B. Sc. Blended Honors with Research
A Degree Program
Jointly getting implemented and quality assured by
University of Melbourne, Australia
and
Progressive Education Society's Modern College of Arts, Science and Commerce, Ganeshkhind, Pune-411016, Maharashtra, India

First year B.Sc. Blended

Course Code	Course Name	Credits	NEP Vertical	Type of course
24BLCH11101	Introductory Chemistry	2	DSC	Theory
24BLCH11102	Chemistry Practical-1	2	DSC	Practical
24BLBI11103	The Diversity of Life	2	DSC	Theory
24BLBI11104	Biology Practical-1	2	DSC	Practical
24BLPH11105	Introductory Classical Physics	2	DSC	Theory
24BLPH11106	Physics Practical-1	2	DSC	Practical
24BLMT11307	Calculus-1	2	OE/GE	Theory
24BLMT11308	Calculus-2	2	SEC	Practical
24BLEN11509	English: Critical Reading Writing and Communication	2	AEC	Theory
24BLIKS11510	(FROM THE COMMON BASKET)	2	IKS	Theory
24BLVEC11511	(FROM THE COMMON BASKET)	2	VEC	Theory
	Total credits	**22**		
Semester 2	**F.Y.B.Sc.Blended Semester II (Revised NEP Version II)**			
Course Code	**Course Name**	**Credits**	**NEP Vertical**	**Type of course**
24BLCH12101	Chemistry of LIfe	2	DSC	Theory
24BLCH12102	Chemistry Practical-2	2	DSC	Practical
24BLBI12103	Modern Physics	2	DSC	Theory
24BLBI12104	Physics Practical-2	2	SEC	Practical
24BLPH12105	Biology of Cells	2	Minor	Theory
24BLPH12106	Biology Practical-2	2	VSC	Practical
24BLMT12307	Algebra-1	2	GE/OE	Theory
24BLMT12408	Algebra-2	2	SEC	Theory
24BLEN12509	Mastering English for Professional Purpose	2	AEC	Theory
24BLVEC12510	Scientific Computation and Modelling	2	VEC	Practical
24BLCC12611	From the common basket- Yoga/NCC/NSS/Red Cross/Sports/ Cultural/Conference participation/ etc	2	CC	Practical
	Total credits	**22**		
After 1 year : 44 credits				

Second year B.Sc. Blended

Semester 3	S.Y.B.Sc.Blended Semester III (NEP Version II)			
Course Code	**Course Name**	**Credits**	**NEP Vertical**	**Type of course**
24BLCH23101	Chemistry: Reactions and Synthesis	**2**	DSC	Theory
24BLCH23102	Chemistry Practical-3	**2**	DSC	Practical
24BLPH23103	Quantum Mechanics and Thermodynamics	**2**	DSC	Theory
24BLPH23104	Physics Practical-3	**2**	VSC	Practical
24BLBI23105	Functional Biology of Organisms	**2**	Minor	Theory
24BLBI23106	Biology Practical-3	**2**	Minor	Practical
24BLMT23307	(Vector Calculus & Differential Equations) / Applied Mathematics	**2**	GE/OE	Theory
24BLIKS23408	(FROM THE COMMON BASKET)	**2**	IKS	(T/P)
24BLMA23509	Indian Language (FROM THE COMMON BASKET)	**2**	AEC	Theory
24BLFP236010	Field Project	**2**	FP	Practical
24BLCC23611	From the common basket- Yoga/NCC/NSS/Red Cross/Sports/ Cultural/Conference participation/ etc	2	CC	Practical
	Total credits	**22**		
	(Vector Calculus & Differential Equations) / Applied Mathematics	**2**	Non credit course	
Semester 4	**S.Y.B.Sc.Blended Semester IV (NEP Version II)**			
Course Code	**Course Name**	**Credits**	**NEP Vertical**	**Type of course**
24BLCH24101	Chemistry: Structure and Properties	2	DSC	Theory
24BLCH24102	Chemistry Practical-4	2	DSC	Practical
24BLPH24103	Electricity, Magnetism, Special Relativity, and Optics	2	DSC	Theory
24BLPH24104	Physics Practical-4	2	DSC	Practical
24BLBI24105	Genetics, Evolution and Ecology	2	Minor	Theory
24BLBI24106	Biology Practical-4	2	Minor	Practical
24BLMT24307	Probability and Statistics-1	2	GE/OE	Theory
24BLMT24608	Probability and Statistics-2	2	SEC	(T/P)
24BLMA24509	Indian Language (FROM THE COMMON BASKET)	2	AEC	Theory
24BLCEP24610	Community Engagement and Services	2	CEP	Practical
24BLCC24611	From the common basket- Yoga/NCC/NSS/Red Cross/Sports/ Cultural/Conference participation/ etc	2	CC	Practical
	Total credits	**22**		
After 2 years: 44+44=88 credits				

Third year B.Sc. Blended

Credit Framework for Chemistry Major, Biology Minor

Semester 5	**T.Y.B.Sc.Blended Semester V (NEP Version II)**				
Course Code	**Course Name**	**Credits**	**NEP vertical**	**Vertical no**	**Type of course**
24BLCH35101	Quantum Mechanics and Reaction Dynamics	2	DSC	V-1	Theory
24BLCH35102	Inorganic Catalysts for Industries	2	DSC	V-1	Theory
24BLCH35103	Organic Molecules: Design and Synthesis	2	DSC	V-1	Theory
24BLCH35104	Analytical Techniques in Chemistry	2	DSC	V-1	Theory
24BLCH35105	Physical and AnalyticalChemistry - LAB-1	2	DSC	V-1	Practical
24BLCH35106	Organic and Inorganic Chemistry - LAB-1	2	DSC	V-1	Practical
24BLCH35107	Forensic Science and Technology#	2	DSE	V-1	Theory
24BLCH35108	Forensic Science Practical#	2	DSE	V-1	Practical
24BLCH35409	Agricultural Chemistry	2	VSC	V-4	Theory (T/P)
24BLCH35610	Project/ Field Work/Community Engagement and Services	2	FP/CEP	V-6	Practical
24BLBI35211	Biomolecules: Structure and Significance	2	Minor	V-2	Theory
	Total credits	**22**			
Semester 6	**T.Y.B.Sc.Blended Semester VI (NEP Version II)**				
Course Code	**Course Name**	**Credits**	**NEP vertical**	**Vertical no**	**Type of course**
24BLCH36101	Nanoscience and Crystallography	2	DSC	V-1	Theory
24BLCH36102	Bioinorganic and Coordination Chemistry	2	DSC	V-1	Theory
24BLCH36103	Heterocyclic Chemistry and Natural Product	2	DSC	V-1	Theory
24BLCH36104	Advanced Analytical Chemistry	2	DSC	V-1	Theory
24BLCH36105	Physical and Analytical Chemistry - LAB-2	2	DSC	V-1	Practical
24BLCH36106	Organic and Inorganic Chemistry - LAB-2	2	DSC	V-1	Practical
24BLCH36107	Green Chemistry#	2	DSE	V-1	Theory
24BLCH36108	Green Chemistry Practical#	2	DSE	V-1	Practical
24BLCH36409	Agricultural Chemistry Practical	2	VSC	V-4	Practical (T/P)
24BLCH36610	Project/On Job Training	4	OJT	V-6	Practical
	Total credits	**22**			

 # DSE andVSC could be changed as per the requirement. The Minor subject continues from the second year.

After 3 years: 44+44+44 = 132 credits

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B. Sc. Blended Honors with Research

To be implemented in the academic year 2026 - 2027

For Chemistry Major and Biology Minor

NEP Version I

Semester 7	Forth year B.Sc.Blended Semester VII (NEP Version I)				
Course Code	**Course Name**	**Credits**	**NEP vertical**	**Vertical no**	**Type of course**
CHM701	Advanced Reaction Dynamics	2	DSC	V-1	Theory
CHM702	Molecular Symmetry	2	DSC	V-1	Theory
CHM703	Spectroscopy for Molecular Characterisation	2	DSC	V-1	Theory
CHM704	Physical Chemistry-LAB-1	2	DSC	V-1	Practical
CHM705	Organic Chemistry-LAB-1	2	DSC	V-1	Practical
CHM706	Petroleum Oils and Lubricants#	2	DSE	V-1	Theory
CHM707	Molecular Characterisation-LAB#	2	DSE	V-1	Practical
CHM708	Research Project-1	4	RP	V-1	Practical
CHM709	Research Methodology	4	RM	V-2	Theory (T/P)
	Total credits	**22**			

Semester 8	Forth year B.Sc.Blended Semester VIII (NEP Version I)				
Course Code	**Course Name**	**Credits**	**NEP vertical**	**Vertical no**	**Type of course**
CHM801	Nuclear and Radiation Chemistry	2	DSC	V-1	Theory
CHM802	Bioinorganic Chemistry	2	DSC	V-1	Theory
CHM803	Heterocyclic Chemistry	2	DSC	V-1	Theory
CHM804	Physical Chemistry-LAB-2	2	DSC	V-1	Practical
CHM805	Organic Chemistry-LAB-2	2	DSC	V-1	Practical
CHM806	Polymer Chemistry	2	DSE	V-1	Theory
CHM807	Advanced Laboratory Techniques-LAB	2	DSE	V-1	Practical
CHM808	Research Project-2	8	OJT/FP	V-6	Practical
	Total credits	**22**			

 # DSE andVSC could be changed as per the requirement. The Minor subject continues from the second year.

After 3 years: 44+44+44+44 = 176 credits

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