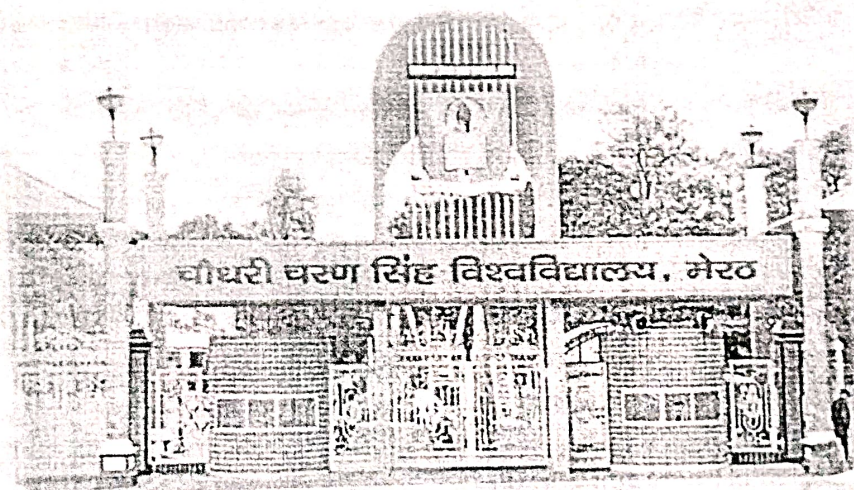


Course Structure, Credits and Syllabus

of

M.Sc. Chemistry with specialization in Polymer Science & Chemical Technology (Effective from the Academic session 2025-2026)



Department of Chemistry
Chaudhary Charan Singh University, Meerut
(Accredited NAAC A⁺⁺)
(U.P.) India-250004

Sangeeta
(Sangeeta Singh)
(H.K. Singh)

NA
24/5/25
(Nazim Tareen)

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(Prof. R.K. Soni)

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M.Sc. Chemistry with Specialization in Polymer Science and Chemical Technology

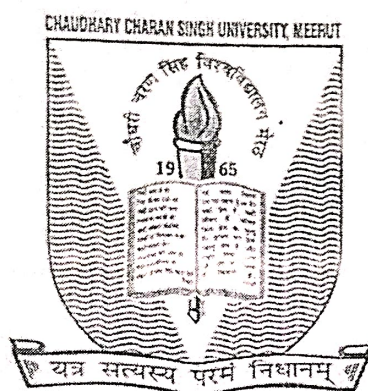
M.Sc. Chemistry with spl. in Polymer Science and Chemical Technology
Approved Course Structure (24/05/2025)

Semester-I							
Year	Course Title	Course Type	Internal Marks	External Marks	Total Marks	Credits	Total Hrs
1	Polymerization	Core Compulsory	30	70	100	4	60
	Properties of Polymers	Core Compulsory	30	70	100	4	60
	Organic Chemistry	Core Compulsory	30	70	100	4	60
	Rubber Technology or Paints, Coatings and Adhesives Technology	Elective I Elective II	30	70	100	4	60
	Polymer Practical-I	Core Compulsory and Skill Enhancement	30	70	100	8	240
	Total		150	350	500	24	480
	Semester-II						
	Synthesis and Applications of polymer	Core Compulsory	30	70	100	4	60
	Polymer Processing	Core Compulsory	30	70	100	4	60
	Physical chemistry	Core Compulsory	30	70	100	4	60
	Tyre Technology or Smart Polymeric Materials	Elective III Elective IV	30	70	100	4	60
	Polymer practical-II	Core Compulsory and Skill Enhancement	30	70	100	8	240
	Total		150	350	500	24	480
	Semester-III						
2	Polymer Blends and Composites	Core Compulsory	30	70	100	4	60
	Analytical Techniques	Core Compulsory	30	70	100	4	60
	Polymer Testing and Specification	Core Compulsory	30	70	100	4	60
	Fibre Technology or Polymers in Energy Applications	Elective V Elective VI	30	70	100	4	60
	Polymer practical-III	Core Compulsory and Skill Enhancement	30	70	100	8	240
	Total		150	350	500	24	480
	Semester-IV						
	Research Project	Core Compulsory and Skill Enhancement	-	500	500	24	720

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Chaudhary Charan Singh University, Meerut

(Accredited NAACA⁺⁺)



Syllabus with course structure and Credits

M.Sc. (Biochemistry)

(w.e.f. the academic session 2025-2026)

Department of Chemistry
Chaudhary Charan Singh University, Meerut (U.P.)
India-250004

(Signature)
(Sangeta Pandey)

(Signature)
(K. V. Guleria)

(Signature)
(Nazim Tarannum)

(Signature)
(Prof. R. K. Sarda)

Program Details

Program Name	M.Sc. Biochemistry
Program Level	PG
Duration	02 Years/04 Semester
Minimum Eligibility Criteria:	Bachelor's Degree in any branch of life sciences/ PCM/CBZ/MLT/ B.Sc. (H) /B.Sc. (General) as per university rules

Research Project evaluation would be based on the following criterion:

Thesis:50%

Presentation 25%

Viva Voce 25%

Program Specific Outcomes (PSOs):

PSO1: The Programme aims to understand the fundamental chemical principles that governs complex biological systems.

PSO2: They will learn several basic and technical skills to work exceptionally in various fields of Biochemistry.

PSO3: It increases the ability to understand the technical aspects of existing technologies that help in addressing the biological and medical challenges faced by humankind.

PSO4: It enhances an ability to acquire in-depth theoretical and practical knowledge of Biochemistry and make students efficient enough to apply the acquired knowledge for providing solutions to various problems in Biochemistry.

PSO5: Graduates should be able to design and conduct research projects, analyze data, and communicate findings effectively through scientific writing and presentations

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Semester-wise titles of the Papers and marks distributions

M.Sc. (Biochemistry)

Year	Course Code	Paper Title	Core Compulsory/ Elective/ Value added	Theory/ Practical	Marks			Credits	
					Ext	Int	Total		
FIRST SEMESTER									
1	CPDBC-1111	General Chemistry	Elective1	Theory	70	30	100	04	
		Drug designing and Medicinal Chemistry	Elective 2	Theory	70	30	100	04	
	CPDBC-1112	Fundamental Genetics and Microbiology	Core Compulsory	Theory	70	30	100	04	
	CPDBC-1113	Cytology and Human Physiology	Core Compulsory	Theory	70	30	100	04	
	CPDBC-1114	Bioenergetics and Intermediary Metabolism	Core Compulsory	Theory	70	30	100	04	
	PR-101	Chemistry Practical	Core Compulsory & Ability enhancement	Practical	70	30	100	08	
		Biochemistry Practical 1	Core Compulsory & Ability enhancement	Practical					
		Biochemistry practical 2	Core Compulsory & Ability enhancement	Practical					
	Total Marks and credits					380	120	500	24
	SECOND SEMESTER								
	CPDBC-1121	Plant Biochemistry	Elective3	Theory	70	30	100	04	
		Environmental Biochemistry	Elective 4	Theory	70	30	100	04	
	CPDBC-1122	Advanced Enzymology	Core Compulsory	Theory	70	30	100	04	
	CPDBC-1123	Immunology	Core Compulsory	Theory	70	30	100	04	
	CPDBC-1124	Biostatistics and Bioinformatic	Core Compulsory & Ability enhancement	Theory	70	30	100	04	
	PR-202	Biochemistry Practical 3	Core Compulsory & Ability enhancement	Practical	70	30	100	08	
		Bioinformatics and Biostatistics Practical	Core Compulsory & Ability enhancement	Practical					
	Total Marks and credits					380	120	500	24

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Year	Course Code	Paper Title	Core Compulsory/ Elective/ Value added	Theory/ Practical	Marks			Credits
					Ext	Int	Total	
THIRD SEMESTER								
2	CPDBC-1131	Bioprocess Engineering and Fermentation Technology	Core Compulsory	Theory	70	30	100	04
	CPDBC-1132	Molecular Biology	Core Compulsory	Theory	70	30	100	04
	CPDBC-1133	Clinical Biochemistry	Elective 5	Theory	70	30	100	04
		Nutritional Biochemistry	Elective 6	Theory	70	30	100	04
	CPDBC-1134	Biophysics and Biochemical Technology	Core Compulsory	Theory	70	30	100	04
	PR-303	Biochemistry Practical 4	Core Compulsory & Ability enhancement	Practical	70	30	100	08
		Biochemistry Practical 5	Core Compulsory & Ability enhancement	Practical				
		15 days Instrumentation Training	Core Compulsory & Ability enhancement					
Total Marks and credits					380	120	500	24
FOURTH SEMESTER								
					-	-	500	24
	CPDBC-PRO	Research Project	Core Compulsory					

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