

विद्यामर्थं च साधयेत् ।

FOUNDER -

Shreemant Malojirao Naik Nimbalkar
Rajesahab Phaltan.



PHALTAN EDUCATION SOCIETY

COLLEGE OF ENGINEERING

(Approved by AICTE New Delhi, D.T.E. Mumbai and D-BATU Lonere/MSBTE Mumbai)

Shreemant Shivajiraje Nagar, Kurawali Road, Thakurki, Tal.Phaltan, Dist.Satara Pin 415 523

E-mail : coeprincipal@yahoo.in | Website : www.coephaltan.edu.in

Accredited with NAAC 'A' Grade

Hon. Shreemant Sanjivraje Naik Nimbalkar
Secretary, P. E. S.

Prof.Dr. M. V. Dalvi
Principal

CERTIFICATE

Phaltan Education Society's College of Engineering, Phaltan Deccan Group of Institutions, Hyderabad (PID No: 1-46221441411) has followed mechanism for social and emotional learning - A crucial component of education" as per guidelines of DBATU, Lonere, MSBTE Mumbai and as per AICTE which emphasizes social and emotional learning as a crucial component of Education in line with NEP 2020 has introduced **Universal Human Values, Life of Shri Chatrapati Shivaji Maharaj, Life of Bharat Ratna Dr. Babasaheb Ambedkar, Constitution of India, Basic Human Rights, Community Engagement Project, Social and Life Skills** as a mandatory portion in the model curriculum. The core strength to build a technically strong ecosystem in the country lies in the hands of our institutions and future generations, who have a bigger role to play in the nation-building and development of the country.

Preamble: Future of Technical Education in India: It has been and shall always be the endeavour of AICTE to bring the best educational system for its students, taking cognisance of NEP that calls for social and emotional learning, which is a crucial component of education. All the activities of AICTE are focused towards the changes as proposed in the NEP 2020 since the last four years by means of various initiatives such as preparation of 'Short & Medium Term' Perspective Plans for Engineering Education in India, which focuses on the demand for courses on in emerging technological areas. AICTE is receptive to the technological changes happening across the global scenario and believes in framing new policies & initiatives and augmenting the existing ones by scheduling workshops, conferences, etc., providing a platform for discussion and inputs from stakeholders.

Reference: AICTE – Approval Process Handbook – 2024-25 to 2026-27

<https://aicte-india.org/sites/default/files/approval/APH%20Final.pdf>

MHRD, Govt. of India

https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf



Dr. Babasaheb Ambedkar Technological University, Lonere

Dr. Babasaheb Ambedkar Technological University
(Established as a University of Technology in the State of Maharashtra)
(Under Maharashtra Act No. XXIX of 2014)
P.O. Lonere, Dist. Raigad, Pin 402 103, Maharashtra
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Course Structure and Detailed Syllabus
of

B. Tech Programme

for

Electronics and Telecommunication Engineering
for

Second Year Engineering

In line with National Education Policy 2020

(Effective from Academic year 2025-26

for Affiliated Institutes only)

SECOND YEAR

	Course Code	Course Title	L	T	P	Examination Scheme			Cr	Categorization
						C A	M S E	E S E		
SEM III	25AF1000BS301	Engineering Mathematics-III	3	0	0	20	20	60	3	BSC
	25AF1372PC302	Electronic Devices & Circuits	3	0	0	20	20	60	3	PCC
	25AF1372PC303	Digital Electronics	3	0	0	20	20	60	3	PCC
	25AF1372PC304L	Electronic Devices & Circuits Lab	0	0	2	60		40	1	PCC Lab
	25AF1XXXOEM05	Open Elective Bucket**	2	0	0	20	20	60	2	OE
	25AF1372MD306	MDM Bucket*	2	0	0	20	20	60	2	MD Minor
	25AF1000HM307A/ 25AF1000HM307B	A. Employability and Skill Development B. Innovation and Entrepreneurship	2	0	0	20	20	60	2	Entrepreneurship
	25AF1000VE308A	Life of Chhatrapati Shivaji Maharaj	1	0	0	50			1	VEC
	25AF1372PC309L	Digital Electronics Lab	0	0	2	60		40	1	PCC Lab
	25AF1UHVVE310	Universal Human Values II	3	0	0	20	20	60	3	VEC
	25AF1372CP311	Community Engagement Project (CEP)	0	0	4	60		40	2	CEP/FP
			19	0	8				23	
			Total							

NOTE: * Refer to Multidisciplinary Minor Bucket of other departments

**** Refer to Open Elective Bucket available on University Website**

**B. Tech. (Artificial Intelligence and Data Science / Artificial Intelligence and Machine Learning and Allied) Syllabus
Aligned with the New Education Policy 2020
Effective from 2025 - 2026
(All Years)**

(Affiliated Colleges)



Note: Refer to this syllabus for the Second year in Artificial Intelligence and Data Science, Artificial Intelligence and Machine Learning, Computer Engineering and Data Science, Data Science with Program Codes (11263, 11911, 11912, 11913, 11917, 11921, 11925, 11995)

Department of Computer Engineering

Dr. Babasaheb Ambedkar Technological University, Lonere - 402103

www.cse.dbatu.ac.in

B.Tech in Artificial Intelligence and Allied
Course Curriculum Aligned with New Education Policy 2020
(Effective from Academic Year 2025 - 2026)
Third Semester

Course Category	Course Code	Course Name	Weekly Hours		Examination Scheme		Credit		
			L	P	CA	M S E			
BSC	25AF1000BS301	Engineering Mathematics-III	3	-	20	20	60	3	
PCC1	25AF1245PC302	Data Structures	3	-	20	20	60	3	
PCC2	25AF1245PC303	Discrete Mathematics	3	-	20	20	60	3	
PCC3	25AFAIPC304	Artificial Intelligence	2	-	20	20	60	2	
OE-I	25AF1XXXOEM305X	Any Course from the Open Elective Bucket	2	-	20	20	60	2	
MDM	25AFAIMD306	Multi-Disciplinary Minor Course* (For Examination Refer MDM Bucket)	-	-	20	20	60	-	
PCC4	25AFAIPC307	Prompt Engineering	2	-	20	20	60	2	
VEC	25AF1000VE308A	Life of Chhatrapati Shivaji Maharaj	1	-	50	-	-	1	
PCC Lab	25AFAIPCL309	Data Structures Laboratory with Python	1	4	60	-	40	3	
VEC	25AF1000VE310	Universal Human Values-II	3	-	20	20	60	3	
VEC	25AFAIPCL311	Artificial Intelligence Laboratory	-	2	60	-	40	1	
			Total	20	6	330	160	560	23

Course Type and Acronyms used

Basic Science Course (BSC)

L - Lecture,

Engineering Science Course (ESC)

P / PR - Practical,

Program Core Course (PCC)

CA - Continuous Assessment,

Vocational Skill Enhancement Course (VSEC)

TH - Theory,

Co-curricular Course (CC)

MSE - Mid Semester Examination,

Ability Enhancement Course (AEC)

ESE - End Semester Examination,

Indian Knowledge System (IKS)

CR - Credit

Course Curriculum
Second Year
B. Tech. in Civil Engineering
In line with National Education Policy 2020
(Effective from AY 2025-26 for Affiliated Institutes)



Dr. Babasaheb Ambedkar Technological University
Lonere 402 103, Dist- Raigad, Maharashtra, INDIA

Established vide Maharashtra Act No. XXII of 1989 and Act. No. XXIX of 2014
"Vidyavihar", P.O. Lonere, Dist. Raigad, Pin 402 103, Maharashtra, India
Telephone and Fax.: 02140 - 275142

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Dr. Babasaheb Ambedkar Technological University, Lonere

Teaching & Evaluation Scheme for Second Year B. Tech. Civil Engineering

Sr. No.	Course Code	Course Title	Teaching Scheme			Evaluation Scheme				Credit
			L	T	P	ISE	MSE	ESE	Total	
Semester-III										
1	25AF1000BS301	Engineering Mathematics - III	3	0	0	20	20	60	100	3
2	25AF1191PC302	Mechanics of Solids	2	1	0	20	20	60	100	3
3	25AF1191PC303	Surveying	2	1	0	20	20	60	100	3
4	25AF1191PC304	Building Construction	3	0	0	20	20	60	100	3
5	25AFARPOE305	OPEN ELECTIVE-I								2
		A. Building Materials B. Design of Masonry Structures C. Energy Efficient Buildings	2	0	0	20	20	60	100	
6	25AF1191MD306	Multi-Disciplinary Minor-I	3	0	0	20	20	60	100	3
7	25AF1191VE307	Modern Indian Language								2
		A. Marathi B. Hindi C. Sanskrit	2	0	0	20	20	60	100	
8	25AF1191VE308	Constitution of India	2	0	0	-	-	-	AU	GR
9	25AF1000VE309	Life of Bharat Ratna Dr. Babasaheb Ambedkar	1	0	0	50	-	-	50	1
10	25AF1191PC310	Mechanics of Solid Lab	0	0	2	25	-	25	50	1
11	25AF1191PC311	Surveying Lab	0	0	2	25	-	25	50	1
TOTAL			20	2	4	240	140	470	850	22
Semester-IV										
1	25AF1191PC401	Structural Mechanics-I	2	1	0	20	20	60	100	3
2	25AF1191PC402	Concrete Technology	3	0	0	20	20	60	100	3
3	25AF1191PC403	Hydraulics Engineering	2	1	0	20	20	60	100	3
4	25AF1191PC404	Building Planning & Drawing	3	0	0	20	20	60	100	3
5	25AFARPOE405	OPEN ELECTIVE-II								3
		A. Advanced Surveying B. Modern Surveying	3	0	0	20	20	60	100	
6	25AF1191HM406	Universal Human Values-II	3	0	0	20	20	60	100	3
7	25AF1000VE407	Life of Chhatrapati Shivaji Maharaj	1	0	0	50	0	0	50	1
8	25AF1191PC408	Concrete Technology Lab	0	0	2	25	-	25	50	1
9	25AF1191PC409	Hydraulics Lab	0	0	2	25	-	25	50	1
10	25AF1191PC410	Building Planning & Drawing Lab	0	0	2	25	-	25	50	1
11	25AF1191HM411	Entrepreneurship Development Process	1	0	0	25	-	25	50	1
TOTAL			18	2	6	270	120	460	850	23
L-Lecture			T-Tutorial			P-Practical				
ISE-In Semester Evaluation			MSE-Mid Semester Evaluation			ESE-End Semester Evaluation				

B. Tech. (Computer Engineering / Computer Science and Engineering / Computer Technology and Allied) Syllabus
Aligned with the New Education Policy 2020
Effective from AY 2025 - 2026
(All Years)

(Affiliated Colleges)



Note: Refer this Syllabus for Second Year in Computer Engineering / Computer Science and Engineering / Computer Technology / Computer Science and Engineering (Cyber Security) with branch codes 11242, 11245, 11251, 11260

Department of Computer Engineering

Dr. Babasaheb Ambedkar Technological University, Lonere - 402103

www.cse.dbatu.ac.in

B.Tech in Computer Engineering and Allied Programs
Course Curriculum Aligned with New Education Policy 2020
(Effective from Academic Year 2025 - 2026)
Third Semester

Course Category	Course Code	Course Name	Weekly Hours		Examination Scheme			Credit	
			L	P	CA	M S E	E S E		
BSC	25AF1000BS301	Engineering Mathematics-III	3	-	20	20	60	3	
PCC1	25AF1245PC302	Data Structures	3	-	20	20	60	3	
PCC2	25AF1245PC303	Discrete Mathematics	3	-	20	20	60	3	
PCC3	25AF1245PC304	Object-Oriented Programming	2	-	20	20	60	2	
OE-I	25AF1XXXOEM305X	Any Course from OE Bucket	2	-	20	20	60	2	
MDM	25AF1245MD306	Multi-Disciplinary Minor* Bucket (For Examination Refer MDM Bucket)	-	-	20	20	60	-	
PCC4 ⁺	25AF1245PC307	Digital Electronics	2	-	20	20	60	2	
VSEC	25AF1000VE308A	Life of Chhatrapati Shivaji Maharaj	1	-	50	-	-	1	
PCC Lab	25AF1245PCL309	Data Structures Laboratory	-	2	60	-	40	1	
VSEC	25AF1000VE310	Universal Human Values - II	3	-	20	20	60	3	
PCC Lab	25AF1245PCL311	Object-Oriented Programming in Java Laboratory	-	2	60	-	40	1	
PCC Lab	25AF1245PCL312	Digital Electronics Laboratory	-	2	60	-	40	1	
			Total	19	06	390	160	600	22

Course Type and Acronyms used

1. Basic Science Course (BSC)
2. Engineering Science Course (ESC)
3. Program Core Course (PCC)
4. Vocational Skill Enhancement Course (VSEC)
5. Co-curricular Course (CC)
6. Ability Enhancement Course (AEC)
7. Indian Knowledge System (IKS)

L - Lecture,
P / PR - Practical,
CA - Continuous Assessment, TH - Theory,
MSE - Mid-Semester Examination,
ESE - End Semester Examination,
CR - Credit

*A student must select a course or courses from the minor degree program s/he wishes to pursue.
+ A student needs to select a course from the list of open elective courses attached to the Open Elective (OE) Bucket

Dr. Babasaheb Ambedkar Technological University, Lonere

(Established by Government of Maharashtra, vide Dr. Babasaheb Ambedkar Technological University Act. No XXIX of 2014)

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NEP 2020 BASED CURRICULUM

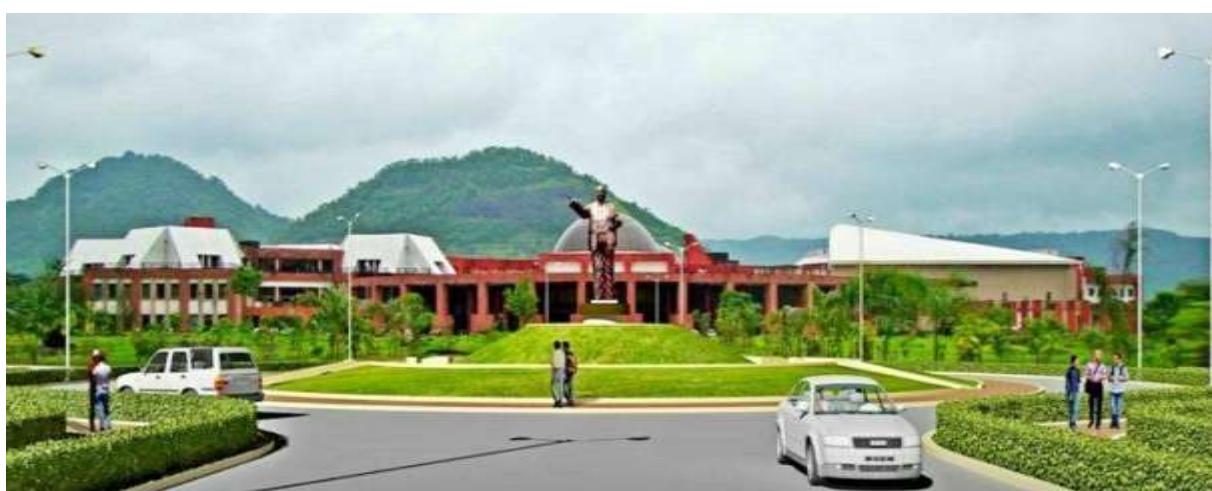
for

AFFILIATED COLLEGES

Second Year B. Tech. in

MECHANICAL ENGINEERING

ACADEMIC YEAR 2025-2026



Dr. Babasaheb Ambedkar Technological University Lonere
Department of Mechanical Engineering
Course Structure and Syllabus (as per NEP 2020)
Second Year B. Tech. in Mechanical Engineering
(for Affiliated Colleges)

Semester III (w.e.f. A.Y. 2025-26)

Category under NEP	Course Code	Course Title	Teaching Scheme			Evaluation Scheme				Credits
			L	T	P	CA	MSE	ESE	Total	
BSC	25AF1000BS301	Engineering Mathematics- III	3	-	-	20	20	60	100	3
PCC	25AF1612PC302	Material Science and Metallurgy	3	-	-	20	20	60	100	3
PCC	25AF1612PC303	Thermodynamics	2	1	-	20	20	60	100	3
PCC	25AF1612PC304	Machine Drawing and CAD	2	-	-	20	20	60	100	2
OE*	25AF1612OE305A	Renewable Energy Sources	3	-	-	20	20	60	100	3
	25AF1612OE305B	Introduction to Automation								
	25AF1612OE305C	Product Design Engineering								
MDM		MDM**	3	-	-	20	20	60	100	3
VEC	25AF1CIVE3407	Constitution of India (Audit)	2	-	-	50	-	-	50	AUDIT
IKS	25AF1DBAIK308	Life of Bharat Ratna Dr. Babasaheb Ambedkar	1	-	-	50	-	-	50	1
VSEC	25AF1612L309	Material Science and Metallurgy Lab	-	-	2	60	-	40	100	1
VSEC	25AF1612L310	Machine Drawing and CAD Lab	-	-	4	60	-	40	100	2
		Total	19	1	6	340	120	440	900	21

MDM to be offered to other departments: Basic Thermodynamics

OE*: The students can opt for the Open Elective from the Open Elective bucket declared for the particular semester.

MDM**: The students will have to choose the MDM course being offered by other disciplines available/offered at the college)

Maharashtra State Board Of Technical Education, Mumbai

Learning and Assessment Scheme for Post S.S.C Diploma Courses

Programme Name : Diploma In Civil Engineering / Civil & Rural Engineering / Construction Technology / Civil & Environmental Engineering

Programme Code : CE / CR / CS / LE **With Effect From Academic Year** : 2023-24

Duration Of Programme : 6 Semester **Duration** : 16 WEEKS

Semester : Second **NCrF Entry Level** : 3.0 **Scheme** : K

Sr No	Course Title	Abbreviation	Course Type	Course Code	Total IKS Hrs for Sem.	Learning Scheme			Self Learning (Activity/Assignment /Micro Project)	Notional Learning Hrs /Week	Credits	Paper Duration (hrs.)	Assessment Scheme								Based on Self Learning	Total Marks							
						Actual Contact Hrs./Week							Theory			Based on LL & TL		Practical											
						CL	TL	LL					FA-TH	SA-TH	Total	FA-PR	SA-PR	SLA											
						Max	Max	Max					Max	Min	Max	Min	Max	Min	Max	Min									

(All Compulsory)

1	APPLIED MATHEMATICS	AMS	AEC	312301	2	3	1	-	-	4	2	3	30	70	100	40	-	-	-	-	-	-	100	
2	APPLIED SCIENCE	ASC	DSC	312308	4	2	-	2	0	8	4	1.5	30	70*#	100	40	25	10	25@	10	-	-	200	
						2	-	2	0								25	10	25@	10	-	-		
3	ENGINEERING MECHANICS	EGM	DSC	312312	2	3	1	2	2	8	4	3	30	70	100	40	25	10	-	-	25	10	150	
4	BUILDING MATERIAL AND CONSTRUCTION	BMC	DSC	312338	1	3	-	2	3	8	4	3	30	70	100	40	25	10	-	-	25	10	150	
5	SURVEYING	SUY	SEC	312339	1	3	-	4	1	8	4	3	30	70	100	40	25	10	50#	20	25	10	200	
6	PROFESSIONAL COMMUNICATION	PCO	SEC	312002	-	-	-	2	-	2	1	-	-	-	-	-	25	10	25@	10	-	-	50	
7	SOCIAL AND LIFE SKILLS	SFS	VEC	312003	-	-	-	-	2	2	1	-	-	-	-	-	-	-	-	-	-	50	20	50
Total						10	16	2	14	8	20			150	350	500		150		125		125		900

Sr No	Course Title	Abbreviation	Course Type	Course Code	Total IKS Hrs for Sem.	Learning Scheme			Credits	Assessment Scheme									
						Actual Contact Hrs./Week				Self Learning (Activity/Assignment /Micro Project)	Notional Learning Hrs /Week	Paper Duration (hrs.)	Theory			Based on LL & TL		Based on Self Learning	Total Marks
						CL		TL	LL				FA-TH		SA-TH	Total	FA-PR	SA-PR	
						Max	Max	Max	Min				Max	Min	Max	Min	Max	Min	

Abbreviations : CL- Classroom Learning , TL- Tutorial Learning, LL-Laboratory Learning, FA - Formative Assessment, SA -Summative Assessment, IKS - Indian Knowledge System, SLA - Self Learning Assessment

Legends : @ Internal Assessment, # External Assessment, *# On Line Examination , @\\$ Internal Online Examination

Note :

1. FA-TH represents average of two class tests of 30 marks each conducted during the semester.

2. If candidate is not securing minimum passing marks in FA-PR of any course then the candidate shall be declared as "Detained" in that semester.

3. If candidate is not securing minimum passing marks in SLA of any course then the candidate shall be declared as fail and will have to repeat and resubmit SLA work.

4. Notional Learning hours for the semester are (CL+LL+TL+SL)hrs.* 15 Weeks

5. 1 credit is equivalent to 30 Notional hrs.

6. * Self learning hours shall not be reflected in the Time Table.

7. * Self learning includes micro project / assignment / other activities.

Course Category : Discipline Specific Course Core (DSC) , Discipline Specific Elective (DSE) , Value Education Course (VEC) , Intern./Apprenti./Project./Community (INP) , AbilityEnhancement Course (AEC) , Skill Enhancement Course (SEC) , GenericElective (GE)

♦ For the course Applied Science - candidate will have to appear for pre-examination of both physics & chemistry. If absent in any one section (physics / chemistry) student will be declared as absent & fail for the course and marks will not be processed or carried forward.