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**MIT**

Academy of  
Engineering

(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

**MIT ACADEMY OF ENGINEERING, ALANDI**

**Curriculum for  
Bachelor of Technology in  
Chemical Engineering**

(Choice Based Credit System)

**NEP REVISION 2023 (2.0)**

(Four Year Curriculum W.E.F, AY: 2023-2024)

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**MIT****Academy of  
Engineering**

(An Autonomous Institute Affiliated to Savitribai Phule Pune University)


**COURSE STRUCTURE  
(NEP REVISION 2023)**

<b>SCHOOL OF CHEMICAL ENGINEERING</b>	<b>W. E. F.</b>	<b>:</b>	<b>2023-2024</b>
<b>FIRST YEAR BACHELOR OF TECHNOLOGY (CHEMICAL ENGINEERING)</b>	<b>RELEASE DATE</b>	<b>:</b>	<b>01/08/2023</b>
	<b>REVISION NO.</b>	<b>:</b>	<b>2.0 (NEP)</b>

**SEMESTER: I (CHEMICAL)****Universal Human Values (Induction Program)**


COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS					C R E D I T	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT/TUT			T O T A L
			L	P	T	IA	MSE	ESE	CA	D/ P		
BSC	2301101T	Calculus and Differential Equations	3	-	1	30	20	50	20	30	150	4
BSC	2301102T	Engineering Physics	2	-	-	15	20	40	-	-	75	2
	2301102L	Engineering Physics Lab	-	2	-	-	-	-	20	30	50	1
ESC	2307101T	Electrical and Electronics Engineering	2	-	-	15	20	40	-	-	75	2
	2307101L	Electrical and Electronics Engineering Lab	-	2	-	-	-	-	20	30	50	1
ESC	2304101T	Foundations of Computing	2	-	-	15	20	40	-	-	75	2
	2304101L	Foundations of Computing Lab	-	2	-	-	-	-	20	30	50	1
VSEC	2305161L	Computer-Aided Engineering Drawing	-	4	-	-	-	-	35	40	75	2
HSSM AEC	2301171/ 2/3/4L	Communication Skills (English/ German/Japanese/ French)	-	4	-	-	-	-	35	40	75	2
CC	2301182	Liberal Learning	-	2	-	-	-	-	-	50	50	1
HSSM IKS	2305181T	Indian Knowledge System (Indian Heritage Textiles)	2	-	-	25	-	50	-	-	75	2
<b>TOTAL</b>			<b>11</b>	<b>16</b>	<b>1</b>						<b>800</b>	<b>20</b>

SEMESTER: II (CHEMICAL)													
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS						C R E D I T	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT		T O T A L		
			L	P	T	IA	MSE	ESE	CA	D/P			
BSC	2301103	Statistics and Integral Calculus	3	-	1	30	20	50	20	30	150	4	
BSC	2301104T	Science of Nature	3	-	-	30	20	50	-	-	100	3	
	2301104L	Science of Nature Lab	-	2	-	-	-	-	20	30	50	1	
ESC	2304102T	Essentials of Data Science	2	-	-	15	20	40	-	-	75	2	
	2304102L	Essentials of Data Science Lab	-	2	-	-	-	-	20	30	50	1	
ESC	2303101T	Applied Mechanics	2	-	-	15	20	40	-	-	75	2	
	2303101L	Applied Mechanics Lab	-	2	-	-	-	-	20	30	50	1	
ESC	2309101	Design Thinking	1	2	-	15	-	20	20	20	75	2	
VSEC	2305162L	Computer Aided Chemical Engineering	1	2	-	15	-	20	20	20	75	2	
PCC	2305111T	Chemical Process Calculations	2	-	-	15	20	40	-	-	75	2	
CC	2307183L	Creative Technologies	-	4	-	-	-	-	35	40	75	2	
<b>TOTAL</b>			<b>14</b>	<b>14</b>	<b>1</b>						<b>850</b>	<b>22</b>	


 <b>Academy of Engineering</b> <small>(An Autonomous Institute Affiliated to Savitribai Phule Pune University)</small>		<b>COURSE STRUCTURE (NEP REVISION 2023)</b>		
<b>SCHOOL OF CHEMICAL ENGINEERING</b>		<b>W. E. F</b>	<b>:</b>	<b>2024-2025</b>
<b>SECOND YEAR BACHELOR OF TECHNOLOGY (CHEMICAL ENGINEERING)</b>		<b>RELEASE DATE</b>	<b>:</b>	<b>01/07/2024</b>
		<b>REVISION NO.</b>	<b>:</b>	<b>2.0</b>

SEMESTER: III (CHEMICAL)												
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS						C R E D I T
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT		T O T A L	
			TH	P	TU	IA	MSE	ESE	CA	D/P		
PCC	2305211T	Fluid flow Operation	3	-	-	30	20	50	-	-	100	3
	2305211L	Fluid flow Operation Lab	-	2	-	-	-	-	20	30	50	1
PCC	2305212T	Applied Chemistry	3	-	-	30	20	50	-	-	100	3
	2305212L	Applied Chemistry Lab	-	2	-	-	-	-	20	30	50	1
PCC	2305213T	Chemical Engineering Thermodynamics	2	-	-	15	20	40	-	-	75	2
VSEC	2305264L	Computer Application for Chemical Engineers	-	4	-	-	-	-	35	40	75	2
HSSM VEC	2301287	Universal Human Values-II	1	4	-	-	-	25	-	75	100	3
HSSM VEC	2301286	Environmental Science	2	-	-	35	-	40	-	-	75	2
OE	2305256T	Applied Numerical Methods	3	-	-	30	20	50	-	-	100	3
	2305256L	Applied Numerical Methods Lab	-	2	-	-	-	-	20	30	50	1
ELC PRJ	2305291	Project Design	-	2	-	-	-	-	20	30	50	1
<b>TOTAL</b>			<b>14</b>	<b>16</b>							<b>800</b>	<b>22</b>

SEMESTER: IV (CHEMICAL)												
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS						C R E D I T
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT		T O T A L	
			TH	P	TU	IA	MSE	ESE	CA	D/P		
PCC	2305214T	Heat Transfer	3	-	-	30	20	50	-	-	100	3
	2305214L	Heat Transfer Lab	-	2	-	-	-	-	20	30	50	1
PCC	2305215T	Solid-Fluid Operation	3	-	-	30	20	50	-	-	100	3
	2305215L	Solid-Fluid Operation Lab	-	2	-	-	-	-	20	30	50	1
PCC	2305216T	Chemical Process Synthesis	2	-	-	15	20	40	-	-	75	2
VSEC	2305265L	Data Analytics in Chemical Engineering	-	4	-	-	-	-	35	40	75	2
MDM	*MDM List	Sustainability Informatics	2	-	-	15	20	40	-	-	75	2
	*MDM List	Sustainability Informatics Lab	-	2	-	-	-	-	20	30	50	1
OE	2311251	Prototyping	-	4	-	-	-	-	35	40	75	2
	2305252	Financial Planning and Management	2	-	-	35	-	40	-	-		
HSSM MEC	2301276	Entrepreneurship Skills	2	-	-	35	-	40	-	-	75	2
ELC PRJ	2305292	Project Implementation	-	2	-	-	-	-	20	30	50	1
ELC SI	2305296	Internship (Life And Soft Skills)	-	-	-	-	-	-	-	75	75	2
Audit	2301281	Indian Constitution	1	-	-	-	-	-	-	-	Audit	
<b>TOTAL</b>			<b>15</b>	<b>16</b>	<b>-</b>						<b>875</b>	<b>22</b>

 <b>MIT</b>   Academy of Engineering <small>(An Autonomous Institute Affiliated to Savitribai Phule Pune University)</small>	<b>COURSE STRUCTURE (NEP Revision 2023)</b>			
	<b>SCHOOL OF CHEMICAL ENGINEERING</b>	<b>W. E. F</b>	<b>:</b>	<b>2025-2026</b>
<b>THIRD YEAR BACHELOR OF TECHNOLOGY (CHEMICAL ENGINEERING)</b>	<b>RELEASE DATE</b>	<b>:</b>	<b>01/07/2025</b>	
	<b>REVISION NO.</b>	<b>:</b>	<b>2.0</b>	

<b>SEMESTER: V (CHEMICAL)</b>													
COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS						<b>C R E D I T</b>	
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT		TOTAL		
			L	P	T	IA	MSE	ESE	CA	D/P			
MDM	* MDM List	Environmental Engineering	2	-	-	15	20	40	-	-	75	2	
	* MDM List	Environmental Engineering Lab	-	2	-	-	-	-	20	30	50	1	
PCC	2305311T	Mass Transfer	3	-	-	30	20	50	-	-	100	3	
	2305311L	Mass Transfer Lab	-	2	-	-	-	-	20	30	50	1	
	2305312T	Chemical Reaction Engineering	3	-	-	30	20	50	-	-	100	3	
	2305312L	Chemical Reaction Engineering Lab	-	2	-	-	-	-	20	30	50	1	
PEC	2305321T/ 2305322T	Program Elective Courses-I (Process Engineering / Energy Engineering )	3	-	-	30	20	50	-	-	100	3	
	2305321L/ 2305322L	Program Elective Courses-I Lab (Process Engineering Lab/ Energy Engineering Lab)	-	2	-	-	-	-	20	30	50	1	
VSEC	2305361L	Practical Skill for Chemical Engineers-I	-	4	-	-	-	-	35	40	75	2	
ELC PRJ	2305391	Project - I	-	4	-	-	-	-	35	40	75	2	
ELC SI	2305396	Internship (Technical)	-	-	-	-	-	-	-	75	75	2	
<b>TOTAL</b>			<b>11</b>	<b>16</b>	<b>-</b>						<b>800</b>	<b>21</b>	

 <b>MIT</b>   Academy of Engineering <small>(An Autonomous Institute Affiliated to Savitribai Phule Pune University)</small>	<b>COURSE STRUCTURE (NEP Revision 2023)</b>		
<b>SCHOOL OF CHEMICAL ENGINEERING</b>	<b>W. E. F</b>	<b>:</b>	<b>2025-2026</b>
<b>THIRD YEAR BACHELOR OF TECHNOLOGY (CHEMICAL ENGINEERING)</b>	<b>RELEASE DATE</b>	<b>:</b>	<b>01/07/2025</b>
	<b>REVISION NO.</b>	<b>:</b>	<b>2.0</b>

<b>SEMESTER: VI (CHEMICAL)</b>													
<b>COURSE</b>			<b>TEACHING SCHEME</b>			<b>EXAMINATION SCHEME AND MARKS</b>						<b>C R E D I T</b>	
<b>TYPE</b>	<b>CODE</b>	<b>NAME</b>	<b>Hour/Week</b>			<b>THEORY</b>			<b>PRACT</b>		<b>T O T A L</b>		
			L	P	T	IA	MSE	ESE	CA	D/ P			
MDM	* MDM List	Sustainable Engineering & Life Cycle Assessment	2	-	-	15	20	40	-	-	75	2	
	* MDM List	Sustainable Engineering & Life Cycle Assessment Lab	-	2	-	-	-	-	20	30	50	1	
PCC	2305313T	Separation Process	3	-	-	30	20	50	-	-	100	3	
	2305313L	Separation Process Lab	-	2	-	-	-	-	20	30	50	1	
	2305314T	Process Dynamics & Control	3	-	-	30	20	50	-	-	100	3	
	2305314L	Process Dynamics & Control Lab	-	2	-	-	-	-	20	30	50	1	
PEC	2305323T/ 2305324T	Program Elective Course –II (Process Modeling & Simulation / Energy Modeling & Simulation)	3	-	-	30	20	50	-	-	100	3	
	2305323L/ 2305324L	Program Elective Course-II Lab (Process Modeling & Simulation Lab / Energy Modeling & Simulation Lab)	-	2	-	-	-	-	20	30	50	1	
VSEC	2305363L	Skill Lab (ASPEN HYSYS / EDR)	-	4	-	-	-	-	35	40	75	2	
HSSM AEC	2305371	Employability and Career Development	-	4	-	-	-	-	35	40	75	2	
ELC PRJ	2305392	Project - II	-	4	-	-	-	-	35	40	75	2	
<b>TOTAL</b>			<b>12</b>	<b>20</b>	<b>-</b>						<b>800</b>	<b>21</b>	

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**COURSE STRUCTURE  
(NEP REVISION 2023)****SCHOOL OF CHEMICAL ENGINEERING****W. E. F****:****2026-2027****FINAL YEAR BACHELOR OF TECHNOLOGY****RELEASE DATE****:****01/07/2026****REVISION NO.****:****2.0****SEMESTER: VII**

COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS						C R E D I T
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT		T O T A L	
			L	P	T	IA	MSE	ESE	CA	D/P		
MDM	2305431T	Green Technology	2	-	-	15	20	40	-	-	75	2
PCC	230541XT	Chemical Equipment Design	3	-	-	30	20	50	-	-	100	3
	230541XL	Chemical Equipment Design Lab	-	2	-	-	-	-	20	30	50	1
PEC	2305421T	Program Elective Course-III (Process Intensification & Integration / Energy Management & Audit)	3	-	-	30	20	50	-	-	100	3
	2305421L	Program Elective Course-III (Process Intensification & Integration Lab / Energy Management & Audit Lab)	-	2	-	-	-	-	20	30	50	1
HSSM MEC	2305476	Project Management /Engineering Economics	-	4	-	-	-	-	35	40	75	2
ELC PRJ	2305491	Project - III	-	4	-	-	-	-	35	40	75	2
ELC PRJ	2305492	Research Methodology	2	-	-	15	20	40	-	-	75	2
ELC SI	2305496	Summer Internship (Technical)	-	-	-	-	-	-	-	150	150	4
<b>TOTAL</b>			<b>10</b>	<b>12</b>	<b>-</b>						<b>750</b>	<b>20</b>

**SEMESTER: VIII**

COURSE			TEACHING SCHEME			EXAMINATION SCHEME AND MARKS						C R E D I T
TYPE	CODE	NAME	Hour/Week			THEORY			PRACT		T O T A L	
			L	P	T	IA	MSE	ESE	CA	D/P		
PCC	2305411T	Plant Design & Piping	3	-	-	30	20	50	-	-	100	3
	2305411L	Plant Design & Piping Lab	-	2	-	-	-	-	20	30	50	1
PEC	230542XT SWAYAM	Program Elective Course-V (Petro-refining Engineering / Biochemical Engineering / Environmental Engineering /SWAYAM / MOOC Course)	3	-	-	30	20	50	-	-	100	3
MDM	*MDM Annexure List	SWAYAM/MOOC Course	2	-	-	15	20	40	-	-	75	2
	*MDM Annexure List	Green Technology Lab	-	2	-	-	-	-	20	30	50	1
OE	2305451	Professional Certification Course	-	-	-	-	-	-	-	-	-	2
ELC SI	2305497	Semester Long Internship	-	-	-	-	-	-	-	-	300	8
<b>TOTAL</b>			<b>9</b>	<b>6</b>							<b>675</b>	<b>20</b>

