: Organic Chemistry-I (T) CHE404: Lab Activities on CHE401		4	CHE406: Physical Methods in Chemistry (T)	RES405: Research	4	_	_	_		2	22
			2	OR CHE407: Polymer Chemistry (T)	Methodology (T)						-	
6.0		CHE404: Lab ActivitiesonCHE401, CHE402 & CHE403 (P)	4									
		CHE409: Inorganic Chemistry-II (T)	4	CHE415: Analytical Chemistry (T)								
	X7777	CHE410: Physical Chemistry-II (T)	4	OR						CHE413	;	
	VIII	CHE411: Organic Chemistry-II (T)	2	CHE416: Chemical Mathematics & Biostatistics (T)	-					OJT	4	22
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P)	4									
Cum	n. Cr.	76		16	22		12	14	1.	. 22	•	176
				Four Year UG Honours Degree in Major	and Minor with 176 cre	dits						

Programme Structure: B.Sc. (Honours) (Major in CHEMISTRY and Minor in PHYSICS) (2025 Pattern)

III CHE202: Ancient Indian Chemistry (T) CHE203: Lab Activities on CHE201 (P) CHE 205: Basic Analytical Chemistry CHE 205: Basic Analytical Chemistry		Cum.														
Level	Sem	Mandatory		Electives	Minor		OE		VSC, SEC (VSEC)		AEC, VEC, I	KS				Cr. / Sem
			4		_			2	Instrumentation Skills	2	Communication-I	(T)		Photograp hy		
4.5	I		2	-			Safety	2		2	Education-I (T)	2	& Bird Watching	2	22
			4		_		Chemistry (T)	2		2			2	CC102:		
	11		2	-			ulteration and Detection	2		2	Environmental Educa	ition-	·II 2	(TXAZ)	2	22
								1								44
	Exit o	pption: Award of UG Certificat	e in M	Iajor CHE	MISTRY with 44 cr	edits	s <mark>and</mark> an additional 4	cre	dits core NSQF course	e/ In	ternship <mark>OR</mark> Conti	nue	with	Major and N	Iinoı	•
			4		PHY301:				VCCoote Lab				Cl	HE204: Field	L	2
	III		2	-	Statistical	4	0	2	Activities on PHY201	2	Indian Language-I	2		Project		22
		_	2		Mechanics (T)						,		CC2		rts	2
5.0		•	4										СНЕ	208: Bee Keep	ing	2
	IV		2	-		4	Code: IPR (T)	2	Investment Skills	2	Indian Language-II	2	CC2	•	for	22
			2						<u></u>		(-)			O		_
																88
Exit o	ption	: Award of UG Diploma in Maj	or CH	IEMISTRY	and Minor PHYSIC	CS w	ith 88 credits and ar Minor	add	litional 4 credits core	NSQ)F course/ Interns	hip (OR Co	ontinue with	Maj	or and

			Majo	or						VSC, SEC	AEC		OJT, FP, CEP	,	Cum.
Level	Sem	Mandatory		Electives	Minor		OH	E	(VSEC)	VEC IKS		CC, RP	,	Cr. / Sem	
		CHE301: Physical & Inorganic Chemistry (T)	4	CHE304: Chemistry in Everyday life (T)		PHY301: Classical &				VSC207: Lab			СНЕ307:FP		
	\mathbf{v}	CHE302: Industrial Chemistry-I (T)	2	CHE305: Biochemistry (T)OR	4	Quantum Mechanics (T)	4	-	-	Activities on 2	-	-	/CHE308: Awareness of	2	22
5.5		CHE303: Lab Activities on CHE301 & CHE302 (P)	4	CHE306: Co-ordination Chemistry (T)						PHY301 (P)			SDG		
		CHE309: Green Chemistry (T)	4	CHE312: Advanced Agrochemicals, Bio-		DHVooza Nuclear									
		CHE310: Industrial Chemistry-II (T)	2	pesticides & Fertilizers (T) OR		PHY307: Nuclear Physics & Radiation							CHE315:		
	VI	CHE 311: Lab Activities on CHE309 & CHE310 (P)	4	CHE313: Forensic Chemistry (T) OR CHE314: Application of Computer in Chemistry (T)	4	Safety (T)	4	-	-	-	-	-	OJT	4	22
Cum	. Cr.	48		08		18		12		14	14		18		132
	Exit option: Award of UG Degree in Major CHEMISTRY					h 132 credits <mark>OR</mark> Conti		nue with		Major and Minor					

	C	Major	Major								AEC,		OJT, FP, CEP,		Cum.
Level	Sem	Mandatory		Electives		Minor		OE	VSC, SE (VSEC)		VEC, IK	S	CC, RP		Cr. / Sem
		CHE401: Inorganic Chemistry-I (T)	4	CHE406: Physical Methods in		RES405:									ĺ
	VII	CHE402: Physical Chemistry-I (T)	4	Chemistry (T)	4	Research	4	_	_		_		_	2	22
	VII	CHE403: Organic Chemistry-I (T)	2	OR	4	Methodology (T)			_		_		_	_	
6.0		CHE404: Lab Activities on CHE401, CHE402 & CHE403 (P)	4	CHE407: Polymer Chemistry (T)		(1)									
0.0		CHE409: Inorganic Chemistry-II (T)	4	CHE415: Analytical Chemistry (T)									CHE		I
	VIII	CHE410: Physical Chemistry-II (T)	4	OR	4	_							CHE413: OJT	1	22
	V 111	CHE411: Organic Chemistry-II (T)	2	CHE416: Chemical Mathematics &	4								001	4	- <u>-</u> -
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P)	4	Biostatistics (T)											
Cun	ı. Cr.	76		16		22		12	14		14		22		176
		Four Year I	JG H	onours Degree in Major and Mi	nor	with 176 cred	its								

Programme Structure: B.Sc. (Honours) (Major in CHEMISTRY and Minor in ZOOLOGY) (2025 Pattern)

		Major														OJT, FF	,	Cum.
Level	Sem	Mandatory		Elective	es	Minor		OE		VSC, SEC (VS	EC)	AEC, VEC	c, IKS		CEP,	•	Cr. / Sem	
		CHE101: Basic Inorganic & Organic Chemistry (T)	4						: Chemistry in yday Life (T)	2	VSC101: Basic Instrumentation Skil (TW)	lls	2 AEC101: Eng Communication	-I (T)	2	CC101: Photograp hy		
4.5	I	CHE102: Lab Activities on CHE101 (P)	2	-		-			Safety Management (T)	2	SEC101: IT & e-Learning Skills (TV	V)	2 VEC101: Enviror Education-I (IKS101: General	T)	2	Technique s& Bird Watching (TW)	2	22
		CHE103: Physical & Organic Chemistry-I (T)	4			ZOO106 : Comparative			Pesticides emistry (T)	2	VSC102: Lab Activi ZOO106 (P)	ity	AEC102: Eng Communication		2	CC102:		
	II	CHE104: Lab Activities on CHE103 (P)	2	-		Anatomy & Developmental Biology of Vertebrates (T)	2 0	Adul	4: Food Safety lteration and tection (T)	2	CHE205: Food Chemi	istry	2 Environmental Edu (T)		I 2	Yoga (TW)	2	22
Cum		12		00		02			08		08		10		•	04		44
E	xit opti	on: Award of UG Certificate in	CH	EMISTRY	as I	Major with 44 cre	edits	and	an additiona	d 4 (credits core NSQF c	ours	e/ Internship <mark>OR</mark> Co	<u>ntinue</u>	with	Major and I	Mino	r
		CHE201: Physical & Organic Chemis (T)	stry-I	I 4		ZOO201 : Anima	al				_		AEC201: Modern			204: Field Project	2	
	III	CHE202: Ancient Indian Chemistr	y (T)	2 -		Physiology & Ecolo	ogy	4	OE101: Fuel Chemistry (T)	2	VSC201: Lab Activity ZOO201 (P)	2	Indian Language - I	2	1	Toject		22
		CHE203: Lab Activities on CHE20	01 (P)) 2		(T)			enemistry (1)		Tiching 200201 (1)		(T)			o1: Applied s (TW)	2	
5.0		CHE 205: Basic Analytical Chemistr	ry (T)	4												E208: Bee bing (TW)	2	
	IV	CHE206: Molecular Modelling Chemistry(T)	3	2 -		ZOO206: Genetics Evolutionary Biolo (T)		4	Code: IPR(T)	2	SEC201: Financial & Investment Skills (TW)	2	AEC202: Modern Indian Language - II (T)	2	Astro	C202: onomy for	2	22
		CHE 207: Lab Activities on CHE20	05 (P) 2												ginners (TW)		
Cum		28			00	10			12		12		14			12		88
Exit	option	a: Award of UG Diploma in CHI	EMIS	STRY as M	Iajoı	and ZOOLOGY a			with 88 cred or and Minor	its a	and an additional 4	cred	lits core NSQF course	e/ Inte	rnshi	p OR Contir	iue v	vith

Level	Sem		Maj	or		Minon	Minor			VSC, SEC		AEC, VEC,		OJT, FP, CE	P,	Cum.
Level	Sem	Mandatory		Electives		Willor		OE		(VSEC)		IKS		CC, RP		Cr. / Sem
		CHE301: Physical & Inorganic Chemistry (T)	4	CHE304: Chemistry in Everyday life (T)		Z00301:				VSC207: Lab				CHE307:FP		
	V	CHE302: Industrial Chemistry-I (T)	2	CHE305: Biochemistry (T) OR	4	Mammalian	4	-	-	Activity	2	-	-	/CEP308: Awareness of	2	22
5.5		CHE303: Lab Activities on CHE301 & CHE302 (P)		CHE306: Co-ordination Chemistry (T)		Histology (T)				ZOO301 (P)				SDG		
3.3		CHE309: Green Chemistry (T)	4	CHE312: Advanced Agrochemicals, Bio-												
	VI	CHE310: Industrial Chemistry-II (T)	2	pesticides & Fertilizers (T) OR CHE313: Forensic Chemistry (T) OR	4	ZOO307: Pest Management &	4	-	-	-		-	-	CHE315: OJT	4	22
		CHE 311: Lab Activities on CHE309 & CHE310 (P)	4	CHE314: Application of computer in Chemistry (T)		Parasitology (T)								001		
Cum	ı. Cr.	48		08		18		12		14		14		18		132
		Errit antion, Arve		th 100 anodits OP Co				Major and Mir	• • •							

Exit option: Award of UG Degree in CHEMISTRY as Major with 132 credits OR Continue with Major and Minor

		Major							VSC, SEC	AEC,	OJT, FI	,	Cum.
Level	Sem	Mandatory		Electives		Minor		OE	(VSEC)	VEC, IKS	CEP, CC, RP	•	Cr. / Sem
		CHE401: Inorganic Chemistry-I (T)	4	CHE406: Physical Methods in		RES405:							
	VII	CHE402: Physical Chemistry-I (T)	4	Chemistry (T)	4	Research	4				_	2	22
	VII	CHE403: Organic Chemistry-I (T)	2	OR	4	Methodology		_				_	22
6.0	-	CHE404: Lab ActivitiesonCHE401, CHE402 & CHE403 (P)	4	CHE407: Polymer Chemistry (T)		(T)							
0.0		CHE409: Inorganic Chemistry-II (T)	4	CHE415: Analytical Chemistry (T)									
	VIII	CHE410: Physical Chemistry-II (T)	4	OR	4	_					CHE413: OJT		22
	VIII	CHE411: Organic Chemistry-II (T)	2	CHE416: Chemical Mathematics &	4	_					001	4	22
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P)	4	Biostatistics (T)									
Cum	Cum. Cr. 76			16	22		12	14	14	22		176	
		Four Year UG Honours D	e in Major CHEMISTRY and Mi	ZOOLOGY wit	h 176	credit	·s						

Programme Structure: B.Sc. (Honours) (Major in CHEMISTRY and Minor in BOTANY) (2025 Pattern)

_		Major											OJT, FP,		Cum.
Level	Sem	Mandatory		Electives	Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		CEP, CC, RP		Cr. / Sem
	T	CHE101: Basic Inorganic & Organic Chemistry (T)	4				OE101: Chemistry in Everyday Life (T	2	VSC101: Basic Instrumentation Skills (TW)	2	AEC101: English Communication-I (T)	2	Techniques&	2	
4.5	1	CHE102: Lab Activities on CHE101 (P)	2		-		OE102: Industrial Safety Management (T)	2	SEC101: IT & e-Learning Skills (TW)	2	VEC101: Environmental Education-I (T) IKS101: General IKS (T)	2	watching	2	22
		CHE103: Physical & Organic Chemistry-I (T)	4		BOT103:		OE103: Pesticides Chemistry (T)	2	VSC102: Lab Activity on BOT103 (P)	2	AEC102: English Communication-II (T)	2	CC102:		
	II	CHE104: Lab Activities on CHE103 (P)	2	-	Evolution and Diversity of Pteridophytes and Gymnosperms (T)	2	OE104: Food Safety Adulteration and Detection (T)	2	CHE205: Food Chemistry (TW)	2	VEC102: Environmental Education-II (T)	2	Yoga	2	22
Cum		12		00	02		08		08		10		04		44
	Exit opt	ion: Award of UG Certificate i	n CH	EMISTRY	as Major with 44 cred	its 8	<mark>and</mark> an additional 4 o	cred	its core NSQF course/	Inte	ernship <mark>OR</mark> Continue wit	h M	Iajor and Mi	nor	
		CHE201: Physical & Organic Chemistry-II (T)	4										CHE204:	2	
	Ш	CHE202: Ancient Indian Chemistry (T)	2	-	BOT201: Angiosperm Morphology, Taxonomy	4	OE101: Fuel Chemistry (T)	2	VSC201: Lab Activity on BOT201 (P)	2	AEC201: Modern Indian Language- I (T)	r	ield Project		22
5.0		CHE203: Lab Activities on CHE201 (P)	2		and Diversity (T)		enemoti (1)		201201(1)		Zaman Zangungo Z (Z)	A	CC201: applied Arts (TW)	2	
	IV	CHE 205: Basic Analytical Chemistry (T)	4		DOTTO O C. Plant								HE208: Bee eeping (TW)	2	
	_•	CHE 206: Molecular Modelling Chemistry(T)	2	-	BOT206: Plant Physiology and Metabolism (T)	4	Code: IPR (T)	2	SEC201: Financial & Investment Skills(TW)	2	AEC202: Modern Indian Language- II (T)		cC202:	2	22
		CHE 207: Lab Activities on CHE205 (P)	2										Beginners (TW)		
	Cum. Cr. 28 00 10 12 12 14 12 88														
Exit op	tion: Aw	vard of UG Diploma in CHEMI	STRY	Y as Major a	and BOTANY as Mino	r wi	ith 88 credits <mark>and</mark> ar Minor	ı ad	ditional 4 credits core	NSQ)F course/ Internship OF	C C	ontinue with	Maj	or and

т1	Level Sem Ma		ajor		3.6°	OF	VSC, SEC		AEC,	OJT, FP	,	Cum.	
Levei	Sem	Mandatory		Electives		Minor	OE	(VSEC)		VEC, IKS	CEP, CC, RP		Cr. / Sem
		CHE301: Physical & Inorganic Chemistry (T)	4	CHE304: Chemistry in Everyday life (T)							CHE307:		
	\mathbf{v}	CHE302: Industrial Chemistry-I (T)	2	OR	4	BOT301: Cell Biology & Genetics 4	_ _	VSC207: Lab Activity on	2	-	FP /CEP308:	2	22
		CHE303: Lab Activities on CHE301 & CHE302 (P)		CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry (T)		(T)		BOT301 (P)			Awareness of SDG		
5.5		CHE309: Green Chemistry (T)	4	CHE312: Advanced Agrochemicals, Bio-		ВОТ307:							
	VI	CHE310: Industrial Chemistry-II (T)	2	pesticides & Fertilizers (T) OR CHE313: Forensic Chemistry (T) OR	4	Analytical Techniques in Plant 4	- -	-		-	CHE315: OJT	4	22
		CHE 311: Lab Activities on CHE309 & CHE310 (P)	4	CHE314: Application of Computer in Chemistry (T)		Science & Horticulture (T)					001		
Cum	Cum. Cr. 48			08		18	12	14		14	18		132
		Exit option: Award o	th 1	32 credits OR Contin	ue with	h Maior and Minor							

Level	Sem	Major Mandatory		Electives		Minor		OE	VSC, SEC (VSEC)	AEC, VI	EC,	OJT, FF CEP, CC, RF		Cum. Cr. / Sem
	VII	CHE401: Inorganic Chemistry-I (T) CHE402: Physical Chemistry-I (T)	4	CHE406: Physical Methods in Chemistry (T)	4	RES405: Research	4	_	_	_		_	2	22
6.0	-	CHE403: Organic Chemistry-I (T) CHE404: Lab ActivitiesonCHE401, CHE402 & CHE403 (P)	2	OR CHE407: Polymer Chemistry (T)	4	Methodology (T)								
0.0		CHE409: Inorganic Chemistry-II (T)	4	CHE415: Analytical Chemistry (T)								CHE413:		
	VIII	CHE410: Physical Chemistry-II (T)	4	OR	4	_						OJT	4	22
		CHE411: Organic Chemistry-II (T)	2	CHE416: Chemical Mathematics &Biostatistics (T)										
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P)	4											
Cum	. Cr.	76		16		22		12	14	14		22		176
	<u>'</u>	Four Year U	or v	vith 176 credit	S		.1	•						

APPENDIX I:

SYLLABUS OF OE COURSES FROM CHEMISTRY

- Includes OE, SEC, major course as discussed in PAC

APPENDIX II: Syllabus of B.Sc. (Honours) (Chemistry) – VSEC, AEC VEC, OJT, FP, CC, CEP Courses_20 Sept 2024

Refer the syllabus file attached with this mail separately.