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

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

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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 06.06.2024

Date: 06th June, 2024 Time: 10.30 am to 04.30 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 offline & online on **Thursday, 06-06-2024 at 10:30 AM** at school meeting hall. Following members and invitees were present,

01	Dr. Chetana Kamlaskar	(Chairperson) and Member
02	Prof. Ashok V Borhade	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. Bharat More	Invitee
07	Dr. Jagruti Chavan	Invitee
08	Ms. Tejaswi Kadam	Invitee
09	Ms. Minakshi Kadel	Invitee
10	Mr. Nandkishor Sangale	Invitee
11	Mr. Ravindra Bharsat	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	The PAC members unanimously finalized and
	proposed credit distribution details,	approved the proposed programme structure, credit
	detailed Syllabus for all second and	distribution and detail syllabus for all second and
	third year courses, evaluation pattern	third year courses at semester 03 to 06 and

and other details for all courses of B.Sc. Chemistry (Honours) (Major and Minor) programmes {2025 Pattern} as per NEP2020 guidelines.

evaluation pattern for all first, second and third year courses at semester 01 to 06 of B.Sc. Chemistry (Honours) (Major and Minor) programmes for the following 04 programmes as per NEP2020 guidelines, with few suggestions about courses in programme structure:

- i. 4 Year B.Sc. (Honours) (Major in Chemistry and Minor in Mathematics)
- ii. 4 Year B.Sc. (Honours) (Major in Chemistry and Minor in Physics)
- iii. 4 Year B.Sc. (Honours) (Major in Chemistry and Minor in Zoology)
- iv. 4 Year B.Sc. (Honours) (Major in Chemistry and Minor in Botany)

Suggestions by PAC members:

- 1. As per dissuasion in the PAC meeting, it has been advised to revise lab activities of all courses from Semester 01 to semester 06 of proposed Major in Chemistry programme.
- 2. For Semester 03, course CHE202: Molecular Modeling Chemistry (T) course content to be updated in consultation with Dr. Chetan B. Patil. Accordingly, suggested updates have been incorporated in the syllabus.
- 3. As per discussion in the meeting PAC member Dr. Chetan Patil suggested to interchange two courses CHE204 (DSC) and CHE306 (DSE) of semester 04 & semester 05. But as per suggestion of another PAC member Dr. Ramesh L. Gardas suggested 'no change' of course position, hence, both courses kept as it is in the proposed programme structure.
- 4. In semester 05, CHE301: Physical and Inorganic Chemistry, it has been advised that in credit 02, rearrange the units sequence. Suggested correction mentioned below:

As per Programme	As per Suggestion
Structure	
02-01: Solids	02-01: Chemical
	Kinetics I
02-02: Chemical	02-02: Chemical
Kinetics I	Kinetics II
02-03: Chemical	02-03: Theories of
Kinetics II	Reaction Rates
02-04: Theories of	02-04: Solids
Reaction Rates	

5. It is also suggested that course content of Major courses shall be used for providing Chemistry as minor for other programmes.

	_	nd syllabus has been updated as per the discussion in
	PAC meeting.	
	Refer Appendix I & II for updated prog	gramme structure & syllabus.
2	Agenda 2: Finalization and approval of Syllabus, recommendation of additional Elective courses (DSE), OE/VSC courses etc. related to Chemistry {2025 Pattern} as per NEP 2020 guidelines.	The PAC members unanimously finalized and approved the syllabus of the proposed Major in Chemistry; Elective courses (DSE) related to Chemistry, have been discussed and approved after fruitful deliberations among all PAC members.
	Action Taken: Syllabus of DSE cour	rses has been updated as per the discussion in PAC
	meeting.	
	Refer Appendix II for updated syllabu	
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 Chemistry) 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 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

Leve	Se	Major											OJT, FP	,	Cum.
l	m	Mandatory		Electives	Minor		OE		VSC, SEC (VSEC)	AEC, VEC, IKS		CEP, CC, RP	,	Cr. / Sem
		CHE101: Basic Inorganic & Organic Chemistry (T)	4				(CHE) OE-I	2		2		2			
	I	CHE too. Lab		-	-							2		2	22
4.5		CHE102: Lab Activities on CHE101 (P) CHE103: Physical &						(CHE) OE-II 2		2	IKS101: Ancient Indian Chemistry (T)	2			
1.5	II	CHE103: Physical & Organic Chemistry-I (T)	4	_	CHE103: Physical &	2	(CHE) OE-III	2	VSC102: Lab Activities on CHE103 (P)	2		2		2	22
		CHE104: Lab Activities on CHE103 (P)			Organic Chemistry-I (T)		(CHE) OE-IV	2		2		2			
Cum.	Cr.	12		00	02		08		08		10		04		44
	III	CHE201: Physical & Organic Chemistry-II (T CHE202: Molecular Modelling Chemistry (T)	4 2	CHE201: Physical & Organic Chemistry-II (T)	4	(CHE) OE-V	2	VSC201: Lab Activities on CHE201 (P)	2		2	Field Projec t	2	22
		CHE203: Lab Activitie on CHE201 (P)	S	2										2	
5.0		CHE 204: Basic Analytical Chemistry (T)	4	CHE204:Basic									2	
	IV	CHE 205: Nuclear Chemistry (T)		2	Analytical Chemistry (T)	4	IPR (T)	2		2		2		2	22
ļ .		CHE206: Lab Activitie	S												
		on CHE204 (P)		2											

	Se	Мај	or							VSC, SEC		AEC		OJT, FP	,	Cum.
Level	m	Mandatory		Electives		Minor		OI	3	(VSEC)		VEC IKS		CEP, CC, RP		Cr. / Sem
		CHE301: Physical & Inorganic Chemistry (T)		CHE304: Chemistry in Everyday life (T) OR		CHE301: Ph				VSC207:						
	\mathbf{V}	CHE302: Industrial Chemistry-I (T)	2	CHE305: Biochemistry (T)	ysical &	4	_		Activities on	2	_		FP/CEP	2	22	
	•	CHE303: Lab Activities on CHE301 & CHE302 (P)	4	OR CHE306: Co-ordination Chemistry(T)	4	Inorganic Chemistry (T)				CHE301 (P)	_			FI/CEI	2	22
5.5		CHE307: Green Chemistry (T)	4	Agrochemicals, Bio-pesticides & Fertilizers (T) OR CHE311: Forensic Chemistry												
	VI	CHE 200: Lab Activities on CHE207	2			CHE306: Green Chemistry	4	-	-	-		-	-	OJT	4	22
		CHE 309: Lab Activities on CHE307 & CHE308 (P)		(T) OR CHE312: Application of Computer in Chemistry(T)		(T)										
Cum. (Cr.	48		08		18		12	1	14		14		18		132

Lev	Se	Major				Minor		OE	VSC, SEC	AEC, VEC,	OJT, F		Cum. Cr./
el	m	Mandatory		Electives				(VSEC)	IKS	CEP, CC, R		Sem	
		CHE401: Inorganic Chemistry-I (T)	4	CHE406: Physical Methods in Chemistry		RES405:							
	VII	CHE402: Physical Chemistry-I (T)	4	(T)	4	Research	4	_	_	_	_	2	22
	V 11	CHE403: Organic Chemistry-I (T)	2	OR CHE407: Polymer	7	Methodolo gy						_	
6.0		CHE404: Lab Activities on CHE401, CHE402 & CHE403 (P)	4	Chemistry (T)		(T)							
		CHE409: Inorganic Chemistry-II (T) CHE410: Physical Chemistry-II (T)		CHE415: Basic Analytical Chemistry							CHE		
	VII			(T)							CHE41 3:	4	22
	I	CHE411: Organic Chemistry-II (T)	2	OR CHE416: Chemical	4	-					OJT	4	
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P) 4		Mathematics &Biostatistics (T)									
Cum	. Cr.	76		16		22		12	14	14	22	·	176
						1			<u> </u>	l	<u>'</u>		

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

Level	Sem	Major Mandatory		Electives	Minor	OE			VSC, SEC (VS	SEC)		AEC, VEC,	IKS		OJT, FP, CE CC, RP	Р,	Cum. Cr. / Sem
		CHE101: Basic Inorganic & Organic Chemistry (T)	4			OE		2	VSC101: Basic Instrumentation SI (TW)		2	AEC101: Engl		2	CC101:		
	I	CHE102: Lab Activities on CHE101 (P)	2	-	-	OE		2	SEC101: IT & e-Learning Skills (7		2	VEC101: Val Education (T IKS101: Ancient	<u>.</u>)	2	Yoga (TW)	2	22
4.5												Chemistry (1	<u>()</u>	2			
	II CHE103: Physical & Organic Chemistry-I (T) CHE104: Lab Activities		4	-	MAT101: Fundamentals of 2	OE		2	VSC102: Mathematical Statistics using MS - Excel (P)		2	AEC102: Engl Communication-		2	&	2	22
	on CHE103 (P)		2		Mathematics (T)	OE		2	System (TW)			VEC102: Environ Science (T)		al 2	Sketching (TW)		
Cum		12		00	02	08			08			10		•	04		08
	Exit option: Award of UG Certificate in CHE		CHEMIS	TRY as Major with 44 cr	edits and an addit	edits and an additional 4 cr			cour	se/ I	nternship <mark>OR</mark> Cor	ntinu	e wit	h Major and M	<u>inor</u>		
		CHE201: Physical & Organic Chemistry-II (T)	4											TF.	ield Project	2	
	III	CHE202: Molecular Modelling Chemistry (T)	2	-	MAT103: Calculus 4	OE	2		C201: Practical sed on MAT 103	2		EC201: Modern dian Language – 1	2		icia i roject		22
5.0		CHE201 (P)	2		(T)				(P)			(T)			& Event agement (TW)	2	
		CHE 204: Basic Analytical Chemistry (T)	4					op.	D' 110						CEP	2	
	IV	CHE 205: Nuclear Chemistry (T)	2	-	MAT201: Linear Algebra(T)	Code: IPR(T)	2		C201: Financial & Investment Skills (TW)	2		EC202: Modern dian Language – 2(T)	2	C20	2: Personality &	2	22
		CHE206: Lab Activities or CHE204 (P)	2						()			-(-/		Car	eer Skills (TW)	2	
Cum		28	•	00	10	12			12			14			12		88
Exit o	ption: A	Award of UG Diploma in C	HEM	ISTRY as	Major and MATHEMAT	ICS as Minor with Major and M		edit	ts <mark>and</mark> an addition	al 4	cred	its core NSQF cou	ırse/	Inter	nship OR Con	tinue	with
						major and m	11101										

_			Maj	or					VSC, SEC	AE		OJT, FP,		Cum.
Level	Sem	Mandatory		Electives		Minor		OE	(VSEC)	VE IKS	-	CEP, CC, RP		Cr. / Sem
	CHE301: Physical &Inorganic Chemistry (T) V CHE302: Industrial Chemistry-I (T)		4	CHE304: Chemistry in Everyday life (T) OR		MAT301: Differe	_		VSC301: MAT303:					
			2	CHE305: Biochemistry (T) OR	4	ntial Equations	4	-	- Programmin	2 -	-	FP/CEP	2	22
5.5		CHE303: Lab Activities on CHE301 & CHE302 (P)	4	CHE306: Co-ordination Chemistry (T)		(T)			g in MATLAB (P)					
		CHE307: Green Chemistry (T)	4	CHE310: Advanced Agrochemicals, Bio-pesticides & Fertilizers (T) OR		N # 4 FEINZNZNZ								
	X7T	CHE308: Industrial Chemistry-II (T)	2			MATXXX: Numerical	4					O IT		22
	VI	CHE 309: Lab Activities on CHE307 & CHE308 (P)	4	CHE311: Forensic Chemistry (T) OR CHE312: Application of Computer in Chemistry (T)	4	Analysis (T)		-		-	-	OJT	4	22
Cum	ı. Cr.	48		08		18		12	14	-	4	18		132
		r wi	th 132 credits <mark>OR</mark> (Con	tinue v	with Major and M	inor		_					

Level	Sem		M	ajor	Minor		OE	VSC, SE		,	OJT, FP, CEP,		Cum. Cr./	
		Mandatory		Electives				(VSEC)	VEC, I	KS	CC, RP		Sem	
		CHE401: Inorganic Chemistry-I (T)	4											
	VII	CHE402: Physical Chemistry-I (T)	4	CHE406: Physical Methods in Chemistry (T)	RES405: Research	4	_	_	_		_	2	22	
	V 11	CHE403: Organic Chemistry-I (T)	2	OR	Methodology (T)							_		
6.0		CHE404: Lab ActivitiesonCHE401, CHE402 & CHE403 (P)	4	CHE407: Polymer Chemistry (T)										
		CHE409: Inorganic Chemistry-II (T)	4	CHE415: Analytical Chemistry (T)										
	37111	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	ı. Cr.	76		16	22		12	14	14	•	22		176	
				Four Year UG Honours Degree in Major and Minor with 176 credits										

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

Level	Sem	Major			Minor		OE		VSC, SEC (VSEC)		AEC, VEC, 1	IKS		OJT, FP, C		Cum. Cr./
Level		Mandatory		Electives	WILLOI		02		vse, sie (vsie)		inc, vic,			CC, RP	'	Sem
		CHE101: Basic Inorganic & Organic Chemistry (T)	4				OE	2	VSC101: Basic Instrumentation Skills (TW)	2	AEC101: Engli Communication-	(T)	2	CC101:		
4.5	I	CHE102: Lab Activities on CHE101 (P)	2	-			OE	2	SEC101: IT & e-Learning skills (TW)	2	VEC101: Valu Education (T IKS101: Ancient I Chemistry (T) ndia	2 n 2	(TW)	2	22
	II	CHE103: Physical & Organic Chemistry-I (T)	4	_	PHY103: Electricity &		OE	2	VSC102: Electricity & Magnetism (P)	2	AEC102: Engl Communication-		2	CC102: Drawing &	2	22
		CHE104: Lab Activities on CHE103 (P)	2		Magnetism (T)		OE	2	SEC102: Solar Panel System (TW)	2	VEC102: Environi Science (T)	nent	al 2	Sketching (TW)	_	
Cun	n. Cr.	12		00	02		08		08		10			04		44
	Exit	option: Award of UG Certificat	te in N	Iajor CHE	MISTRY with 44 cro	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	Iinor	
		CHE201: Physical & Organic Chemistry-II (T)	4		DV V								17	ield Project		
	III	CHE202: Molecular Modelling Chemistry (T)	2	-	PHY301: Thermodynamics & Statistical	4	OE	2		2	AEC201: Modern Indian Language-1	2	Г	ieiu Project		2 22
5.0		CHE203: Lab Activities on CHE201 (P)	2		Mechanics (T)				(P)		(T)			201: Conferen & Event nagement (TV		2
		CHE 204: Basic Analytical Chemistry (T)	4		D				SEC201: Financial		AEC202: Modern			CEP		2
	IV	CHE 205: Nuclear Chemistry (T) 2	-	PHY 304: Optics (T)	4	Code: IPR (T)	2		2	Indian Language-2	2		ъ 1		22
		CHE206: Lab Activities on CHE204 (P)	2		Optics (1)				(TW)		(T)			02: Personal reer Skills (T		2
Cum.	Cr.	28		00	10		12		12		14			12		88
Exit	exit option: Award of UG Diploma in Major			IEMISTRY	and Minor PHYSIC	CS wi	ith 88 credits and ar	ado	litional 4 credits core	NSC)F course/ Interns	hip (OR Co	ontinue with	Majo	r and

Exit option: Award of UG Diploma in Major CHEMISTRY and Minor PHYSICS with 88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor

		M					VSC SEC	VSC, SEC			OJT, FP,	,	Cum.	
Level	Sem	Mandatory	Electives	I	Minor			(VSEC)		VEC, IKS		CEP, CC, RP		Cr. / Sem
		CHE301: Physical & Inorganic Chemistry (T)	CHE304: Chemistry in Everyday life (T) OR	_	PHY301: Classical & Quantum			VSC207:						
	V	CHE302: Industrial Chemistry-I (T)	CHE305: Biochemistry (T)OR		nics(T)	4	-	Lab Activities on	2	-	-	FP/CEP	2	22
5.5		CHE303: Lab Activities on CHE301 & CHE302 (P)	CHE306: Co-ordination Chemistry (T)					PHY301 (P)						
0.0		CHE307: Green Chemistry (T)	CHE310: Advanced Agrochemicals,	DIIVee	PHY307: Nuclear									
		CHE308: Industrial Chemistry-II (T)		D1	Radiation									
	VI	CHE 309: Lab Activities on CHE307 & CHE308 (P)	CHE311: Forensic Chemistry (T) OR CHE312: Application of Computer in Chemistry (T)	1 1	ty (T)	4	-	-		-	-	OJT	4	22
Cum	ı. Cr.	48	08		18		12	14	14		18		132	
		Exit option: Awar	l of UG Degree in Major CHEMISTRY w	vith 132 cre	dits OR Cont	tinu	e with	Major and Min	or					

Major OJT, FP, Cum. VSC, SEC AEC, CEP, Minor OE Level Sem Cr. / (VSEC) VEC, IKS Mandatory Electives Sem CC, RP CHE401: Inorganic Chemistry-I (T) **CHE406:** Physical Methods in **RES405:** CHE402: Physical Chemistry-I (T) Chemistry (T) 4 Research OR VII 2 22 Methodology CHE403: Organic Chemistry-I (T) **CHE407:** Polymer Chemistry **(T)** CHE404: Lab Activities on CHE401, CHE402 & CHE403 **(T) (P)** 6.0 CHE409:Inorganic Chemistry-II (T) **CHE415:** Analytical Chemistry CHE410: Physical Chemistry-II (T) **(T)** CHE413: OR VIII OJT **22** 4 CHE411: Organic Chemistry-II (T) CHE416: Chemical CHE412: Lab Activities on CHE409, CHE410 & CHE411 Mathematics & Biostatistics (T) **(P)** 16 Cum. Cr. **76** 176 22 12 14 14 Four Year UG Honours Degree in Major and Minor with 176 credits

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

Level	Sem	Major Mandatory	Elec	etives	Minor		OE		VSC, SEC (VSEC	C)	AEC, VEC, I		OJT, FP CEP, CC, RP		Cum. Cr. / Sem	
		CHE101: Basic Inorganic & Organic Chemistry (T)					OE	2	VSC101: Basic Instrumentation Skill (TW)	s 2	AEC101: Englis Communication-1	(T)	2	CC101:		
	I	CHE102: Lab Activities on CHE101 (P)	-		-		OE	2	SEC101: IT & e-Learning Skills (TW	2	VEC101: Value Education (T) IKS101: Ancient Ir		2	Yoga (TW)	2	22
4.5		CHE103: Physical & Organic Chemistry-I (T)			ZOO106: Comparative		OE	2	VSC102: Lab Activit ZOO106 (P)	2	Chemistry (T) AEC102: English Communication -2 (T)		2	CC102:		
	II	CHE104: Lab Activities on CHE103 (P)	-		Anatomy & Developmenta I Biology of Vertebrates (T)	2	OE	2	SEC102: Solar Panel System (TW)	2	VEC102: Environm Science (T)	nental	2	Drawing &Sketching (TW)	2	22
Cum		12		00	02	1	08		08		10	Į.		04		44
E	xit opti	on: Award of UG Certificate in Cl	HEMIST	TRY as	Major with 44 o	cred	its <mark>and</mark> an additiona	al 4 c	credits core NSQF co	ırse/ I	nternship OR Conti	inue w	ith I	Major and N	<u> Iino</u>	r
	III	CHE201: Physical & Organic Chemistry-II (T) CHE202: Molecular Modelling Chemistry (T)	2		ZOO201 : Animal Physiology & Ecology		4 OE	2	VSC201: Lab Activity ZOO201 (P) 2		EC201: Modern Idian Language - 1 2	F		Project	2	22
5.0		CHE203: Lab Activities on CHE20 (P)			(T)				(1)		(2)			erence & anagement FW)	2	
		CHE 204: Basic Analytical Chemist (T)	4		ZOO206: Ger		Code:		SEC201: Financial &		EC202: Modern		(CEP	2	
	IV	CHE 206: Lab Activities on CHE2 (P)			& Evolutiona Biology (T		4 IPR(T)	2	Investment Skills (TW)	2 In	dian Language - 2 (T)	l l	Perso	C 201: onality & skills (TW)	2	22
Cum		28		00	10		12		12		14			12		88
Exit	t option	: Award of UG Diploma in CHEM	ISTRY a	as Majo	r and ZOOLOG	Yas	Minor with 88 cred Major and Minor	lits a	and an additional 4 cr	edits	core NSQF course/	Intern	ship	OR Contin	ue w	vith

Com		Minon	OF		VSC, SEC		AEC,	OJT, FP,		Cum.				
Sem	Mandatory	WIIIOI		OE		(VSEC)		IKS	CC, RP		Cr. / Sem			
	CHE301: Physical & Inorganic Chemistry (T)	4	CHE304: Chemistry in Everyday life	E304: Chemistry in Everyday life					WCCc c= III					
V	CHE302: Industrial Chemistry-I (T)	2	(T) OR CHE305: Biochemistry (T) OR	CHE305: Biochemistry (T) OR 4 M			-	-	Activity	2		FP/CEP	2	22
	CHE303: Lab Activities on CHE301 & CHE302 (P)	4	CHE306: Co-ordination Chemistry (T)						(=)					
	CHE307: Green Chemistry (T)	4	CHE310: Advanced Agrochemicals,											
VI	CHE308: Industrial Chemistry-II (T)	2	Bio- pesticides & Fertilizers (T) OR CHE311: Forensic Chemistry (T) OR	Bio- pesticides & Fertilizers (T) OR EHE311: Forensic Chemistry (T) OR 4		4	-	-	-		- -	OJT	4	22
	CHE 309: Lab Activities on CHE307 & CHE308 (P)	4	CHE312: Application of computer in Chemistry (T)		Parasitology (T)									
. Cr.	48	08		18		12		14		14	18		132	
	VI	V CHE301: Physical & Inorganic Chemistry (T) CHE302: Industrial Chemistry-I (T) CHE303: Lab Activities on CHE301 & CHE302 (P) CHE307: Green Chemistry (T) CHE308: Industrial Chemistry-II (T) CHE 309: Lab Activities on CHE307 & CHE307 & CHE308 (P) Cr. 48	Mandatory V CHE301: Physical & Inorganic Chemistry (T) 4 CHE302: Industrial Chemistry-I (T) 2 CHE303: Lab Activities on CHE301 & CHE302 (P) 4 VI CHE307: Green Chemistry (T) 4 CHE308: Industrial Chemistry-II (T) 2 CHE 309: Lab Activities on CHE307 & CHE308 (P) 4	VI CHE309: Lab Activities on CHE301 CHE309: Lab Activities on CHE309: Lab Activities	SemMandatoryElectivesVCHE301: Physical & Inorganic Chemistry (T)4CHE304: Chemistry in Everyday life (T) OR CHE302: Industrial Chemistry-I QT)4CHE302: Industrial Chemistry-I & CHE303: Lab Activities on CHE301 & CHE306: Co-ordination Chemistry (T)4CHE306: Co-ordination Chemistry (T)VICHE307: Green Chemistry (T)4CHE310: Advanced Agrochemicals, Bio- pesticides & Fertilizers (T) OR CHE311: Forensic Chemistry (T) OR CHE311: Forensic Chemistry (T) OR CHE311: Forensic Chemistry (T) OR CHE312: Application of computer in Chemistry (T)Cr.4808	SemMandatoryElectivesMinorVCHE301: Physical & Inorganic Chemistry (T)4CHE302: Industrial Chemistry-I (T)4CHE302: Industrial Chemistry-I (T)2CHE305: Biochemistry (T) OR CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry (T)4CHE306: Co-ordination Chemistry (T)4CHE306: Co-ordination Chemistry (T)VICHE307: Green Chemistry (T)4CHE310: Advanced Agrochemicals, Bio- pesticides & Fertilizers (T) OR CHE311: Forensic Chemistry (T) OR CHE311: Forensic Chemistry (T) OR CHE311: Application of computer in Chemistry (T)ZOO307: Pest Management & Parasitology (T)CHE 309: Lab Activities on CHE307 & CHE308 (P)4CHE312: Application of computer in Chemistry (T)Application of computer in Chemistry (T)	SemMandatoryElectivesVCHE301: Physical & Inorganic Chemistry (T)4CHE304: Chemistry in Everyday life (T) OR CHE302: Industrial Chemistry-I (T)2CHE305: Biochemistry (T) OR CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry (T)4Admammalian Histology (T)CHE303: Lab Activities on CHE301 & CHE302 (P)4CHE310: Advanced Agrochemicals, Bio- pesticides & Fertilizers (T) OR CHE308: Industrial Chemistry-II (T)2ZOO307: Pest Management & Parasitology (T)VICHE 309: Lab Activities on CHE307 & CHE308 (P)4CHE312: Application of computer in Chemistry (T)ZOO307: Pest Management & Parasitology (T)Cr.48O818	VIMandatoryElectivesMinorOECHE301: Physical & Inorganic Chemistry (T)4CHE304: Chemistry in Everyday life (T) ORZOO301: Mammalian Histology (T)CHE302: Industrial Chemistry-I (T)2CHE305: Biochemistry (T) OR CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry (T)4CHE307: Green Chemistry (T)4CHE310: Advanced Agrochemicals, Bio- pesticides & Fertilizers (T) OR CHE308: Industrial Chemistry-II (T)ZOO307: Pest Management & Parasitology (T)VICHE 309: Lab Activities on CHE301: Application of computer in CHE307 & CHE308 (P)CHE312: Application of computer in Chemistry (T)Amanagement & Parasitology (T)Cr.48081812	CHE301: Physical & Inorganic Chemistry (T)	CHE301: Physical & Inorganic Chemistry (T) CHE302: Industrial Chemistry-I (T) CHE303: Lab Activities on CHE301 Activity (T) CHE303: Lab Activities on CHE301 Activity (T) CHE308: Industrial Chemistry-II (T) CHE308: Industrial Chemistry-II (T) CHE309: Lab Activities on CHE301 CHE311: Forensic Chemistry (T) CHE309: Lab Activities on CHE301 CHE310: Advanced Agrochemicals, Bio- pesticides & Fertilizers (T) OR CHE309: Lab Activities on CHE311: Forensic Chemistry (T) OR CHE310: Advanced Agrochemicals, Bio- pesticides & Fertilizers (T) OR CHE311: Forensic Chemistry (T) OR CHE312: Application of computer in Chemistry (T) OR CHE312: Application of computer in Chemistry (T) OR CHE3132: Application OR CHE3	Wandatory CHE301: Physical & Inorganic Chemistry (T) CHE302: Industrial Chemistry-I (T) CHE303: Lab Activities on CHE301 & CHE306: Co-ordination Chemistry (T) CHE307: Green Chemistry (T) CHE308: Industrial Chemistry-II (T) CHE309: Lab Activities on CHE301 & CHE311: Forensic Chemistry (T) OR CHE312: Application of computer in CHE307 & CHE308 (P) CHE307: Green Chemistry (T) CHE309: Lab Activities on CHE308 (P) CHE310: Advanced Agrochemicals, Bio-pesticides & Fertilizers (T) OR CHE311: Forensic Chemistry (T) OR CHE312: Application of computer in Chemistry (T) CHE307: CHE308 (P) CHE311: Forensic Chemistry (T) OR CHE312: Application of computer in Chemistry (T) CHE312: Application of computer in Chemistry (T) CHE312: Application of computer in Chemistry (T) CHE312: Application of computer in Chemistry (T)	V	Nandatory Electives Minor OE VSC, SEC VEC, RP	Sem Mandatory Electives Minor OE VSC, SEC (VSEC) CEP, CC, RP

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

		Major							VSC, SEC	AEC,	OJT, FP,	Cum.
Level	Sem	Mandatory	Electives	Minor		OE	(VSEC)	VEC, IKS	CEP, CC, RP	Cr. / Sem		
		CHE401: Inorganic Chemistry-I (T)	4			RES405:						
	VII	CHE402: Physical Chemistry-I (T)	4	Chemistry (T) OR		Research	4		-			00
	VII	CHE403: Organic Chemistry-I (T)	2	CHE407: Polymer Chemistry	4	Methodology		-		-	- 2	22
6.0		CHE404: Lab ActivitiesonCHE401, CHE402 & CHE403 (P)	4	(T)		(T)						
0.0		CHE409: Inorganic Chemistry-II (T)		CHE415: Analytical Chemistry								
	VIII	CHE410: Physical Chemistry-II (T)	4	(T)							OJT 4	20
	VIII	CHE411: Organic Chemistry-II (T)	2	OR CHE416: Chemical Mathematics	4	-					031 4	22
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P)	4	& Biostatistics (T)								
Cum. Cr.		76	16		22		12	14	14	22	176	
		Four Year UG Honours Do	egre	e in Major CHEMISTRY and Min	or !	ZOOLOGY with	176	credits	5		·	

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

_		Major										OJT, FP,		Cum.
Level	Sem	Mandatory	Elective	s Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		CEP, CC, RP		Cr. / Sem
		CHE101: Basic Inorganic & Organic Chemistry (T)	4			OE		VSC101: Basic Instrumentation Skills (TW)	2	AEC101: English Communication-1 (T)	2	CC101:		
4.5	I	CHE102: Lab Activities on CHE101 (P)	2	-		OE	2	SEC101: IT & e-Learning Skills (TW)	2	VEC101: Value Education (T) IKS101: Ancient Indian	2	Yoga (TW)	2	22
										Chemistry (T)	2			
		CHE103: Physical & Organic Chemistry-I (T)	4	BOT103: Evolution and		OE	2	VSC102: Lab Activity on BOT103 (P)	2	AEC102: English Communication-2 (T)	2	CC102: Drawing		
	II	CHE104: Lab Activities on CHE103 (P)	2	Diversity of Pteridophytes and Gymnosperms (T)	2	OE	2	SEC102: Solar Panel System (TW)	2	VEC102: Environmental Science (T)			2	22
Cum		12	00	02		08		08		10		04		44
5.0	III	CHE202: Molecular Modelling Chemistry (T) CHE203: Lab Activities on CHE201 (P)	2 - 2	BOT201: Angiosperm	s and	OE	2	VSC201: Lab Activity on BOT201 (P)	2	AEC201: Modern Indian Language- 1 (T)	Fi Co	eld Project CC201: conference &	2	22
	IV	CHE 206: Lab Activities on	2 -	BOT206: Plant Physiology and Metabolism (T)	4	Code: IPR (T)	2	SEC201: Financial & Investment Skills(TW)		AEC202: Modern Indian Language- 2 (T)		CC202:	2	22
Cum	ı. Cr.	28	00	10		12		12		14		12		88
		vard of UG Diploma in CHEMIS			with		ado		NS(R Co		Maj	

Lovel	G	Ma	Minor		OE	VSC, SEC		AEC, VEC,		OJT, FP,		Cum.		
Level	Sem	Mandatory	WINO		OE	(VSEC)		IKS		CEP, CC, RP		Cr. / Sem		
		CHE301: Physical & Inorganic Chemistry (T)	4	CHE304: Chemistry in Everyday life	BOT301: Cell			VSC207:						
	V	CHE302: Industrial Chemistry-I (T)	2	(T) OR CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry (T)	Biology &	4	- -	Lab Activity on BOT301	2	-	-	FP/CEP	2	22
5.5		CHE303: Lab Activities on CHE301 & CHE302 (P)	4		Genetics (T)			(P)						
3.3		CHE307: Green Chemistry (T)	4	CHE310: Advanced Agrochemicals,	ВОТ307:									
	VI	CHE308: Industrial Chemistry-II (T)	2	Bio-pesticides & Fertilizers (T) OR CHE311: Forensic Chemistry (T) OR 4	Analytical Techniques in	4	_	_		_	-	OJT	4	22
		CHE 309: Lab Activities on CHE 307 & CHE 308 (P)	4	CHE312: Application of Computer in Chemistry (T)	Plant Science & Horticulture (T)	-								
Cum. Cr.		48		08	18		12	14		14		18		132
		Exit option: Award of	f UG	Degree in CHEMISTRY as Major with 1	32 credits OR Conti	inı	ue with I	Major and Min	or		<u>-</u>			

Major VSC, Cum. OJT, FP, AEC, VEC, Sem OE SEC Cr. / Level Minor CEP, IKS **Mandatory Electives** (VSEC) Sem CC, RP CHE401: Inorganic Chemistry-I (T) **CHE406:** Physical Methods in **RES405:** Chemistry **(T)** 4 CHE402: Physical Chemistry-I (T) Research VII2 22 OR Methodology CHE407: Polymer Chemistry (T) CHE403: Organic Chemistry-I (T) **(T)** CHE404: Lab ActivitiesonCHE401, CHE402 & CHE403 (P) 4 6.0 4 CHE409: Inorganic Chemistry-II (T) **CHE415:** Analytical Chemistry **CHE413: (T)** CHE410: Physical Chemistry-II (T) 4 VIII OJT 4 **22** OR **CHE416:** Chemical Mathematics CHE411: Organic Chemistry-II (T) &Biostatistics (T) CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P) 4 Cum. Cr. **76** 16 22 14 176 12 14 22 Four Year UG Honours Degree in Major and Minor with 176 credits

APPENDIX II:

SYLLABUS OF B.Sc. (HONOURS) (CHEMISTRY AS MAJOR)

Refer the syllabus file attached with this mail separately.

APPENDIX III: Syllabus of B.Sc. (Honours) (Chemistry as Minor)

Refer the syllabus file attached with this mail separately