



Manipal University Jaipur

Faculty of Science, Technology, and Architecture Department of Biotechnology and Chemical Engineering

B.Tech. Chemical Engineering (AY 2026-27 onwards)

Program Scheme

Bachelor of Technology in Chemical Engineering (2025-2026) onwards (160 Credits)

First Semester		
Code	Course Name	Cr
CHY1001	Engineering Chemistry & Lab	3
MAS1001	Calculus & Matrices	3
ECE1001	Electronic Circuits	3
MEE1008	Basic Mechanical Engineering	3
CSCXXXX	Problem-Solving Using Computers	3
DOA1001	Universal Human Values	1
CSCXXXX	Problem-Solving Using Computers Lab	1
LLC1011	Communication Skills	2
MEE1036	Engineering Graphics	1
	First Semester Credits	20

Second Semester		
Code	Course Name	Cr
PHY1001	Engineering Physics & Lab	4
MAS1002	Computational Mathematics	3
CHY1002	Environmental Studies	2
EEE1001	Electrical Technology	2
CIV1002	Engineering Materials and Mechanics	3
MEE1038	Creativity & Innovation IDEA Lab	2
BIT1001	Biology for Engineers	2
MEE1037	MATLAB for Engineers lab	1
DOA1002	Wellness and Community Services	1
	Second Semester Credits	20

Third Semester		
Code	Course Name	Cr
	Principles of Management/ Engineering Economics	3
CHE2101	Process Calculations	4
CHE2102	Fluid Mechanics	4
CHE2104	Chemical Engineering Thermodynamics-I	4
CHE2105	Heat Transfer Operations	4
CHE2106	Transport Phenomena	4

Fourth Semester		
Code	Course Name	Cr
MAS22xx	Probability and Statistics	3
	Principles of Management/ Engineering Economics	3
CHE2203	Chemical Reaction Engineering-I	4
CHE2204	Mass Transfer - I	4
CHE2205	Chemical Engineering Thermodynamics-II	4
	Technical Report Writing	2
CHE2230	Fluid Mechanics Lab	1



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Third Semester Credits		23

CHE2231	Thermal Processes Lab	1
CHE2270	Project-Based Learning - 1	3
Fourth Semester Credits		25

Fifth Semester		
Code	Course Name	Cr
CHE3103	Chemical Reaction Engineering-II	4
CHE3104	Mass Transfer-II	4
CHE3105	Process Modelling and Simulation	4
CHE3106	Process Dynamics and Control	4
CHE31xx	Program Elective 1	3
CHE3130	Reaction Engineering Lab	1
CHE3131	Process Modelling and Simulation Lab	1
CHE3170	Project-Based Learning - 2	3
Fifth Semester Credits		24

Sixth Semester		
Code	Course Name	Cr
CHE3201	Process Plant Design	4
CHE3230	Process Dynamics and Control Lab	1
CHE3231	Mass Transfer Lab	2
CHE3270	Project-Based Learning - 3	3
CHE32xx	Program Elective 2	3
CHE32xx	Program Elective 3	3
CHE32xx	Program Elective 4	3
	Open Elective	3
Sixth Semester Credits		22

Seventh Semester		
Code	Course Name	Cr
	Open Elective	3
	Open Elective	3
CHE41xx	Program Elective 5	3
CHE41xx	Program Elective 6	3
CHE4170	Internship (Industry/ Research/ Industry Certification)	2
Seventh Semester Credits		14

Eighth Semester		
Code	Course Name	Cr
CHE4270	Major Project	12
Eighth Semester Credits		12