

COEP Technological University Pune
(A Unitary Public University of Govt. of Maharashtra)

School of Mechanical and Materials Engineering

Curriculum Structure
F.Y. B.Tech.

Department of Metallurgy and Materials Engineering

(Effective from: A.Y. 2023-24)

List of Abbreviations

Abbreviation	Title
AEC	Ability Enhancement Course
BS	Basic Science Course
ESC	Engineering Science Course
PCC	Programme Core Course
PEC	Programme Elective Course
OE/SE	Open/School Elective other than particular program
MDM	Multidisciplinary Minor
VSEC	Vocational and Skill Enhancement Course
HSMC	Humanities Social Science and Management
IKS	Indian Knowledge System
VEC	Value Education Course
RM	Research Methodology
INTR	Internship
PBL	Project
CEA	Community Engagement Activity/Field Project
CCA	Co-curricular & Extracurricular Activities

F. Y. B. Tech. Metallurgy and Materials Technology

[Level 4.5 UG Certificate] Semester -I

Sr. No.	Course Type	Course Code	Course Name	L	T	P	S	Cr	Evaluation Scheme (Weightages in %)				
									Theory			Laboratory	
									MSE	TA	ESE	ISE	ESE
01	BSC	<td>	Matrix Algebra, Univariate Calculus and Probability	2	1	0	1	3	30	10	60	--	--
02	BSC	<td>	Engineering Physics	2	0	2	1	3	30	20	50	CIE: 100	
03	ESC	<td>	Basics of Electrical and Electronics Engineering	2	0	2	1	3	30	20	50	CIE: 100	
04	ESC	<td>	Engineering Drawing and Graphics	1	0	4	1	3	CIE: 100			CIE: 100	
05	ESC	<td>	Engineering Mechanics	3	0	2	1	4	30	10	60	CIE: 100	
06	VSEC-I	<td>	Manufacturing Practices/FAB Lab-I	0	0	2	1	1	--	--	--	CIE: 100	
07	AEC-I	<td>	Communication Skills	1	0	2	0	2	CIE: 100			CIE: 100	
08	CCA	<td>	Liberal Learning Course	0	0	2	0	1	--	--	--	CIE: 100	
Total				11	01	16	06	20					

[Level 4.5 UG Certificate] Semester -II

Sr. No.	Course Type	Course Code	Course Name	L	T	P	S	Cr	Evaluation Scheme (Weightages in %)				
									Theory			Laboratory	
									MSE	TA	ESE	ISE	ESE
01	BSC	<td>	Engineering Chemistry	2	0	2 [#]	1	3	30	20	50	CIE: 100	
02	BSC	<td>	Ordinary Differential Equations and Multivariate Calculus	2	1	0	1	3	30	10	60	--	--
03	BSC	<td>	Biology for Engineers	2	0	0	1	2	30	20	50	--	--
04	ESC	<td>	Systems in Mechanical Engineering	2	0	2	1	3	30	20	50	CIE: 100	
05	ESC	<td>	Programming for Problem Solving	1	0	2	2	2	CIE: 100			CIE: 100	
06	ESC	<td>	Design Thinking and Idea Lab	0	0	2	1	1	--	--	--	CIE: 100	
07	PCC	<td>	Materials Science	2	0	0	1	2	30	20	50	--	--
08	VSEC-II	<td>	Manufacturing Practices/FAB Lab-II	0	0	2	1	1	--	--	--	CIE: 100	
09	IKS	<td>	Indian Knowledge System	2	0	0	0	2	30	20	50	--	--
10	CCA	<td>	Co-curricular and Extracurricular Activity (Office Automation)	0	0	2	0	1	--	--	--	CIE: 100	
Total				13	01	12	09	20					

Legends: L-Lecture, T-Tutorial, P-Practical, S-Self Study, Cr-Credits
 ISE-In-Semester-Evaluation, ESE-End-Semester-Evaluation, MSE-Mid-Semester-Evaluation, TA-Teachers' Assessment, CIE-Continuous-Internal-Evaluation

#Combined practical of Engineering Chemistry (Dept. Applied Science) and Materials Science (Dept. Metallurgy and Materials Engineering).

Exit option to qualify for Certification in Metallography and Materials Testing:

Sr. No.	Course Type	Course Code	Course Name	L	T	P	S	Cr	Evaluation Scheme (Weightages in %)				
									Theory			Laboratory	
									MSE	TA	ESE	ISE	ESE
01	Exit Course	<td>	Materials Testing Laboratory (Hardness/Tensile/Impact)	0	0	6	1	3	--	--	--	CIE: 100	
02	Exit Course	<td>	Metallographic Techniques (Cutting/Polishing/Etching/Optical Microscopy)	0	0	6	1	3	--	--	--	CIE: 100	
Total				00	00	12	02	06					