

# M. Tech. in Chemical Engineering Program

## Break-down of Credits

Sl. No	Category	Total number of Credits
1	University Core	3
2	Mathematics and Science	4
3	Programme Core	50
4	Programme Electives	15
<b>Minimum Total Number of Credits</b>		<b>72</b>

## Category of Courses

Sl No	Category	Credits	%
1	Engineering	65	90
2	Mathematics and Science	4	6
3	Humanities & Management	3	4
	<b>TOTAL</b>	<b>72</b>	<b>100</b>

**List of Courses: University Core Courses (3 Credits)**

<b>S. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>Prerequisite/ Exposure</b>	<b>Category</b>	<b>Sem</b>
1	ENG684	Professional and Communication Skills	0	0	4	2		Humanities	II
2	GUC501	Seminar	0	0	2	1		Engineering	III

**List of Science and Mathematics Courses (4 credits)**

<b>S. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>Prerequisites/ Exposure</b>	<b>Category</b>	<b>Sem</b>
1	MAT502	Advanced Numerical and Statistical Methods	3	1	0	4		Science	I

### List of Programme Core Courses (50 credits)

S. No.	Course Code	Course Title	L	T	P	C	Prerequisites	Category	Version
1	CHE511	Advanced Chemical Reaction Engineering	3	0	0	3		Engineering	1.01
2	CHE512	Advanced Thermodynamics	3	0	0	3		Engineering	1.01
3	CHE513	Process modelling and simulation	3	0	0	3		Engineering	1.01
4	CHE514	Plant Design	3	0	0	3		Engineering	1.01
5	CHE515	Petroleum & Petrochemical Technology	3	0	0	3		Engineering	1.01
6	CHE521	Advanced Transport Phenomena	3	0	0	3		Engineering	1.01
7	CHE522	Advanced Separation Process	3	0	0	3		Engineering	1.01
8	CHE523	Advanced Process Control	3	0	0	3		Engineering	1.01
9	CHE541	Process Simulation Lab	0	0	2	1		Engineering	1.01
10	CHE542	Plant Equipment Design Lab	0	0	2	1		Engineering	1.01
11	CHE 600	Comprehensive Examination	0	0	0	2		Engineering	1.01
12	CHE651	Chemical Process Lab I	0	0	2	1		Engineering	1.01
13	CHE652	Chemical Process Lab II	0	0	2	1		Engineering	1.01
14	CHE699	Major Project	0	0	0	5		Engineering	1.01
15	CHE699	Major Project	0	0	0	15		Engineering	1.01

### List of Programme Electives (15 credits)

S. No.	Course Code	Course Title	L	T	P	C	Prerequi sites	Category	Version
1	CHE561	Biochemical Engineering	3	0	0	3		Engineering	1.01
2	CHE562	Petroleum Reservoir Engineering	3	0	0	3		Engineering	1.01
3	CHE563	Process optimization	3	0	0	3		Engineering	1.01
4	CHE564	Water Supply Treatment Systems	3	0	0	3		Engineering	1.01
5	CHE565	Nuclear Power Engineering	3	0	0	3		Engineering	1.01
6	CHE671	Fuel Cell Technology	3	0	0	3		Engineering	1.01
7	CHE672	Major Hazardous Waste Management	3	0	0	3		Engineering	1.01
8	CHE673	Renewable Energy Resources	3	0	0	3		Engineering	1.01
9	CHE674	Computational Fluid Dynamics	3	0	0	3		Engineering	1.01
10	CHE675	Electrochemical Engineering	3	0	0	3		Engineering	1.01
11	CHE676	Drugs and Pharmaceutical Technology	3	0	0	3		Engineering	1.01
12	CHE677	Wastewater and Sewage Treatment Systems	3	0	0	3		Engineering	1.01