



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 faculty, as per NEP2020 guidelines.	The PAC members unanimously finalized and approved the proposed Open Elective (OE) Courses along with their syllabus in the Chemistry discipline for the learners other than Chemistry Major, in accordance with NEP2020 guidelines. During discussion, PAC members provided the following suggestions: 1. It has been advised to maintain a logical flow in the proposed course content for OE102: ‘Industrial Safety Management’ course offered in semester 01. The suggested unit sequence is mentioned below: <table><tr><td>As per proposed course syllabus</td><td>As per Suggestion by PAC</td></tr><tr><td>01-04:Industrial Hazards and Types</td><td>01-04: Fires and Explosions</td></tr><tr><td>02-01: Industrial Hygiene</td><td>02-01: Industrial Hazards and Types</td></tr><tr><td>02-04:Fires and Explosions</td><td>02-04: Industrial Hygiene</td></tr></table> 2. The list of OE will be modified in the future as per demand of the learners.	As per proposed course syllabus	As per Suggestion by PAC	01-04:Industrial Hazards and Types	01-04: Fires and Explosions	02-01: Industrial Hygiene	02-01: Industrial Hazards and Types	02-04:Fires and Explosions	02-04: Industrial Hygiene
As per proposed course syllabus	As per Suggestion by PAC									
01-04:Industrial Hazards and Types	01-04: Fires and Explosions									
02-01: Industrial Hygiene	02-01: Industrial Hazards and Types									
02-04:Fires and Explosions	02-04: Industrial Hygiene									
	Action Taken: The Programme structure and syllabus have been updated following the discussion in the PAC meeting. Refer Appendix I & II for the revised programme structure & syllabus.									
	Agenda Item 2: To discuss & finalize Discipline specific Indian Knowledge System (IKS) course position within the Chemistry programme structure.	The PAC members unanimously finalized the position of the proposed Discipline specific Indian Knowledge System (IKS) Course at semester 03, of the following proposed Chemistry programmes as per NEP2020 guidelines, with few suggestions about courses in programme structure of: 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) The Following suggestions were made by the PAC members: 1. In semester 03, it is advised that CHE202: ‘Molecular Modelling Chemistry’ course of 02 credits, be shifted in place of CHE 206: ‘Nuclear Chemistry’ in semester 04. 2. PAC members have 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 structure and syllabus have been updated based on the discussions in the PAC meeting. Refer Appendix II for Programme structure and revised syllabus.	
3	Agenda Item 3: To finalize the courses and syllabus from last verticals (VSC, SEC, AEC, VEC, generic IKS, OJT, FP, CEP, CC, RP) that will be offered common for all 4Y UG B.Sc. (Honours) programmes of School of Sciences.	1. Few courses from the last verticals (SEC, AEC, VSC, IKS, CC, CEP etc.) that will be offered common for all programmes have been discussed and approved along with their syllabus. To finalize these courses at the university level, if 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 been updated as per the discussion in the PAC meeting. Refer Appendix II for updated syllabus.	
4	Agenda Item 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. 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. 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

Leve l	Se m	Major				Minor	OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cu m. Cr. / Se m	
		Mandatory		Electives												
4.5	I	CHE101: Basic Inorganic & Organic Chemistry (T)	4	-		-	OE101: Chemistry in Everyday Life (T)	2		2		2		2	22	
		CHE102: Lab Activities on CHE101 (P)	2				OE102: Industrial Safety Management (T)	2								IKS101: General IKS (T)
	II	CHE103: Physical & Organic Chemistry-I (T)	4	-	CHE103: Physical & Organic Chemistry-I (T)	2	OE103: Pesticides Chemistry (T)	2	VSC102: Lab Activities on CHE103 (P)	2		2				
		CHE104: Lab Activities on CHE103 (P)	2				OE104: Food Safety Adulteration and Detection (T)	2	CHE105: Food Chemistry (TW)	2						
Cum. Cr.		12		00		02		08		08		10		04		44
5.0	III	CHE201: Physical & Organic Chemistry-II (T)	4		CHE201: Physical & Organic Chemistry-II (T)	4	OE101: Fuel Chemistry (T)	2	VSC201: Lab Activities on CHE201 (P)	2		2	CHE204:Field Project (TW)	2	22	
		CHE202: Ancient Indian Chemistry (T)	2													
		CHE203: Lab Activities on CHE201 (P)	2													2
	IV	CHE 205: Basic Analytical Chemistry (T)	4		CHE204:Basic Analytical Chemistry (T)	4	IPR (T)	2		2		2	CHE208: Bee Keeping (TW)	2	22	
		CHE 206: Molecular Modelling Chemistry(T)	2													2
		CHE207: Lab Activities on CHE205 (P)	2													
Cum. Cr.		28		00		10		12		12		14		12		88

Level	Se	Major				Minor	OE	VSC, SEC	AEC,	OJT, FP,	Cum.
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	m	Mandatory		Electives						(VSEC)		VEC, IKS		CEP, CC, RP		Cr. / Sem	
5-5	V	CHE301: Physical & Inorganic Chemistry (T)		4	CHE304: Chemistry in Everyday life (T) OR CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry(T)	4	CHE301:Physical & Inorganic Chemistry (T)	4	-	-	VSC301: Lab Activities on CHE301 (P)	2	-	-	CHE307 :FP /CHE308: Awareness of SDG (TW)	2	
		CHE302: Industrial Chemistry-I (T)		2													
		CHE303: Lab Activities on CHE301 & CHE302 (P)		4													
	VI	CHE309: Green Chemistry (T)		4	CHE3112: Advanced Agrochemicals, Bio-pesticides & Fertilizers (T) OR CHE313: Forensic Chemistry (T) OR CHE314: Application of Computer in Chemistry(T)	4	CHE306: Green Chemistry (T)	4	-	-	-		-	-	CHE315: OJT (TW)	4	22
		CHE310: Industrial Chemistry-II (T)		2													
		CHE 311: Lab Activities on CHE309 & CHE310 (P)		4													
Cum. Cr.		48		08		18		12		14		14		18		132	
Level	Se m	Major				Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem	
		Mandatory		Electives													
6.0	VII	CHE401: Inorganic Chemistry-I (T)		4	CHE406: Physical Methods in Chemistry (T) OR CHE407: Polymer Chemistry (T)	4	RES405: Research Methodology (T)	4	-	-	-	-	-	-	2	22	
		CHE402: Physical Chemistry-I (T)		4													
		CHE403: Organic Chemistry-I (T)		2													
		CHE404: Lab Activities on CHE401, CHE402 & CHE403 (P)		4													
	VII I	CHE409: Inorganic Chemistry-II (T)		4	CHE415: Basic Analytical Chemistry (T) OR CHE416: Chemical Mathematics &Biostatistics (T)	4	-							OJT401: OJT	4	22	
		CHE410: Physical Chemistry-II (T)		4													
		CHE411: Organic Chemistry-II (T)		2													
		CHE412: Lab Activities onCHE409, CHE410 & CHE411 (P)		4													
Cum. Cr.		76		16		22		12		14		14		22		176	

Programme Structure: B.Sc. (Honours) (Major in CHEMISTRY and Minor in Mathematics) (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	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	CC101: Photograph y Techniques & Bird Watching (TW)	2	22
		CHE102: Lab Activities on CHE101 (P)	2					OE102: Industrial Safety Management (T)	2	SEC101: MS-Excel With AI (TW)	2	VEC101: Environmental Education-I (T)	2			
	II	CHE103: Physical & Organic Chemistry-I (T)	4	-		MAT101: Fundamentals of Mathematics (T)	2	OE103: Pesticides Chemistry (T)	2	VSC102: Mathematical Statistics using MS - Excel (P)	2	AEC102: English Communication -II (T)	2			
		CHE104: Lab Activities on CHE103 (P)	2					OE104: Food Safety Adulteration and Detection (T)	2	CHE105: Food Chemistry (TW)	2	VEC102: Environmental Education-II (T)	2			
Cum. Cr.		12		00		02		08		08		10		04		08
Exit option: Award of UG Certificate in CHEMISTRY as Major with 44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor																
5-0	III	CHE201: Physical & Organic Chemistry-II (T)	4	-		MAT103: Calculus (T)	4	OE201: Fuel Chemistry (T)	2	VSC201: Practical Based on MAT 103 (P)	2	AEC201: Modern Indian Language – I (T)	2	CHE204:Field Project (TW)	2	22
		CHE202: Ancient Indian Chemistry (T)	2											CC201: Applied Arts (TW)	2	
		CHE203: Lab Activities on CHE201 (P)	2													
	IV	CHE 205: Basic Analytical Chemistry (T)	4	-		MAT201: Linear Algebra(T)	4	Code: IPR(T)	2	SEC201: Financial & Investment Skills (TW)	2	AEC202: Modern Indian Language – II (T)	2	CHE208: Bee Keeping (TW)	2	22
		CHE 206: Molecular Modelling Chemistry (T)	2											CC202: Astronomy for Beginners (TW)	2	
		CHE207: Lab Activities on CHE205 (P)	2													
Cum. Cr.		28		00		10		12		12		14		12		88
Exit option: Award of UG Diploma in CHEMISTRY as Major and MATHEMATICS 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	CHE301: Physical &Inorganic Chemistry (T)		4	CHE304: Chemistry in Everyday life (T) OR CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry (T)		4	MAT301:Differenti al Equations (T)		4	VSC301: MAT303: Programming in MATLAB (P)		2	CHE307: Field Project /CHE308: Awareness of SDG (TW)		2	22
		CHE302: Industrial Chemistry-I (T)		2													
		CHE303: Lab Activities on CHE301 & CHE302 (P)		4													
	VI	CHE309: Green Chemistry (T)		4	CHE312: Advanced Agrochemicals, Bio-pesticides & Fertilizers (T) OR CHE313: Forensic Chemistry (T) OR CHE314: Application of Computer in Chemistry (T)		4	MATXXX: Numerical Analysis (T)		4	-		-	CHE315: OJT (TW)		4	22
		CHE310: Industrial Chemistry-II (T)		2													
		CHE 311: Lab Activities on CHE309 & CHE310 (P)		4													
Cum. Cr.		48		08		18		12		14		14		18		132	
Exit option: Award of UG Degree in CHEMISTRY 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	CHE401: Inorganic Chemistry-I (T)	4	CHE406: Physical Methods in Chemistry (T) OR CHE407: Polymer Chemistry (T)	4	RES405: Research Methodology (T)	4	-		-		-		-	2	22	
		CHE402: Physical Chemistry-I (T)	4														
		CHE403: Organic Chemistry-I (T)	2														
		CHE404: Lab ActivitiesonCHE401, CHE402 & CHE403 (P)	4														
	VIII	CHE409: Inorganic Chemistry-II (T)	4	CHE415: Analytical Chemistry (T) OR CHE416: Chemical Mathematics & Biostatistics (T)	4	-						CHE413: OJT	4	22			
		CHE410: Physical Chemistry-II (T)	4														
		CHE411: Organic Chemistry-II (T)	2														
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P)	4														
Cum. 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, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem	
		Mandatory		Electives												
4.5	I	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	CC101: Photograph by Techniques & Bird Watching (TW)	2	22	
		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)	2				
	II	CHE103: Physical & Organic Chemistry-I (T)	4	-		PHY103: Electricity & Magnetism (T)	2	VSC102: Electricity & Magnetism (P)	2	AEC102: English Communication-II (T)	2	CC102: Yoga (TW)				2
		CHE104: Lab Activities on CHE103 (P)	2				OE104: Food Safety Adulteration and Detection (T)	2	CHE105: Food Chemistry (TW)	2	VEC102: Environmental Education-II (T)		2			
Cum. Cr.		12		00		02		08		08		10		04		44
Exit option: Award of UG Certificate in Major CHEMISTRY with 44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor																
5.0	III	CHE201: Physical & Organic Chemistry-II (T)	4	-		PHY301: Thermodynamics& Statistical Mechanics (T)	4	OE101: Fuel Chemistry (T)	2	VSC201: Lab Activities on PHY201 (P)	2	AEC201: Modern Indian Language-I (T)	2	CHE204: Field Project	2	22
		CHE202: Ancient Indian Chemistry (T)	2												CC201: Applied Arts (TW)	
		CHE203: Lab Activities on CHE201 (P)	2													
	IV	CHE 205: Basic Analytical Chemistry (T)	4	-		PHY 304: Optics (T)	4	Code: IPR (T)	2	SEC201: Financial & Investment Skills (TW)	2	AEC202: Modern Indian Language-II (T)	2	CHE208: Bee Keeping	2	22
		CHE 206: Molecular Modelling Chemistry (T)	2											CC202: Astronomy for Beginners (TW)	2	
		CHE207: Lab Activities on CHE205 (P)	2													
Cum. Cr.		28		00		10		12		12		14		12		88
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																

Level	Sem	Major				Minor	OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem	
		Mandatory		Electives												
5-5	V	CHE301: Physical & Inorganic Chemistry (T)	4	CHE304: Chemistry in Everyday life (T) OR CHE305: Biochemistry (T)OR CHE306: Co-ordination Chemistry (T)	4	PHY301: Classical & Quantum Mechanics(T)	4	-	-	VSC207: Lab Activities on PHY301(P)	2	-	-	CHE307:FP /CHE308: Awareness of SDG	2	22
		CHE302: Industrial Chemistry-I (T)	2													
		CHE303: Lab Activities on CHE301 & CHE302 (P)	4													
	VI	CHE309: Green Chemistry (T)	4	CHE312: Advanced Agrochemicals, Bio-pesticides & Fertilizers (T) OR CHE313: Forensic Chemistry (T) OR CHE314: Application of Computer in Chemistry (T)	4	PHY307: Nuclear Physics & Radiation Safety (T)	4	-	-	-	-	-	CHE315: OJT	4	22	
		CHE310: Industrial Chemistry-II (T)	2													
		CHE 311: Lab Activities on CHE309 & CHE310 (P)	4													
Cum. Cr.		48		08		18		12		14		14		18		132
Exit option: Award of UG Degree in Major CHEMISTRY 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	CHE401: Inorganic Chemistry-I (T)		4	CHE406: Physical Methods in Chemistry (T) OR CHE407: Polymer Chemistry (T)		4	RES405: Research Methodology (T)		4	-	-	-	-	2	22
		CHE402: Physical Chemistry-I (T)		4												
		CHE403: Organic Chemistry-I (T)		2												
		CHE404: Lab Activities on CHE401, CHE402 & CHE403 (P)		4												
	VIII	CHE409:Inorganic Chemistry-II (T)		4	CHE415:Analytical Chemistry (T) OR CHE416: Chemical Mathematics & Biostatistics (T)		4	-						CHE413: OJT	4	22
		CHE410:Physical Chemistry-II (T)		4												
		CHE411: Organic Chemistry-II (T)		2												
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P)		4												
Cum. 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 ZOOLOGY) (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	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	CC101: Photograp hy Technique s& Bird Watching (TW)	2	22
		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)	2			
	II	CHE103: Physical & Organic Chemistry-I (T)	4	-		ZOO106: Comparative Anatomy & Developmental Biology of Vertebrates (T)	2	OE103: Pesticides Chemistry (T)	2	VSC102: Lab Activity ZOO106 (P)	2	AEC102: English Communication -II (T)	2	CC102: Yoga (TW)	2	22
		CHE104: Lab Activities on CHE103 (P)	2					OE104: Food Safety Adulteration and Detection (T)	2	CHE205: Food Chemistry (TW)	2	VEC102: Environmental Education-II (T)	2			
Cum. Cr.		12		00		02		08		08		10		04		44
Exit option: Award of UG Certificate in CHEMISTRY as Major with 44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor																
5.0	III	CHE201: Physical & Organic Chemistry-II (T)	4	-		ZOO201: Animal Physiology & Ecology (T)	4	OE101: Fuel Chemistry (T)	2	VSC201: Lab Activity ZOO201 (P)	2	AEC201: Modern Indian Language - I (T)	2	CHE204: Field Project	2	22
		CHE202: Ancient Indian Chemistry (T)	2											CC201: Applied Arts (TW)	2	
		CHE203: Lab Activities on CHE201 (P)	2													
	IV	CHE 205: Basic Analytical Chemistry (T)	4	-		ZOO206: Genetics & Evolutionary Biology (T)	4	Code: IPR(T)	2	SEC201: Financial & Investment Skills (TW)	2	AEC202: Modern Indian Language - II (T)	2	CHE208: Bee Keeping (TW)	2	22
		CHE206: Molecular Modelling Chemistry(T)	2											CC202: Astronomy for Beginners (TW)	2	
		CHE 207: Lab Activities on CHE205 (P)	2													
Cum. Cr.		28		00		10		12		12		14		12		88
Exit option: Award of UG Diploma in CHEMISTRY as Major and ZOOLOGY 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	CHE301: Physical & Inorganic Chemistry (T)	4	CHE304: Chemistry in Everyday life (T) OR CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry (T)	4	ZOO301: Mammalian Histology (T)	4	-	-	VSC207: Lab Activity ZOO301(P)	2	-	-	CHE307:FP /CEP308: Awareness of SDG	2	22
		CHE302: Industrial Chemistry-I (T)	2													
		CHE303: Lab Activities on CHE301 & CHE302 (P)	4													
	VI	CHE309: Green Chemistry (T)	4	CHE312: Advanced Agrochemicals, Bio-pesticides & Fertilizers (T) OR CHE313: Forensic Chemistry (T) OR CHE314: Application of computer in Chemistry (T)	4	ZOO307: Pest Management & Parasitology (T)	4	-	-	-	-	-	CHE315: OJT	4	22	
		CHE310: Industrial Chemistry-II (T)	2													
		CHE 311: Lab Activities on CHE309 & CHE310 (P)	4													
Cum. Cr.		48		08		18		12		14		14		18		132
Exit option: Award of UG Degree in CHEMISTRY 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	CHE401: Inorganic Chemistry-I (T)	4	CHE406: Physical Methods in Chemistry (T) OR CHE407: Polymer Chemistry (T)	4	RES405: Research Methodology (T)	4	-		-		-		-	2	22	
		CHE402: Physical Chemistry-I (T)	4														
		CHE403: Organic Chemistry-I (T)	2														
		CHE404: Lab ActivitiesonCHE401, CHE402 & CHE403 (P)	4														
	VIII	CHE409: Inorganic Chemistry-II (T)	4	CHE415: Analytical Chemistry (T) OR CHE416: Chemical Mathematics & Biostatistics (T)	4	-						CHE413: OJT	4	22			
		CHE410: Physical Chemistry-II (T)	4														
		CHE411: Organic Chemistry-II (T)	2														
		CHE412: Lab Activities on CHE409, CHE410 & CHE411 (P)	4														
Cum. Cr.		76		16		22		12		14		14		22		176	
Four Year UG Honours Degree in Major CHEMISTRY and Minor ZOOLOGY with 176 credits																	

Programme Structure: B.Sc. (Honours) (Major in CHEMISTRY 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	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	CC101: Photography Techniques& Bird Watching (TW)	2	22
		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)	2			
	II	CHE103: Physical & Organic Chemistry-I (T)	4	-		BOT103: Evolution and Diversity of Pteridophytes and Gymnosperms (T)	2	OE103: Pesticides Chemistry (T)	2	VSC102: Lab Activity on BOT103 (P)	2	AEC102: English Communication-II (T)	2			
		CHE104: Lab Activities on CHE103 (P)	2					OE104: Food Safety Adulteration and Detection (T)	2	CHE205: Food Chemistry (TW)	2	VEC102: Environmental Education-II (T)	2			
Cum. Cr.		12		00		02		08		08		10		04		44
Exit option: Award of UG Certificate in CHEMISTRY as Major with 44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor																
5.0	III	CHE201: Physical & Organic Chemistry-II (T)	4	-		BOT201: Angiosperm Morphology, Taxonomy and Diversity (T)	4	OE101: Fuel Chemistry (T)	2	VSC201: Lab Activity on BOT201 (P)	2	AEC201: Modern Indian Language- I (T)	2	CHE204: Field Project	2	22
		CHE202: Ancient Indian Chemistry (T)	2											CC201: Applied Arts (TW)	2	
		CHE203: Lab Activities on CHE201 (P)	2													
	IV	CHE 205: Basic Analytical Chemistry (T)	4	-		BOT206: Plant Physiology and Metabolism (T)	4	Code: IPR (T)	2	SEC201: Financial & Investment Skills(TW)	2	AEC202: Modern Indian Language- II (T)	2	CHE208: Bee Keeping (TW)	2	22
		CHE 206: Molecular Modelling Chemistry(T)	2											CC202: Astronomy for Beginners (TW)	2	
		CHE 207: Lab Activities on CHE205 (P)	2													
Cum. Cr.		28		00		10		12		12		14		12		88
Exit option: Award of UG Diploma in CHEMISTRY 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	CHE301: Physical & Inorganic Chemistry (T)		4	CHE304: Chemistry in Everyday life (T) OR CHE305: Biochemistry (T) OR CHE306: Co-ordination Chemistry (T)		4	BOT301: Cell Biology & Genetics (T)		4	-		-		VSC207: Lab Activity on BOT301 (P)		2	-		-		CHE307: FP /CEP308: Awareness of SDG		2	22
		CHE302: Industrial Chemistry-I (T)		2																					
		CHE303: Lab Activities on CHE301 & CHE302 (P)		4																					
	VI	CHE309: Green Chemistry (T)		4	CHE312: Advanced Agrochemicals, Bio-pesticides & Fertilizers (T) OR CHE313: Forensic Chemistry (T) OR CHE314: Application of Computer in Chemistry (T)		4	BOT307: Analytical Techniques in Plant Science & Horticulture (T)		4	-		-		-		-		-		CHE315: OJT		4	22	
		CHE310: Industrial Chemistry-II (T)		2																					
		CHE 311: Lab Activities on CHE309 & CHE310 (P)		4																					
Cum. Cr.		48		08		18		12		14		14		18		132									
Exit option: Award of UG Degree in CHEMISTRY 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	CHE401: Inorganic Chemistry-I (T)		4	CHE406: Physical Methods in Chemistry (T) OR CHE407: Polymer Chemistry (T)		4	RES405: Research Methodology (T)		4	-		-		-	2	22	
		CHE402: Physical Chemistry-I (T)		4														
		CHE403: Organic Chemistry-I (T)		2														
		CHE404: Lab ActivitiesonCHE401, CHE402 & CHE403 (P)		4														
	VIII	CHE409: Inorganic Chemistry-II (T)		4	CHE415: Analytical Chemistry (T) OR CHE416: Chemical Mathematics &Biostatistics (T)		4	-						CHE413: OJT	4	22		
		CHE410: Physical Chemistry-II (T)		4														
		CHE411: Organic Chemistry-II (T)		2														
		CHE412: Lab Activities onCHE409, CHE410 & CHE411 (P)		4														
Cum. Cr.		76			16			22		12		14		14		22		176
Four Year UG Honours Degree in Major and Minor with 176 credits																		

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.