

**University of Mumbai**  
**Program Structure for B.E. Chemical Engineering (Revised 2016)**  
**T.E. Semester V (w.e.f 2018-2019)**

Course code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			Total
		Theory	Practical	Tutorial	Theory	Practical	Tutorial	
CHC501	Computer programming and Numerical Methods	4	-	-	4	-	-	4
CHC502	Mass transfer Operations-I (MTO- I)	4	-	-	4	-	-	4
CHC503	Heat transfer Operations (HTO)	4	-	-	4	-	-	4
CHC504	Chemical Reaction Engineering-I (CRE I)	4	-	-	4	-	-	4
CHC505	Business Communication & Ethics	2	-	2	-	-	2	2
CHDE501X	Department Elective I	4	-	-	4	-	-	4
CHL501	Computer programming and Numerical Methods lab	-	2	-	-	1	-	1
CHL502	Chemical Engineering Lab IV (MTO-I)	-	3	-	-	1.5	-	1.5
CHL503	Chemical Engineering Lab V (HTO)	-	3	-	-	1.5	-	1.5
CHL504	Chemical Engineering Lab VI (CRE-I)	-	2	-	-	1	-	1
<b>Total</b>		<b>20</b>	<b>14</b>	<b>-</b>	<b>20</b>	<b>5</b>	<b>2</b>	<b>27</b>

Course code	Course Name	Examination Scheme								
		Theory					Term Work	Pract /Oral	Oral	Total
		Internal Assessment			End Sem Exam	Exam Duration (in hrs)				
		Test 1	Test 2	Avg						
CHC501	Computer programming and Numerical Methods	20	20	20	80	3	-	-	-	100
CHC502	Mass transfer Operations-I (MTO- I)	20	20	20	80	3	-	-	-	100
CHC503	Heat transfer Operations (HTO)	20	20	20	80	3	-	-	-	100
CHC504	Chemical Reaction Engineering-I (CRE I)	20	20	20	80	3	-	-	-	100
CHC505	Business Communication & Ethics	-	-	-	-	-	50	-	-	50
CHDE501X	Department Elective I	20	20	20	80	3	-	-	-	100
CHL501	Computer programming and Numerical Methods Lab	-	-	-	-	2	25	25	-	50
CHL502	Chemical Engineering Lab IV (MTO-I)	-	-	-	-	3	25	25	-	50
CHL503	Chemical Engineering Lab V (HTO)	-	-	-	-	3	25	25	-	50
CHL504	Chemical Engineering Lab VI (CRE-I)	-	-	-	-	2	25	25	-	50
<b>Total</b>				<b>100</b>	<b>400</b>	<b>-</b>	<b>150</b>	<b>100</b>	<b>-</b>	<b>750</b>

Department Elective I (Sem V)		
Engineering Stream (Elective Code)	Advanced Sciences Stream (Elective code)	Technology Stream (Elective Code)
1. Piping Engineering (CHDE5011) 2. Instrumentation (CHDE5014)	1. Colloids and Interfaces (CHDE5012)	1. Advanced Material Sciences (CHDE5013)

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**T.E. Semester VI (w.e.f 2018-2019)**

Course code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			Total
		Theory	Practical	Tutorial	Theory	Practical	Tutorial	
CHC601	Environmental Engineering (EE)	4	-	-	4	-	-	4
CHC602	Mass transfer Operations –II (MTO-II)	4	-	-	4	-	-	4
CHC603	Transport Phenomenon	3	-	1	3	-	1	4
CHC604	Chemical Reaction Engineering –II (CRE- II)	4	-	-	4	-	-	4
CHC605	Plant Engineering & Industrial Safety	3	-	1	3	-	1	4
CHDE602X	Department Elective II	4	-	-	4	-	-	4
CHL601	Chemical Engineering Lab VII (EE)	-	3	-	-	1.5	-	1.5
CHL602	Chemical Engineering Lab VIII (MTO-II)	-	3	-	-	1.5	-	1.5
CHL603	Chemical Engineering Lab IX (CRE-II)	-	2	-	-	1	-	1
<b>Total</b>		<b>22</b>	<b>8</b>	<b>2</b>	<b>22</b>	<b>4</b>	<b>2</b>	<b>28</b>

Course code	Course Name	Examination Scheme								
		Theory					Term Work	Pract /Oral	Oral	Total
		Internal Assessment			End Sem Exam	Exam Duration (in hrs)				
		Test 1	Test 2	Avg						
CHC601	Environmental Engineering (EE)	20	20	20	80	3	-	-	-	100
CHC602	Mass transfer Operations –II (MTO-II)	20	20	20	80	3	-	-	-	100
CHC603	Transport Phenomenon	20	20	20	80	3	25	-	-	125
CHC604	Chemical Reaction Engineering –II (CRE- II)	20	20	20	80	3	-	-	-	100
CHC605	Plant Engineering & Industrial Safety	20	20	20	80	3	25	-	-	125
CHDE602X	Department Elective II	20	20	20	80	3	-	-	-	100
CHL601	Chemical Engineering Lab VII (EE)	-	-	-	-	3	25	25	-	50
CHL602	Chemical Engineering Lab VIII (MTO-II)	-	-	-	-	3	25	25	-	50
CHL603	Chemical Engineering Lab IX (CRE-II)	-	-	-	-	2	25	25	-	50
<b>Total</b>				<b>120</b>	<b>480</b>	<b>-</b>	<b>125</b>	<b>75</b>	<b>--</b>	<b>800</b>

Department Elective II (Sem VI)		
Engineering Stream (Elective Code)	Management Stream (Elective Code)	Technology Stream (Elective Code)
1. Computational Fluid Dynamics (CHDE6021)	1. Operation Research (CHDE6022)	1. Biotechnology (CHDE6023)