



School of Science
Course Structure-B.Sc. Chemistry
Semester I

School of Science													
Department of Chemistry													
Programme Name : B.Sc. Chemistry													
Programme Code: With Effect From Academic Year: 2025-26													
Duration of Programme: 03 Yrs / Honours													
Semester: I													
Course Category	Course Code	Course Title	Scheme of Study (Hours/Week)						Assessment Scheme (Marks)				Total Marks (TA+LA)
			Classroom Instruction (CI)		Lab Instruction (LI)	Hours (CIA+SL)	Total Notional Hours (CI+LI+CIA+SL)/ for 15 weeks)	Total Credits (C)	Theory Assessment (TA)		Lab Assessment (LA)		
			L	T					Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	
PCC	NYCH101	Basics of Organic and Inorganic Chemistry	3	-	-	-	-	3	50	100	-	-	100
PCC	NYCH102	Basics of Physical and Analytical Chemistry	3	-	-	-	-	3	50	100	-	-	100
PCC	NYCH103	Fundamentals of Chemistry	3	-	-	-	-	3	50	100	-	-	100
OE	NSSO02	Introduction to Nanoscience and Nanotechnology	4	-	-	-	-	4	-	100	-	-	100
VSEC / PCC	NYCH111	Chemical Laboratory Safety	-	-	2	-	-	1	-	-	50	50	100
VSEC / PCC	NYCH112	Introductory Chemistry Laboratory	-	-	2	-	-	1	-	-	50	50	100
VSEC / PCC	NYCH113	General Chemistry Practical-I	-	-	2	-	-	1	-	-	50	50	100
VSEC / PCC	NYCH114	Organic Chemistry Laboratory	-	-	2	-	-	1	-	-	50	50	100
VSEC / PCC	NYCH115	Analytical Chemistry Laboratory	-	-	2	-	-	1	-	-	50	50	100
VEC - I	NSSV__	Value Education Course - II	2	-	-	-	-	2	50	100	-	-	100
AEC - II	NHSA__	Ability Enhancement Course - II	-	-	4	-	-	2	-	-	50	50	100
CC - II	NSSC__....	Co Curricular Course - II	-	-	4	-	-	2			50	50	100
Total			15		18			24	200	500	350	350	1200



Semester – II

School of Science													
Department of Chemistry													
Programme Name : B.Sc. Chemistry													
Programme Code: With Effect From Academic Year: 2025-26													
Duration of Programme: 03 Yrs / Honours													
Semester: II													
Course Category	Course Code	Course Title	Scheme of Study (Hours/Week)						Assessment Scheme (Marks)				Total Marks (TA+LA)
			Classroom Instruction (CI)		Lab Instruction (LI)	Hours (CIA+ SL)	Total Notional Hours (CI+LI+CIA+SL)/ for 15 weeks)	Total Credits (C)	Theory Assessment (TA)		Lab Assessment (LA)		
			L	T					Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	
PCC	NYCH201	Organic and Inorganic Chemistry	3	-	-	-	-	3	50	100	-	-	100
PCC	NYCH202	Physical and Analytical Chemistry	3	-	-	-	-	3	50	100	-	-	100
PCC	NYCH203	Food Chemistry	3	-	-	-	-	3	50	100	-	-	100
OE	NSSO.....	Open Elective – II (SWAYAM)	4	-	-	-	-	4	-	100	-	-	100
MDM	NYFSM__	Minor - I	2	-	-	-	-	2	50	100	-	-	100
VSEC / PCC	NYCH211	Skills in Qualitative Organic and Inorganic Analysis	-	-	4	-	-	2	-	-	50	50	100
VSEC / PCC	NYCH212	Physical and Analytical Chemistry Laboratory-I	-	-	4	-	-	2	-	-	50	50	100
VSEC / PCC	NYCH213	Food Chemistry Laboratory	-	-	2	-	-	1	-	-	50	50	100
VEC - I	NSSV__	Value Education Course - II	2	-	-	-	-	2	50	100	-	-	100
AEC - II	NHSA__	Ability Enhancement Course - II	-	-	4	-	-	2	-	-	50	50	100
CC - II	NSSC__....	Co Curricular Course - II	-	-	4	-	-	2			50	50	100
Total			17		18			26	250	600	250	250	1100



School of Science													
Department of Chemistry													
Programme Name : B.Sc. Chemistry													
Programme Code:			With Effect From Academic Year: 2025-26										
Duration of Programme: 03 Yrs / Honours													
Semester: III													
Course Category	Course Code	Course Title	Scheme of Study (Hours/Week)						Assessment Scheme (Marks)				Total Marks (TA+LA)
			Classroom Instruction (CI)		Lab Instruction (LI)	Hours (CIA+SL)	Total Notional Hours (CI+LI+CIA+SL) / for 15 weeks)	Total Credits (C)	Theory Assessment (TA)		Lab Assessment (LA)		
			L	T					Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	
PCC	NYCH301	Organic Chemistry	3	-	-	-	-	3	50	100	-	-	100
PCC	NYCH302	Inorganic Chemistry	3	-	-	-	-	3	50	100	-	-	100
PCC	NYCH303	Dairy Chemistry	3	-	-	-	-	3	50	100	-	-	100
OE	NSSO.....	Open Elective – III (SWAYAM)	2	-	-	-	-	2	-	100	-	-	100
MDM	NYFSM--	Minor - II	4	-	-	-	-	4	50	100	-	-	100
VSEC / PCC	NYCH311	Organic Chemistry Laboratory	-	-	2	-	-	1	-	-	50	50	100
VSEC / PCC	NYCH312	Inorganic Chemistry Laboratory	-	-	2	-	-	1	-	-	50	50	100
VSEC / PCC	NYCH313	Dairy Chemistry Laboratory	-	-	2	-	-	1	-	-	50	50	100
FP/PCC	NYCH314	Water and Soil Analysis (Field Project)		-	4	-	-	2	-	-	50	50	100
AEC - III	NHSA__	Ability Enhancement Course - III	-	-	4	-	-	2	-	-	50	50	100
CC - III	NSSC__....	Co Curricular Course - III	-	-	4	-	-	2			50	50	100
Total			15		18			24	200	500	300	300	1100



School of Science													
Department of Chemistry													
Programme Name : B. Sc. Chemistry													
Programme Code:			With Effect From Academic Year: 2025-26										
Duration of Programme: 03 Yrs / 4 Honours													
Semester: IV													
Course Category	Course Code	Course Title	Scheme of Study (Hours/Week)						Assessment Scheme (Marks)				Total Marks (TA+LA)
			Classroom Instruction (CI)		Lab Instruction (LI)	Hours (CIA+ SL)	Total Notional Hours (CI+LI+CIA+SL)/ for 15 weeks)	Total Credits (C)	Theory Assessment (TA)		Lab Assessment (LA)		
			L	T					Continuous Internal & Self- Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	Continuous Internal & Self- Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	
PCC	NYCH401	Physical Chemistry	3	-	-	-	-	3	50	100		-	100
PCC	NYCH402	Analytical Chemistry	3	-	-	-	-	3	50	100		-	100
PCC	NYCH403	Agricultural Chemistry	3	-	-	-	-	3	50	100		-	100
MDM	NYFSM07	Minor – III	4	-	-	-	-	4	50	100	-	-	100
OE	NSSO.....	Open Elective – IV (SWAYAM)	2	-	-	-	-	2		100			100
VSEC / PCC	NYCH411	Physical Chemistry Laboratory	-	-	4	-	-	2	-	-	50	50	100
VSEC / PCC	NYCH412	Analytical Chemistry Laboratory II	-	-	4	-	-	2	-	-	50	50	100
VSEC / PCC	NYCH413	Agricultural Chemistry Laboratory	-	-	2	-	-	1	-	-	50	50	100
AEC-IV	NHSA12	Ability Enhancement Course - IV	-	-	4	-	-	2	-	-	50	50	100
CEP	NYCH414	Community Engagement Programme	-	-	4	-	-	2	-	-	50	50	100
CC-IV	NSSC__	Co-curricular course IV	-	-	4	-	-	2	-	--	50	50	100
Total			15	-	22			26	200	500	300	300	1100



Semester V

School of Science													
Department of Chemistry													
Programme Name : B.Sc. Chemistry													
Programme Code: With Effect From Academic Year: 2025-26													
Duration of Programme: 03 Yrs / Honours													
Semester: V													
Course Category	Course Code	Course Title	Scheme of Study (Hours/Week)						Assessment Scheme (Marks)				Total Marks (TA+LA)
			Classroom Instruction (CI)		Lab Instruction (LI)	Hours (CIA+ SL)	Total Notional Hours (CI+LI+CIA+SL)/ for 15 weeks)	Total Credits (C)	Theory Assessment (TA)		Lab Assessment (LA)		
			L	T					Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	
PCC	NYCH501	Advanced Inorganic Chemistry	4	-	-	-	-	4	50	100	-	-	100
PCC	NYCH502	Cosmetic Chemistry I	2	-	-	-	-	2	50	100	-	-	100
PCC	NYCH503	Food & Drug Chemistry	2	-	-	-	-	2	50	100	-	-	100
ME	NYCHE--	Major Elective	4	-	-	-	-	4	50	100	-	-	100
MDM	NYFSM __	Minor - IV	4	-	-	-	-	4	50	100	-	-	100
PCC	NYCH511	Cosmetic Chemistry I Laboratory		-	4	-	-	2	-		50	50	100
VSEC / PCC	NYCH512	Advanced Inorganic Chemistry Laboratory	-	-	4	-	-	2	-	-	50	50	100
VSEC / PCC	NYCH513	Food & Drug Chemistry Laboratory	-	-	2	-	-	1	-	-	50	50	100
AEC	NHSA--	Ability Enhancement Course V	-	-	4	-	-	2	-	-	50	50	100
CEP	NYCH514	Community Engagement Programme	-	-	4	-	-	2	-	-	50	50	100
Total			16		18		-	25	250	500	250	250	1000



School of Science													
Department of Chemistry													
Programme Name : B.Sc. Chemistry													
Programme Code: With Effect From Academic Year: 2025-26													
Duration of Programme: 03 Yrs / Honours													
Semester: VI													
Course Category	Course Code	Course Title	Scheme of Study (Hours/Week)						Assessment Scheme (Marks)				Total Marks (TA+LA)
			Classroom Instruction (CI)		Lab Instruction (LI)	Hours (CIA+ SL)	Total Notional Hours (CI+LI+CIA+SL)/ for 15 weeks)	Total Credits (C)	Theory Assessment (TA)		Lab Assessment (LA)		
			L	T					Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	
PCC	NYCH601	Advanced Organic Chemistry	3	-	-	-	-	3	50	100	-	-	100
PCC	NYCH602	Advanced Analytical Chemistry	3	-	-	-	-	3	50	100	-	-	100
PCC	NYCH603	Cosmetic Chemistry II	3					3	50	100	-	-	100
PCC	NYCH611	Advanced Organic Chemistry Laboratory	-	-	4	-	-	2	-	-	50	50	100
VSEC / PCC	NYCH612	Advanced Analytical Chemistry Laboratory	-	-	4	-	-	2	-	-	50	50	100
VSEC / PCC	NYCH613	Cosmetic Chemistry Laboratory II	-	-	2	-	-	1	-	-	50	50	100
ME	NYCHE--	Major Elective - II	4	-	-	-	-	4	50	100	-	-	100
MDM	NYFSM __	Minor - VI	4	-	-	-	-	4	50	100	-	-	100
VSEC / PCC	NYCH614	On Job Training	-	-	8	-	-	4	-	-	50	50	100
Total			17	-	18	-	-	26	250	500	200	200	900



Semester VII

School of Science													
Department of Chemistry													
Programme Name : B.Sc. Chemistry with Honours													
Programme Code:										With Effect From Academic Year: 2025-26			
Duration of Programme: 03 Yrs / Honours													
Semester: VII													
Course Category	Course Code	Course Title	Scheme of Study (Hours/Week)						Assessment Scheme (Marks)				Total Marks (TA+LA)
			Classroom Instruction (CI)		Lab Instruction (LI)	Hours (CIA + SL)	Total Notional Hours (CI+LI+CIA+ SL)/ for 15 weeks)	Total Credits (C)	Theory Assessment (TA)		Lab Assessment (LA)		
			L	T					Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	
PCC	NYCH701	Designing of Organic Synthesis	4	-	-	-	-	4	50	100	-	-	100
PCC	NYCH702	Analytical Spectroscopy	4	-	-	-	-	4	50	100	-	-	100
PCC	NYCH703	Organic Reaction Mechanisms	4	-	-	-	-	4	50	100	-	-	100
PCC	NYCH711	Chemistry Laboratory I		-	4	-	-	2	-	-	50	50	100
ME	NYCHE--	Major Elective - III	4	-	-	-	-	4	50	100	-	-	100
MDM	17RDP101	Research Methodology	4	-		-	-	4	50	100	-	-	100
Total			20		4			22	250	500	50	50	600



School of Science													
Department of Chemistry													
Programme Name : B.Sc. Chemistry with Honours													
Programme Code: With Effect From Academic Year: 2025-26													
Duration of Programme: 03 Yrs / Honours													
Semester: VIII													
Course Category	Course Code	Course Title	Scheme of Study (Hours/Week)						Assessment Scheme (Marks)				Total Marks (TA+LA)
			Classroom Instruction (CI)		Lab Instruction (LI)	Hours (CIA+SL)	Total Notional Hours (CI+LI+CIA+SL) / for 15 weeks)	Total Credits (C)	Theory Assessment (TA)		Lab Assessment (LA)		
			L	T					Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	Continuous Internal & Self-Learning Assessment (CIAs & SL)	End Semester Examination (ESE)	
PCC	NYCH801	Spectroscopic Methods for Structure Determination	4	-	-	-	-	4	50	100	-	-	100
PCC	NYCH802	Quality Assurance and Quality Control, Method of Analytical Development and Validation	4	-	-	-	-	4	50	100	-	-	100
PCC	NYCH803	Industrial Analytical Chemistry	4	-	-	-	-	4	50	100	-	-	100
PCC	NYCH811	Chemistry Laboratory II		-	4	-	-	2	-	-	50	50	100
ME	NYCHE--	Major Elective - IV	4	-	-	-	-	4	50	100	-	-	100
OJT	NYCH812	On Job Training	-	-	8	-	-	4	-	-	50	50	100
Total			16		12			22	200	400	100	100	600