

**BACHELOR DEGREE REQUIREMENTS -  
CHEMICAL ENGINEERING (2009 BATCH)**

<b>SEMESTER 1</b>			
<b>Sr. No.</b>	<b>Course No.</b>	<b>Course Name</b>	<b>Credits</b>
1	CH 101	Chemistry	6.0
2	PH 111	Physics Lab	3.0
3	CS 101	Computer Programming and Utilization	6.0
4	HS 103/HS105	Introduction to Philosophy/Introduction to English	6.0
5	MA 101	Calculus	8.0
6	ME 101	Engineering Graphics and Drawing	5.0
7	PH 101	Electricity and Magnetism	6.0
8	NO 101	NSO	0.0
<b>Total Credits</b>			<b>40.0</b>

<b>SEMESTER 2</b>			
<b>Sr. No.</b>	<b>Course No.</b>	<b>Course Name</b>	<b>Credits</b>
1	EE 104	Introduction to Electrical Engineering I	6.0
2	HS 106	Economics	6.0
3	MA 102	Linear Algebra	4.0
4	MA 104	Ordinary Differential Equations I	4.0
5	ME 112	Workshop Practice	5.0
6	PH 102	Modern Physics	8.0
7	CH 112	Chemistry lab	3.0
8	NO 102	NSO	0.0
9	ME 104	Engineering Mechanics	6.0
10	IN 104	Introduction to Engineering	3.0
<b>Total Credits</b>			<b>42.0</b>

<b>SEMESTER 3</b>			
<b>Sr. No.</b>	<b>Course No.</b>	<b>Course Name</b>	<b>Credits</b>
1	CL 201	Chemical Process Calculations	4.0
2	MM 203	Materials Engineering	6.0
3	CL 203	Chemical Engineering Thermodynamics	8.0
4	EE 205	Introduction Electrical Engineering II	6.0
5	ME 201	Solid Mechanics	6.0
6	MA 201	Complex Analysis	4.0
7	MA 203	Differential Equations-II	4.0
<b>Total Credits</b>			<b>38.0</b>

<b>SEMESTER 4</b>			
<b>Sr. No.</b>	<b>Course No.</b>	<b>Course Name</b>	<b>Credits</b>
1	MA 202	Numerical Analysis	8.0
2	EE 213	Electrical and Electronics Lab	4.0
3	CL 204	Process Fluid Mechanics	6.0
4	CL 202	Fundamentals of Heat and Mass Transfer	6.0
5	CL 212	Chemical Engineering Lab-I	6.0
<b>Total Credits</b>			<b>30.0</b>
		Honors Elective-I	6.0
		Minors Elective-I	6.0

SEMESTER 5			
Sr. No.	Course No.	Course Name	Credits
1	CL 301	Chemical Reaction Engineering	8.0
2	CL 303	Mass Transfer Operations - I	6.0
3	HS 104/HS 305	Sociology/Psychology	6.0
4	CL 307	Molecular Cell Biology	6.0
5	CL 311	Chemical Engineering Lab-II	6.0
<b>Total Credits</b>			<b>32.0</b>
		Honors Elective-II	6.0
		Minors Elective-II	6.0

SEMESTER 6			
Sr. No.	Course No.	Course Name	Credits
1	CL 308	Process Equipment Design and Economics	6.0
2	CL 304	Chemical Processes	6.0
3	CL 302	Process Control	8.0
4	CL 306	Mass Transfer Operations - II	6.0
5	CL 312	Chemical Engineering Lab-III	6.0
<b>Total Credits</b>			<b>32.0</b>
		Honors Elective-III	6.0
		Minors Elective-III	6.0

SEMESTER 7			
Sr. No.	Course No.	Course Name	Credits
1	CL 601	Advanced Transport Phenomena	6.0
2	IN XXX	Institute Elective	6.0
3	ES 401	Earth, Environment, and Energy	6.0
4	CL 411	Chemical Engineering Lab-IV	6.0
5	CL 451	B. Tech Project-I	6.0
<b>Total Credits</b>			<b>30.0</b>
		Honors Elective IV	6.0
		Minors Elective-IV	6.0

SEMESTER 8			
Sr. No.	Course No.	Course Name	Credits
1	CL 402	Chemical Process Design	6.0
2	CL 404	Biochemical Engineering	6.0
3	CL XXX	Departmental Elective	6.0
4	CL 412	Design Lab	4.0
5	CL 452	B. Tech Project-II	6.0
<b>Total Credits</b>			<b>28.0</b>
		Honors Elective-V	6.0
		Minors Elective-V	6.0

<b>Total Core Credits Requirement</b>	<b>272</b>
Institute Elective credits requirement	6
Department Elective credits requirement	6
HSS Core credits requirement	18