SCHOOL OF SEIENCE
DEPARTMENT OF CHEMISTRY
NEP 2020- Course structure

Program Name -Master of Science (Organic/ Analytical Chemistry)
Semester – I **Batch: AY 23-24 onwards**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
1	PC	NRDP101	Research Methodology	4	0	0	4	50	-	100	-	100
2	PC	NPCH101	Organic Chemistry I	4	0	0	4	50	-	100	-	100
3	PC	NPCH102	Analytical Chemistry I	4	0	0	4	50	-	100	-	100
4	PE	NPCHE_	Stereochemistry and Organic Reaction Mechanism or Basic analytical laboratory techniques	4	0	0	4	50	-	100	-	100
5	PC	NPCH111	Organic Chemistry Laboratory I	0	0	4	2	-	50	-	50	100
6	PC	NPCH112	Analytical Chemistry Laboratory I	0	0	4	2	-	50	-	50	100
TOTAL				**16**	**00**	**08**	**20**	**200**	**100**	**400**	**100**	**600**

Course Code	Programme Elective I
NPCHE01	Stereochemistry and Organic Reaction Mechanism
NPCHE02	Basic analytical laboratory techniques

		Formative Assessment		
CIA: Continuous Internal Assessment **L**: Theory Lecture **T**: Tutorial **P**: Practical **ESE**: End Semester Exam	**UC**: University Core **PC**: Programme Core **PE**: Programme Elective **OE:** Open Elective	**CIA**	**Weightage**	**Description**
		CIA 1	10%	Home Assignment
		CIA 2	20%	Written Exam
		CIA 3	10%	Activity/Project and Research based learning along with seminar presentation
		CIA 4	10%	Behavioral Attitude +General Discipline Theory +Practical attendance
		TOTAL	**50%**	

SCHOOL OF SEIENCE
DEPARTMENT OF CHEMISTRY
NEP 2020- Course structure

Program Name -Master of Science (Organic/ Analytical Chemistry)
Semester – II **Batch: AY 23-24 onwards**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
1	PC	NPCH201	Organic Chemistry II	4	0	0	4	50	-	100	-	100
2	PC	NPCH202	Analytical Chemistry II	4	0	0	4	50	-	100	-	100
3	PC	NPCH203	Applicative Chemistry	4	0	0	4	50	-	100	-	100
4	PE	NPCHE_	Spectroscopy and Separation techniques or Polymer Chemistry	4	0	0	4	50	-	100	-	100
5	PC	NPCH211	Organic Chemistry Laboratory II	0	0	4	2		50		50	100
6	PC	NPCH212	Analytical Chemistry Laboratory II	0	0	4	2	-	50	-	50	100
7	PC	NPCH213	Applicative Chemistry Laboratory	0	0	4	1	-	50	-	50	100
TOTAL				**16**	**00**	**12**	**21**	**200**	**150**	**400**	**150**	**700**

Course Code	Programme Elective II
NPCHE03	Spectroscopy and Separation techniques
NPCHE04	Polymer Chemistry

		Formative Assessment		
		CIA	Weightage	Description
CIA: Continuous Internal Assessment **L**: Theory Lecture **T**: Tutorial **P**: Practical **ESE**: End Semester Exam	**UC**: University Core **PC**: Programme Core **PE**: Programme Elective **OE:** Open Elective	CIA 1	10%	Home Assignment
		CIA 2	20%	Written Exam
		CIA 3	10%	Activity/Project and Research based learning along with seminar presentation
		CIA 4	10%	Behavioral Attitude +General Discipline Theory +Practical attendance
		TOTAL	**50%**	

Exit Option: PG Diploma with 40 Credits

SCHOOL OF SEIENCE
DEPARTMENT OF CHEMISTRY
NEP 2020- Course structure

Program Name -Master of Science (Organic Chemistry)
Level 6.5 (Semester – III) **Batch: AY 23-24 onwards**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
1	PC	NPCH301	Spectroscopic Methods for Structure Determination	4	–	–	4	50	-	100	-	100
2	PC	NPCH302	Pericyclic reactions, Photochemistry and Heterocyclic Chemistry	4	–	–	4	50	-	100	-	100
3	PC	NPCH303	Designing of Organic Synthesis	4	–	–	4	50	-	100	-	100
4	PE	NPCHE--	Program Elective III	4	–	–	4	50	-	100	-	100
5	PE	NPCHE--	Program Elective IV	4	–	–	4	50	-	100	-	100
6	PC	NPCH311	Organic Chemistry Laboratory III	0	0	4	2	-	50	-	50	100
7	PC	NPCH312	Organic Chemistry Laboratory IV	0	0	4	2	-	50	-	50	100
8	PC	NPCH313	Organic Chemistry Laboratory V	0	0	2	1	-	50	-	50	100
TOTAL				**20**	**00**	**10**	**25**	**250**	**150**	**500**	**150**	**800**

Course Code	Programme Elective III
NPCHE05	Asymmetric Synthesis
NPCHE06	Green Chemistry in Organic Synthesis

Course Code	Programme Elective IV
NPCHE07	Heterocyclic Chemistry
NPCHE08	Organic Reaction Mechanism

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PC: Programme Core
PE: Programme Elective
OE: Open Elective

Formative Assessment		
CIA	**Weightage**	**Description**
CIA 1	10%	Home Assignment
CIA 2	20%	Written Exam
CIA 3	10%	Activity/Project and Research based learning along with seminar presentation
CIA 4	10%	Behavioral Attitude +General Discipline Theory +Practical attendance
TOTAL	**50%**	

SCHOOL OF SEIENCE
DEPARTMENT OF CHEMISTRY
NEP 2020- Course structure

Program Name - Master of Science (Organic Chemistry)
Level 6.5 (Semester – IV) **Batch: AY 23-24 onwards**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
1	PC	NPCH411	Research Project	-	-	40	20	-	50	-	100	100
TOTAL				-	-	**40**	**20**	-	**50**	-	**100**	**100**

Assessment Rubrics

Sr. No	Activity	Weightage %	Assessment type	Credits	Marks	Time schedule
1	Ist Review and acceptance of the title	5	F	1	25	Beginning of Term
2	II nd Review and confirmation of methodology	10	F	2	50	45 days
3	IIIrd Review and results	15	F	3	75	75 days
4	Final Submission as per format	20	F	4	100	90 days
5	External examiners detailed report and *Viva-Voce* examination	50	S	10	250	As per Practical Examination Schedule
Total		**100**	**-**	**20**	**500**	**3-4 Months**

Exit Option: Award of PG Degree with 86 Credits

SCHOOL OF SEIENCE
DEPARTMENT OF CHEMISTRY
NEP 2020- Course structure

Program Name -Master of Science (Analytical Chemistry)
Level 6.5 (Semester – III) **Batch: AY 23-24 onwards**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
1	PC	NPCA301	Pharmaceutical Analysis	4	0	0	4	50	-	100	-	100
2	PC	NPCA302	Analytical Spectroscopy	4	0	0	4	50	-	100	-	100
3	PC	NPCA303	Industrial Analytical Chemistry	4	0	0	4	50	-	100	-	100
4	PE	NPCAE--	Programme Elective III	4	0	0	4	50	-	100	-	100
5	PE	NPCAE--	Programme Elective IV	4	0	0	4	50		100		100
6	PC	NPCA311	Analytical laboratory III	0	0	4	2	-	50	-	50	100
7	PC	NPCA312	Analytical laboratory IV	0	0	4	2	-	50	-	50	100
8	PC	NPCA313	Analytical laboratory V	0	0	2	1	-	50		50	100
TOTAL				**20**	**00**	**10**	**25**	**200**	**150**	**500**	**150**	**800**

Course Code	Programme Elective III
NPCAE01	Analytical toxicology
NPCAE02	Food analysis

Course Code	Programme Elective IV
NPCAE03	Nano technology
NPCAE04	Pollution monitoring

		Formative Assessment		
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		CIA 4	10%	Behavioral Attitude +General Discipline Theory +Practical attendance
		TOTAL	**50%**	

SCHOOL OF SEIENCE
DEPARTMENT OF CHEMISTRY
NEP 2020- Course structure

Program Name - Master of Science (Analytical Chemistry)
Level 6.5 (Semester – IV) **Batch: AY 23-24 onwards**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
1	PC	NPCA411	Research Project	0	0	40	20		50		100	100
TOTAL				**00**	**00**	**40**	**20**		**50**		**100**	**100**

Assessment Rubrics

Sr. No	Activity	Weightage %	Assessment type	Credits	Marks	Time schedule
1	Ist Review and acceptance of the title	5	F	1	25	Beginning of Term
2	II nd Review and confirmation of methodology	10	F	2	50	45 days
3	IIIrd Review and results	15	F	3	75	75 days
4	Final Submission as per format	15	F	4	100	90 days
5	External examiners detailed report and *Viva-Voce* examination	55	S	10	250	As per Practical Examination Schedule
Total		**100**	**-**	**20**	**500**	**3-4 Months**

Exit Option: PG with 86 Credits.