

DEPARTMENT OF CHEMICAL ENGINEERING, MANIT, BHOPAL
PROPOSED SCHEME FOR BTECH (CHEMICAL ENGINEERING)
 (Revised April 2020)

Third Semester:

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
MTH7301	Mathematics-3	3	1	-	4
HUM7302	Fundamental of Entrepreneurship	3	1	-	4
CHE7303	Chemical Process Calculations	3	1	-	4
CHE7304	Fluid Mechanics	3	1	-	4
CHE7305	Chemical Engineering Thermodynamics	3	1	-	4
CHE7306	Chemical Process Design & Technology-1	-	2	-	2
CHE7307	Chemical Technology Lab	-	-	2	1
CHE7308	Fluid Mechanics Lab	-	-	2	1
Total Hours = 26		15	7	4	24
Total Credits (Cumulative)					69

Fourth Semester:

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
MTH7401	Mathematics-4	3	1	-	4
CHE7402	Fundamentals of Process Equipment Design	3	1	-	4
CHE7403	Chemical Reaction Engineering-1	3	1	-	4
CHE7404	Heat Transfer	3	1	-	4
CHE7405	Mass Transfer-1	3	1	-	4
CHE7406	Chemical Process Design & Technology-2	-	2	-	2
CHE7407	Heat Transfer Lab	-	-	2	1
CHE7408	Mass Transfer Lab	-	-	2	1
Total Hours = 26		15	7	4	24
Total Credits (Cumulative from 3rd semester)					93

Fifth Semester:

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
MM7501	Fuel, Furnaces & Refractories	3	1	-	4
ME7502	Engineering Management	3	1	-	4
CHE7503	Mechanical Operations	3	1	-	4
CHE7504	Mass Transfer-2	3	1	-	4
CHE7505	Chemical Reaction Engineering-2	3	1	-	4
CHE7506	Mechanical Operation Lab	-	-	2	1
CHE7507	Chemical Reaction Engineering Lab	-	-	2	1
CHE7508	Fuel Process & Technology Project Lab	-	2	-	2
CHE7509	Internship/Training	-	2	-	1
Total Hours = 28		15	9	4	25
Total Credits (Cumulative)					118

Sixth Semester:

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
CSE7601	Data Structure	3	1	-	4
CHE7602	Project-1	-	-	4	2
CHE7603	Process Modeling and Simulation	3	1	-	4
CHE7604	Transport Phenomena	3	1	-	4
CHE7605	Instrumentation & Process Dynamic Control	3	1	-	4
	Department Elective-1(A)	3	1	-	4
CHE7606	Process Control Lab	-	-	2	1
CHE7607	Process Modeling and Simulation Lab	-	-	2	1
Total Hours = 28		15	5	8	24
Total Credits (Cumulative)					142

Seventh Semester:

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
HUM7701	Engineering Economics & IPR	3	1	-	4
CHE7702	Project-2 phase-1	-	-	2	1
CHE7703	Process Engineering and Costing	3	-	-	3
CHE7704	Process Plant Design	3	-	-	3
	Department Elective-2(A)	3	1	-	4
	Open Elective-1(C)	3	-	-	3
CHE7705	Advanced Characterization of Materials Lab	-	-	2	1
CHE7706	Internship/Training	-	2	-	1
Total Hours = 23		15	4	4	20
Total Credits (Cumulative)					162

Eighth Semester:

Course Number	Subject	Scheme of Studies Periods per week			Credits
		L	T	P	
CHE7801	Project-2 phase-2	-	-	4	2
	Department Elective-3(A)	3	-	-	3
	Department Elective-4(A)	3	-	-	3
	Department Elective-5(A)	3	-	-	3
	Department Elective-6(A)	3	-	-	3
	Department Elective-7(A)	3	-	-	3
CHE7802	General Proficiency	-	-	2	1
Total Hours = 21		15	-	6	18
Cumulative Credits (from 3rd semester)					180

LIST OF ELECTIVES

Group A Department Elective

CHE501 Bio Chemical Engineering
 CHE502 Oil and Paint Technology
 CHE503 Sustainable Engineering
 CHE504 Paper and pulp technology
 CHE505 Petroleum Refinery Engineering
 CHE506 Fertilizer Technology
 CHE507 Novel Separation Techniques
 CHE508 Industrial Pollution Control
 CHE509 Process Piping Design
 CHE510 Packaging Technology
 CHE511 Transport in Porous media
 CHE512 Computer Aided Process Control & Design
 CHE513 Fluidization Engineering
 CHE514 Fuels and Combustion
 CHE515 Air Pollution and control
 CHE516 Oil and Gas well testing and enhanced oil recovery
 CHE517 Membrane Science and Technology
 CHE518 Industrial Catalysis
 CHE519 Introduction to Multi Phase Flow
 CHE520 Trends in Healthcare and Technology
 CHE521 Wastewater Treatment
 CHE522 Plant Utility
 CHE523 Numerical and Statistical Methods in Chemical Engineering
 CHE524 Cleaner Technologies in Chemical Process Industries
 CHE525 Computational Fluid Dynamics
 CHE526 Sustainability and Green Chemistry
 CHE527 Nanotechnology in Catalysis
 CHE528 Hazardous Waste Treatment and Management
 CHE529 Advanced Material Characterization
 CHE530 Bio Energy Technology
 CHE531 Solid Waste Management
 CHE532 Economics and Managements of chemical industries
 CHE533 Advanced Analytical Techniques
 CHE534 Material Synthesis processes
 CHE535 Ceramic Technology
 CHE536 Advanced Process Optimization

CHE537 Safety & Hazard Management in Chemical Industries
 CHE538 Introduction to Nano-Science and Technology
 CHE539 Rubber Technology
 CHE540 Polymer Science & Technology
 CHE541 Textile Technology

Group C

Open Elective

(For Other Departments)

CHE701 Industrial Pollution Control
 CHE702 Wastewater Treatment
 CHE703 Solid Waste Management
 CHE704 Advanced Material Characterization
 CHE705 Material Synthesis processes
 CHE706 Computational Fluid Dynamics
 CHE707 Bio Chemical Engineering
 CHE708 Sustainable Engineering
 CHE709 Fuels and Combustion
 CHE710 Hazardous Waste Treatment and Management
 CHE711 Bio Energy Technology
 CHE712 Industrial Safety & Hazard Management