

Rayat Shikshan Sanstha's
**Karmaveer Bhaurao Patil,
College of Engineering, Satara.**

An Autonomous Institute & Affiliated to DBATU Lonere

Accredited by NAAC with "B++" Grade



Second Year to Final Year B. Tech
Electronics & Telecommunication
Engineering

Structure & Curriculum

(w.e.f. A.Y. 2026-27)

As Per NEP 2020

NCrF Level 6

Recommended in BOS (E&TC) Meeting Dated: 15th June 2026

&

Approved in Academic Council Meeting Dated: 20th July 2026


Dr. Y. K. Kanse
BOS Chairman (E & TC)


Dr. S. J. Modi
Member Secretary
Academic Council


Dr. A. C. Attar
Principal

Rayat Shikshan Sanstha's

**KARMAVEER BHAURAO PATIL COLLEGE OF ENGINEERING,
SATARA**

**An Autonomous Institute and Affiliated to Dr. Babasaheb Ambedkar
Technological University, Lonere**

Accredited by NAAC



Department Of Electronics and Telecommunication Engineering

STRUCTURE AND CURRICULUM

(w.e.f. Academic Year 2026 - 2027)

As per NEP 2020



Rayat Shikshan Sanstha's
Karmaveer Bhaurao Patil
College of Engineering, Satara
An Autonomous Institute

Accredited by NAAC with "B++" Grade

Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere – from 2017

Key Features of Curriculum

Multiple entry and exit option after every year.

1. Provision for Open Electives (OE), Vocational and Skill Enhancement Courses (VSE), Ability Enhancement Courses (AE), Indian Knowledge System (IKS), Value Education Courses (VE), Co-Curricular Courses (CC) in addition to program core courses.
2. Mandatory internship of one semester.
3. Credits for Value education courses, Ability Enhancement Courses, Co-Curricular Curricular activities.
4. Mandatory Non-Credit Courses.
5. Interdisciplinary and multidisciplinary education through single and double minors and open electives.
6. Skill based courses and multiple exit level.
7. Provision for learning in online mode through Swayam / NPTEL etc courses
8. Provision for B.Tech. Honours with Research degree through research project.
9. Opportunity for learner to choose courses of their interest in all disciplines.
10. Provision of Skill Based Courses and internship/Field project/mini projects for exit options at each level.
11. Flexibility for all types of learners

Degree	Total Credits
Four year Bachelor of Technology (B.E./B.Tech. or Equivalent) in Engineering/Technology with Multidisciplinary Minor	Proposed Total Credits: 172
AND	
Four Year Bachelor's Degree (B.E./B.Tech. or Equivalent) in Engineering/Technology – Honors and Multidisciplinary Minor	18–20 additional credits over and above the credit requirement of the regular B.Tech. Degree. Total 192-194 Credits
OR	
Four Year Bachelor's Degree (B.E./B.Tech. or Equivalent) in Engineering/Technology – Honors with Research and Multidisciplinary Minor	
OR	
Four Year Bachelor's Degree (B.E./B.Tech. or Equivalent) in Engineering/Technology – Major Engineering Discipline with Double Minors (Multidisciplinary Minor and Specialization Minor)	





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Credit Distribution for each year and Exit Option

NCrF Level	Year/ Sem	Exit Option	Minimum Credit Requirements	Maximum Credit Requirements	E & TC Credits	Additional Credits for exit students	Total Credits
4.5	I & II	U. G. Certificate	40	44	42	8	50
5	III & IV	U. G. Diploma	80	88	86	8	94
5.5	V & VI	B. Vocational / B.Sc.	120	132	130	8	138
6	VII & VIII	B. Tech. Major with Multidisciplinary Minor	160	176	172	-	172
6	VII & VIII	B.Tech. Honors and Multidisciplinary Minor	180	194	172	18	190
		B.Tech. Honors with Research and Multidisciplinary Minor	180	194	172	18	190
		B.Tech. with Double Minor (Multidisciplinary and Specialization Minor)	180	194	172	18	190





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Curriculum Framework

List of Abbreviations

Sr. No.	Abbreviation	Type of Course
1	BSC	Basic Science Course
2	ESC	Engineering Science Course
3	PCC	Programme Core Course
4	PEC	Programme Elective Course
5	MDM	Multidisciplinary Minor
6	OE	Open Elective
7	VSEC	Vocational and Skill Enhancement Course
8	AEC	Ability Enhancement Course
9	EEMC	Entrepreneurship/Economics/Management Course
10	IKS	Indian Knowledge System
11	VEC	Value Education Course
12	CC	Co-Curricular Courses
13	RM	Research Methodology
14	CEP/FP	Community Engineering. Project/Field Project
15	PR	Project
16	IT/OJT	Internship/On job training





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Semester-Wise Credit Distribution

Course Category	As per NEP GR	Credits	Course Category	As per NEP GR	Credits
BSC/ESC	30	30	BSC	14-18	16
			ESC	16-12	14
Program Courses	64-76	74	PCC	44-56	54
			PEC	20	20
Multidisciplinary Courses	22	22	MDM	14	14
			OE	8	8
Skill Courses	8	8	VSEC	8	8
Humanities, Social Science & Management (HSSM)	14	14	AEC	4	4
			EEMC	4	4
			IKS	2	2
			VEC	4	4
Experiential Courses	22	22	RM	4	4
			EL	2	2
			PR	4	4
			IN/OJT	12	12
Liberal Learning Courses	4	2	CC	4	2
Total Credits	160-176	172		160-176	172

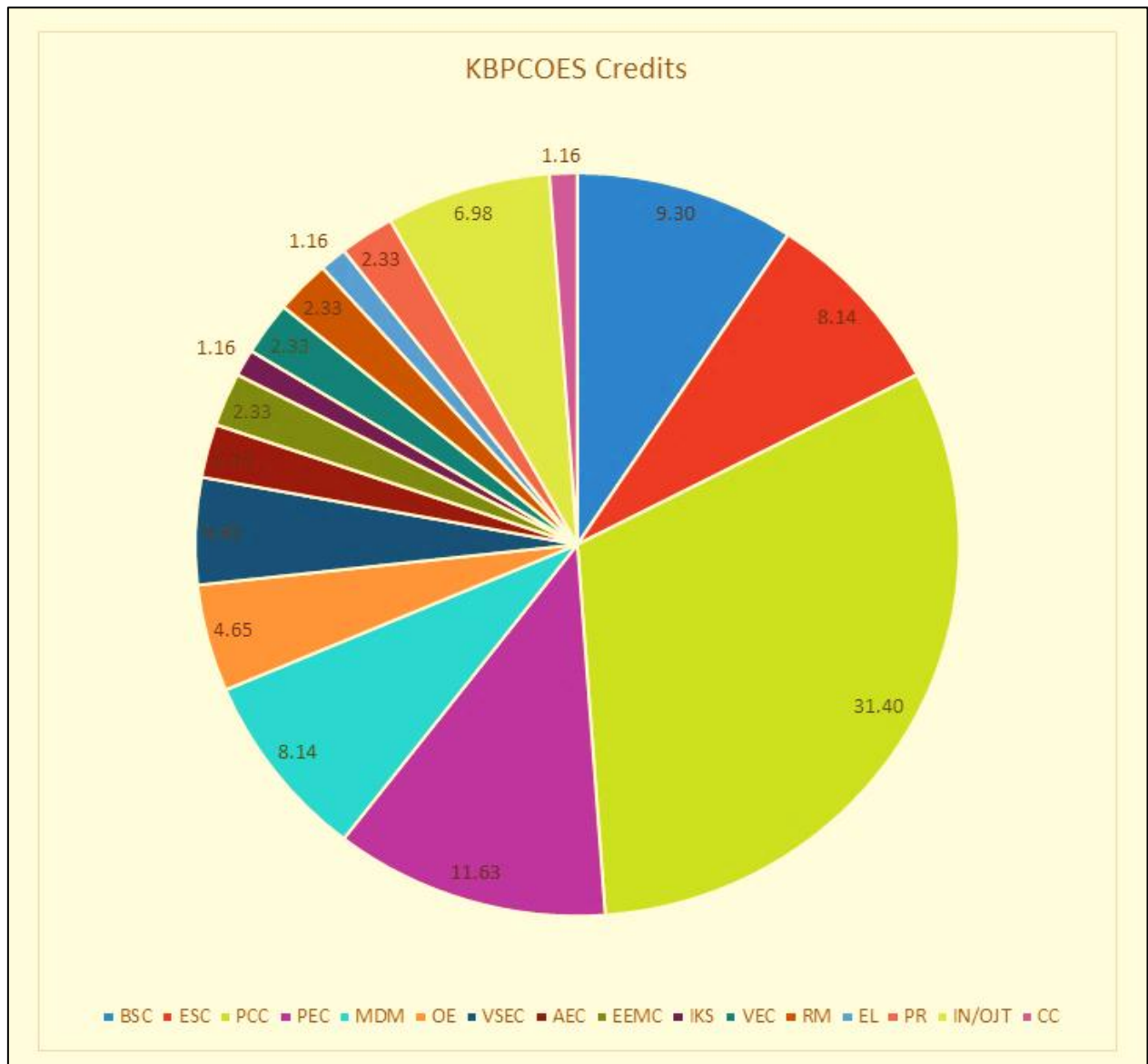




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Semester-Wise Credit Distribution





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Semester-Wise Credit Distribution

Semester		I	II	III	IV	V	VI	VII	VIII	Total Credits
BSC/ESC	Basic Science Course	8	8							16
	Engineering Science Course	8	6							14
Program Courses	Programme Core Course (PCC)		2	10	10	12	10	6	4	54
	Programme Elective Course (PEC)					4	8	6	2	20
Multidisciplinary Courses	Multidisciplinary Minor (MDM)			2	3	3	2	4	-	14
	Open Elective (OE) Other than a particular program			3	2	3				8
Skill Courses	Vocational and Skill Enhancement Course (VSEC)	2	2		2		2			8
Humanities Social Science and Management (HSSM)	Ability Enhancement Course (AEC -01, AEC-02)	2			2					4
	Entrepreneurship / Economics/ Management Courses			2	2					4
	Indian Knowledge System (IKS)		2							2
	Value Education Course (VEC)			2	2					4
Experiential Learning Courses	Research Methodology							4		4
	Comm. Engg. Project (CEP)/Field Project (FP)			2		-	-	-		2
	Project							4		4
	Internship/ OJT								12	12
Liberal Learning Courses	Co-curricular Courses (CC)	1	1							2
Total Credits (Major)		21	21	21	23	22	22	24	18	172





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General Instructions

In the eighth semester, students must complete a mandatory internship for one semester at a company or organization approved by the BOS Chairman.

During the eighth-semester internship, students must complete theory courses through one of the two modes:

Online mode, where courses are offered through SWAYAM/NPTEL or an equivalent platform, providing an evaluation mechanism approved by the BOS Chairman. In this case:

Students can register and complete these online courses any time after the beginning of the third semester.

The course must be completed and the scorecard/certificate submitted before the declaration of the eighth-semester result.

If a student fails an online course, they must register for the same course offered by the institute and appear for ESE examination of 100 marks only personally as per the schedule declared by the institute to successfully complete the course.

Self-study mode, where students study independently using the course offered by the institute.

Students must appear for all college assessments/examinations (ISE, MSE, ESE) personally as per the institute's schedule and successfully complete the course.

In addition to program-specific courses, students must complete vocational skill courses, internships, and field projects connected to their major degree.

Exit Options:

The exit option is available at the end of even semesters (2nd, 4th, and 6th semesters), commencing from the academic year 2027-28 for the UG Certificate.

Students opting for exit at any level (odd or even semesters) must earn an additional eight credits in skill-based vocational courses, internships, apprenticeships, or mini-projects before exiting.

This makes them eligible for a UG Certificate, UG Diploma, or B.Voc./B.Sc. Engineering degree, depending on their qualification level.

Re-entry and Lateral Entry:





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Students opting for exit after an even semester may re-enter within four years and resume from the next odd semester they left off.

There must be a gap of at least one year between exit and re-entry.

Students opting for exit after an odd semester (1st, 3rd, 5th, or 7th) may only re-enter the program during the next even semester.

There must be a gap of at least one year between exit and re-entry.

Maximum Duration for Degree Completion:

The B.Tech degree must be completed within eight years from the date of admission to the first-year undergraduate program.

The duration includes exit, withdrawal, absence, or permissible leaves but excludes rustication periods.

If exceptional cases arise, valid reasons may be presented to the Academic Council, which may approve an extension of one additional year.

Eligibility for Admission to UG Bachelor's Degree with Honors, Research, or Double Minor:

Students must have a minimum CGPA of 7.5 with no backlogs at the end of the second semester and must have earned 18 credits.

Multiple Exit Qualification Titles & Requirements:

- Exit-1 (NCrF Level 4.5) – One-Year UG Certificate in Engineering/Technology (Requires 8 additional credits by 2-Month internship /Technical Project/Industrial Training or equivalent skill courses).
- Exit-2 (NCrF Level 5.0) – Two-Year UG Diploma in Engineering/Technology (Requires 8 additional credits by 2-Month internship /Technical Project/Industrial Training or equivalent skill courses).
- Exit-3 (NCrF Level 5.5) – Three-Year B.Voc/B.Sc. Engineering Degree (Requires 8 additional credits by 2-Month internship /Technical Project/Industrial Training or equivalent skill courses).





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Multiple Exit Options

Option	NCrF Level	Qualification Title	Additional Credit Requirement	Bridge Courses
Exit-1	4.5	One-Year UG Certificate Course in Engineering / Technology	8	2 Months Internship / Technical Project/Industrial Training OR Online Two Skill Courses from NSQF/ESSC/Any Other Agency certification approved by BoS
Exit-2	5.0	Two-Year UG Diploma in Engineering/Technology	8	2 Months Internship / Technical Project/Industrial Training OR Online Two Skill Courses at Diploma Level from NSQF/ESSC/Any Other Agency certification approved by BoS
Exit-3	5.5	Three-Year Bachelor Degree in Vocation (B.Voc.) or B.Sc. (Engineering/Technology)	8	2 Months Internship / Technical Project/Industrial Training OR Online Two Skill Courses at Degree Level from NSQF/ESSC/Any Other Agency certification approved by BoS





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Curriculum Structure

of

**First Year B.Tech. in Electronics &
Telecommunication Engineering**

Effective from

Academic Year 2026-27





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First Year B. Tech. Electronics and Telecommunication Engineering
Semester-I (w.e.f. 2026-27)
Group A

Sr. No	Course Category	Course Code	Course Name	Teaching Scheme (Weekly Hour)				Cr	Evaluation Scheme (Weightage in Marks)			
				L	T	P	S		ISE	MSE	ESE/POE	Total
1	Basic Science Course (BSC)	26BSH101	Engineering Mathematics – I	3	-	-	1	3	10	30	60	100
2	Basic Science Course (BSC)	26BSHA102	Engineering Chemistry	3	-	-	1	3	10	30	60	100
3	Engineering Science Course (ESC)	26BSHA103	Engineering Mechanics	3	-	-	1	3	10	30	60	100
4	Engineering Science Course (ESC)	26BSHA104	Basic Mechanical Engineering	2	-	-	1	2	10	30	60	100
5	Ability Enhancement Course (AEC-01)	26BSHA105	Communication Skills	2	-	-	1	2	10	30	60	100
6	Basic Science Course BSC	26BSHA106	Engineering Chemistry Lab	-	-	2	-	1	60	-	40	100
7	Engineering Science Course (ESC)	26BSHA107	Engineering Mechanics Lab	-	-	2	-	1	60	-	40	100
8	Engineering Science Course (ESC)	26BSHA108	Python Programming Lab	-	-	4	-	2	60	-	40	100
9	Vocational and Skill Enhancement Course (VSEC)	26BSHA109	Workshop Practices-I	-	-	4	-	2	60	-	40	100
10	Ability Enhancement Course (AEC-01)	26BSHA110	Communication Skills Lab	-	-	2	-	1	60	-	40	100
11	Co-curricular Courses (CC)	26BSHA111A	Sports & Physical Education	-	-	2	-	1	60	-	40	100
		26BSHA111B	Music & Dance									
		26BSHA111C	Yoga Education									
			Total	13	-	16	5	21	410	150	540	1100

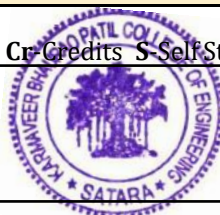
Legends: L-Lecture, T-Tutorial, P-Practical, Cr-Credits S-Self Study

Total Contact Hours/Week: 29

ISE: In Semester Evaluation

-Cumulative Credits:21+21=42

-ESE: End Semester Examination





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First Year B.Tech. in Electronics and Telecommunication Engineering
Semester-II (w.e.f. 2026-27)
Group A

Sr. No	Course Category	Course Code	Course Name	Teaching Scheme (Weekly Hour)				Cr	Evaluation Scheme (Weightage in Marks)			
				L	T	P	S		ISE	MSE	ESE/ POE	Total
1	Basic Science Course (BSC)	26BSH201	Engineering Mathematics – II	3	-	-	1	3	10	30	60	100
2	Basic Science Course (BSC)	26BSHA202	Engineering Physics	3	-	-	1	3	10	30	60	100
3	Engineering Science Course (ESC)	26BSHA203	Engineering Graphics	3	-	-	1	3	10	30	60	100
4	Engineering Science Course (ESC)	26BSHA204	Basic Civil Engineering	2	-	-	1	2	10	30	60	100
5	Basic Science Course (BSC)	26BSHA205	Engineering Physics Lab	-	-	2	-	1	60	-	40	100
6	Engineering Science Course (ESC)	26BSHA206	Engineering Graphics Lab	-	-	4	-	2	60	-	40	100
7	Programme Core Course (PCC)	26BSHA207	Basics in AI-I-RA Lab	-	-	4	-	2	60	-	40	100
8	Vocational and Skill Enhancement Course (VSEC)	26BSHA208	Design Thinking	-	-	4	-	2	60	-	40	100
9	Indian Knowledge System (IKS)	26BSHA209	IKS Bucket #	2	-	0	-	2	60	-	40	100
10	Co-curricular Courses (CC)	26BSHA210A	Integrated Personality Development	-	-	2	-	1	60	-	40	100
		26BSHA210B	Health and Wellness									
		26BSHA210C	Social Outreach Activities									
				13	-	16	4	21	400	120	480	1000

Legends: L-Lecture, T-Tutorial, P-Practical, Cr-Credits S-Self Study

Total Contact Hours/Week: 29

-Cumulative Credits:21+21=42

ISE: In Semester Evaluation

-ESE: End Semester Examination





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First Year B.Tech. in Electronics and Telecommunication Engineering
Group B Semester-I (w.e.f. 2026-27)

Sr. No	Course Category	Course Code	Course Name	Teaching Scheme (Weekly hour)				Cr	Evaluation Scheme (Weightage in Marks)			
				L	T	P	S		ISE	MSE	ESE/POE	Total
1	Basic Science Course (BSC)	26BSH101	Engineering Mathematics – I	3	-	-	1	3	10	30	60	100
2	Basic Science Course (BSC)	26BSHB102	Engineering Physics	3	-	-	1	3	10	30	60	100
3	Engineering Science Course (ESC)	26BSHB103	Engineering Graphics	3	-	-	1	3	10	30	60	100
4	Engineering Science Course(ESC)	26BSHB104	Basic Civil Engineering	2	-	-	1	2	10	30	60	100
5	Basic Science Course (BSC))	26BSHB105	Engineering Physics Lab	-	-	2	-	1	60	-	40	100
6	Engineering Science Course(ESC)	26BSHB106	Engineering Graphics Lab	-	-	4	-	2	60	-	40	100
7	Programme Core Course (PCC)	26BSHB107	Basics in AI-I-RA Lab	-	-	4	-	2	60	-	40	100
8	Vocational and Skill Enhancement Course (VSEC)	26BSHB108	Design Thinking	-	-	4	-	2	60	-	40	100
9	Indian Knowledge System (IKS)	26BSHB109	IKS Bucket #	2	-	0	-	2	60	-	40	100
10	Co-curricular Courses (CC)	26BSHB110A	Integrated Personality Development	-	-	2	-	1	60	-	40	100
		26BSHB110B	Health and Wellness									
		26BSHB110C	Social Outreach Activities									
				13	-	16	4	21	400	120	480	1000

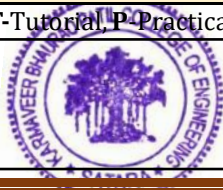
Legends: L-Lecture, T-Tutorial, P-Practical, Cr-Credits S-Self Study

Total Contact Hours/Week: 29

ISE: In Semester Evaluation

-Cumulative Credits:21+21=42

-ESE: End Semester Examination





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First Year B.Tech. in Electronics and Telecommunication Engineering
Group B Semester-II (w.e.f. 2026-27)

Sr. No	Course Category	Course Code	Course Name	Teaching Scheme (Weekly Hour)				Cr	Evaluation Scheme (Weightage in Marks)			
				L	T	P	S		ISE	MSE	ESE/ POE	Total
1	Basic Science Course (BSC)	26BSH201	Engineering Mathematics – II	3	-	-	1	3	10	30	60	100
2	Basic Science Course (BSC)	26BSHB202	Engineering Chemistry	3	-	-	1	3	10	30	60	100
3	Engineering Science Course (ESC)	26BSHB203	Engineering Mechanics	3	-	-	1	3	10	30	60	100
4	Engineering Science Course(ESC)	26BSHB204	Basic Mechanical Engineering	2	-	-	1	2	10	30	60	100
5	Ability Enhancement Course(AEC-01)	26BSHB205	Communication Skills	2	-	-	1	2	10	30	60	100
6	Basic Science Course BSC	26BSHB206	Engineering Chemistry Lab	-	-	2	-	1	60	-	40	100
7	Engineering Science Course (ESC)	26BSHB207	Engineering Mechanics Lab	-	-	2	-	1	60	-	40	100
8	Engineering Science Course (ESC)	26BSHB208	Python Programming Lab	-	-	4	-	2	60	-	40	100
9	Vocational and Skill Enhancement Course (VSEC)	26BSHB209	Workshop Practices-I	-	-	4	-	2	60	-	40	100
10	Ability Enhancement Course(AEC-01)	26BSHB210	Communication Skills Lab	-	-	2	-	1	60	-	40	100
11	Co-curricular Courses (CC)	26BSHB211A	Sports &Physical Education	-	-	2	-	1	60	-	40	100
		26BSHB211B	Music & Dance									
		26BSHB211C	Yoga Education									
			Total	13	-	16	5	21	410	150	540	1100

Legends: L-Lecture, T-Tutorial, P-Practical, Cr-Credits S-Self Study

Total Contact Hours/Week: 29

ISE: In Semester Evaluation

-Cumulative Credits:21+21=42

-ESE: End Semester Examination





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UG Certificate Level

Exit Course after Semester -II of Engineering

(UG Certificate Course in Engineering /Technology)

Course Category	Course Code	Name of Course	Weekly Teaching Scheme			Evaluation Scheme				Credit
			L	T	P	ISE	MSE	ESE	Total	
Exit	26104EX01	Computer Hardware Basics Skill India Digital Hub (SIDH) - Upskilling, reskilling, career growth and lifelong learning				120	00	80	200	8
	OR									
		2 months Internship				120	00	80	200	8
Total Contact Hr.										08





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Curriculum Structure

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**Second Year B.Tech. in Electronics &
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Effective from

Academic Year 2027-28





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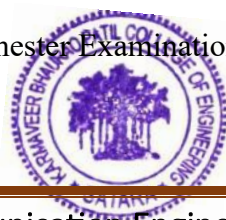
Second Year B.Tech. in Electronics and Telecommunication Engineering
(W.E.F 2027-28)

SEMESTER-III

Sr. No.	Course Category	Course Code	Name of Course	Weekly Teaching Scheme				Evaluation Scheme				Credit
				L	T	P	S	ISE	MSE	ESE	Total	
1	PCC	27104PCC301	Engineering Mathematics for E&TC	3	-	-	1	10	30	60	100	3
2		27104PCC302	Electronic Devices and Circuits	3	-	-	1	10	30	60	100	3
3		27104PCC303	Digital Electronics and Logic Design	2	-	-	1	10	30	60	100	2
4		27104PCC304L	Electronic Devices and Circuits Lab	-	-	2	-	60	-	40	100	1
5		27104PCC305L	Digital Electronics Lab	-	-	2	-	60	-	40	100	1
6	MDM	27104MDM306	MDM Bucket List	2	-	-	-	10	30	60	100	2
7	OE	27104OE307	Open Elective-I	3	-	-	-	10	30	60	100	3
8	EEMC	27104EEM308	Entrepreneurship and Startup Eco System	2	-	-	-	50	-	-	50	2
9	VEC	27104VEC309	Universal Human Values	2	-	-	-	50	-	-	50	2
10	CEP/ FP	27104CEP310	Community Engagement Project	-	-	4	-	60	-	40	100	2
Total				17	00	08	03	330	150	420	900	21
Total Contact Hrs=28 Total Theory=07 Total Lab=02												

ISE – In Semester Evaluation, ESE – End Semester Examination, MSE – Mid Semester Examination, L-Lecture, T-Tutorial, P-Practical.

CUMULATIVE CREDITS: 42 + 21 = 63





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Second Year B.Tech. in Electronics and Telecommunication Engineering
(W.E.F 2027-28)

SEMESTER-IV

Sr. No	Course Category	Course Code	Name of Course	Weekly Teaching Scheme				Evaluation Scheme				Credit
				L	T	P	S	ISE	MSE	ESE	Total	
1	PCC	27104PCC401	Analog Communication	3	-	-	1	10	30	60	100	3
2		27104PCC402	Microprocessors & Microcontroller	2	-	-	1	10	30	60	100	2
3		27104PCC403	Network Theory	2	-	-	1	10	30	60	100	2
4		27104PCC404L	Analog Communication Lab	-	-	2	-	60	-	40	100	1
5		27104PCC405L	Microprocessors & Microcontroller Lab	--	-	2	-	60	--	40	100	1
6		27104PCC406L	Network Theory Lab	-	-	2	-	60	-	40	100	1
7	MDM	27104MDM407	MDM Bucket List	3	-	-	-	10	30	60	100	3
8	OE	27104OE408	Open Elective - II	2	-	-	-	10	30	60	100	2
9	VSEC	27104VSEC409	PCB Design and Electronic CAD	-	-	4	1	60	-	40	100	2
10	AEC	27104AEC410	Quantitative Aptitude and Logical Reasoning	2	-	-	1	50	-	-	50	2
11	VEC	27104VEC411	Sustainable Electronics	2	-	-	-	50	-	-	50	2
12	EEMC	27104EEM412	Intellectual Property Rights	2	-	-	1	50	-	-	50	2
	Total			18	00	10	06	440	150	460	1050	23
	Total Contact Hrs=34 Total Theory=08 Total Lab=04											

ISE – In Semester Evaluation, ESE – End Semester Examination, MSE – Mid Semester Examination, L-Lecture, T-Tutorial, P-Practical, S- Self Study

CUMULATIVE CREDITS: 63 + 23 = 86



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UG Certificate Level

Exit Course after Semester -IV of Engineering

(UG Certificate Course in Engineering /Technology)

Course Category	Course Code	Name of Course	Weekly Teaching Scheme			Evaluation Scheme				Credit
			L	T	P	ISE	MSE	ESE	Total	
Exit	27104EX02	IoT : Internet Of Things for beginner Skill India Digital Hub (SIDH) - Upskilling, reskilling, career growth and lifelong learning				120	00	80	200	8
	OR									
		2 months Internship				120	00	80	200	8
Total Contact Hr.										08





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Curriculum Structure

of

Third Year B.Tech. in Electronics and

Telecommunication Engineering

Effective from

Academic Year 2028-29





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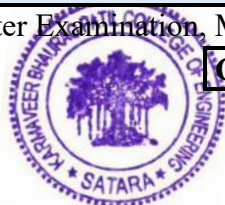
Third Year B.Tech. in Electronics and Telecommunication Engineering
(W.E.F 2028-29)

SEMESTER-V

Sr. No	Course Category	Course Code	Course Title	Weekly Teaching Scheme				Evaluation Scheme				Credit
				L	T	P	S	CA	MSE	ESE	Total	
1	Programme Core Course (PCC)	28104PCC501	Digital Signal Processing	3	-	-	1	10	30	60	100	3
2		28104PCC502	Wireless Sensor Networks	3	-	-	1	10	30	60	100	3
3		28104PCC503	Digital Communication	3	-	-	1	10	30	60	100	3
4		28104PCC504L	Digital Signal Processing Lab	-	-	2	-	60	-	40	100	1
5		28104PCC505L	Digital Communication Lab	-	-	2	-	60	-	40	100	1
6		28104PCC506L	Wireless Sensor Networks Lab	-	-	2	-	60	-	40	100	1
7	Programme Elective Course (PEC)	28104PEC507	Programme Elective-I	3	-	-	1	10	30	60	100	3
8		28104PEC508L	Program Elective-I Lab	-	-	2	-	60	-	40	100	1
09	MDM	28104MDM509	MDM Bucket List	3	-	-	-	10	30	60	100	3
10	OE-1	28104OE510	Open Elective - III	3	-	-	1	10	30	60	100	3
Total				18	00	08	05	300	180	520	1000	22
Total Contact Hrs=31 Total Theory=06 Total Lab=04												

ISE – In Semester Evaluation, ESE – End Semester Examination, MSE – Mid Semester Examination, L-Lecture, T-Tutorial, P-Practical, S-Self Study Topics .

CUMULATIVE CREDITS: 86 + 22 = 108





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Third Year B.Tech. in Electronics and Telecommunication Engineering
(W.E.F 2028-29)

SEMESTER-VI

SEMESTER-VI												
Sr. No	Course Category	Course Code	Course Title	Weekly Teaching Scheme				Evaluation Scheme				Credit
				L	T	P	S	CA	MSE	ESE	Total	
1	Programme Core Course (PCC)	28104PCC601	Electromagnetic Theory	3	-	-	1	10	30	60	100	3
2		28104PCC602	Antenna and Wave Propagation	3	-	-	1	10	30	60	100	3
3		28104PCC603	Computer Network	3	-	-	1	10	30	60	100	3
4		28104PCC604L	Antenna and Wave Propagation Lab	-	-	2	-	60	-	40	100	1
5	Programme Elective Course (PEC)	28104PEC605	Program Elective-II	3	-	-	1	10	30	60	100	3
6		28104PEC606	Program Elective-III	3	-	-	1	10	30	60	100	3
7		28104PEC607L	Program Elective-II Lab	-	-	2	-	60	-	40	100	1
8		28104PEC608L	Program Elective-III Lab	-	-	2	-	60	-	40	100	1
9	MDM-II	28104MDM609	MDM Bucket List	2	-	-	-	10	30	60	100	2
10	VSEC	28104VSEC610	Industrial IoT and Sensor Interfacing	-	-	4	-	60	-	40	100	2
	Total			17	00	10	05	300	180	520	1000	22
Total Contact Hrs=32 Total Theory=06 Total Lab=04												

ISE – In Semester Evaluation, ESE – End Semester Examination, MSE – Mid Semester Examination, L- Lecture, T-Tutorial, P-Practical, S-Self Study Topics

CUMULATIVE CREDITS: 108 + 22 = 130





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UG Certificate Level

Exit Course after Semester -VI of Engineering

(UG Certificate Course in Engineering /Technology)

Course Category	Course Code	Name of Course	Weekly Teaching Scheme			Evaluation Scheme				Credit
			L	T	P	ISE	MSE	ESE	Total	
Exit	28104EX03	Digital Electronics Online Course Skill India Digital Hub (SIDH) - Upskilling, reskilling, career growth and lifelong learning				120	00	80	200	8
	OR									
		2 months Internship				120	00	80	200	8
Total Contact Hr.										08





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Curriculum Structure

of

Final Year B.Tech. in Electronics and

Telecommunication Engineering

Effective from

Academic Year 2029-30





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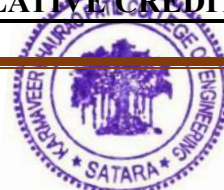
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Final Year B.Tech. in Electronics and Telecommunication Engineering
(W.E.F 2029-30)

SEMESTER-VII												
Sr. No	Course Category	Course Code	Course Title	Weekly Teaching Scheme				Evaluation Scheme				Credit
				L	T	P	S	CA	MSE	ESE	Total	
1	Programme Core Course (PCC)	29104PCC701	Power Electronics	2	-	-	1	10	30	60	100	02
2		29104PCC702	Microwave Theory and Techniques	2	-	-	1	10	30	60	100	02
3		29104PCC703L	Power Electronics	-		2	-	60	-	40	100	01
4		29104PCC704L	Microwave Theory and Techniques Lab	-		2	-	60	-	40	100	01
5	Programme Elective Course (PEC)	29104PEC705	Program Elective-IV	3	-	-	1	10	30	60	100	03
6		29104PEC706	Program Elective-V	3	-	-	1	10	30	60	100	03
7	MDM	29104MDM707	MDM Bucket List	-	-	8	-	10	30	60	100	04
8	RM	29104RM708	Research Methodology	3	-	-	-	10	30	60	100	03
9	RM	29104RM709L	Research Methodology Lab	-	-	2	-	60	-	40	100	01
10	Project	29104PR710	Major Project	-	-	8	-	60	-	40	100	04
Total				13		22	4	300	180	520	1000	24
Total Contact Hrs=39 Total Theory=05 Total Lab=05												

ISE – In Semester Evaluation, ESE – End Semester Examination, MSE – Mid Semester Examination, L- Lecture, T-Tutorial, P-Practical. .

CUMULATIVE CREDITS: 130+ 24 = 154





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SEMESTER-VIII											
Sr. No	Course Category	Course Code	Name of Course	Weekly Teaching Scheme			Evaluation Scheme				Credit
				L	T	P	ISE	MSE	ESE	Total	
1	PCC	29104PCC801	Self-learning course	4	-	-	10	30	60	100	4
2	PEC	29104PEC802	Program Elective-VI	2	-	-	10	30	60	100	2
4	IT/OJT	29104IT804	Internship / On Job Training	-	-	24	60		40	100	12
	Total			06	00	24	80	60	160	300	18
Total Contact Hrs=30 Total Theory=02 Total Lab=01											

ISE – In Semester Evaluation, ESE – End Semester Examination, MSE – Mid Semester Examination, L-Lecture, T-Tutorial, P-Practical. .

CUMULATIVE CREDITS: 154+ 18 = 172





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List of Programme Elective Courses (PEC)

PEC DOMAIN	SEM V	SEM VI		SEM VII		SEM VIII
	Programme Elective-I	Programme Elective-II	Programme Elective-III	Programme Elective-IV	Programme Elective-V	Programme Elective-VI
Embedded Systems & IoT	Embedded C & Computer Architecture	Embedded Systems & RTOS	Industrial IoT and Edge Computing	Energy harvesting and management	Embedded Electronics for Precision Agriculture	EV and Power Electronics
VLSI & FPGA Design	Digital Design using Verilog HDL	FPGA Design & Programming	CMOS VLSI Design	Analog CMOS VLSI Design	VLSI Signal Processing	VLSI for IOT and Embedded System
Communication & Networking	Wireless Communication	IoT Communication Protocols	Optical & 5G Communication Systems	RF Circuits Design	Satellite Communication/Nano Electronics	Data Compression and Encryption
AI for Electronics & Signal Processing	Advanced Signal Processing	AI & Soft Computing for Engineers	Computer Vision & Edge AI	Biomedical signal Processing	Artificial Intelligence & Machine Learning	Forensics Applications of Signal Processing





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Curriculum Structure
of
B.Tech. in Electronics and
Telecommunication Engineering
Multidisciplinary Minor (MDM) Bucket
Effective from





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Semester wise Multidisciplinary Minor (MDM) Bucket List

For

Civil Engineering, Computer Science & Engineering, Mechanical Engineering

SEMESTER-III to VII				
Sr. No.	Semester	Course Code	Course Name	Credit
1	III	27104MDM306	Basic Electronics and Digital Systems	02
2	IV	27104MDM407	Microcontrollers and Embedded Systems	03
3	V	28104MDM509	Sensors, Actuators and IoT Fundamentals	03
4	VI	28104MDM609	Communication Systems and Wireless Technologies	02
5	VII	29104MDM707	Mini Project/ Capstone project on Intelligent Embedded Systems	04





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Curriculum Structure

of

B.Tech. in Electronics and

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Open Elective Bucket

Effective from





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Semester wise Open Elective (OE) Bucket List

SEMESTER- III to V				
Sr. No.	Semester	Course Code	Course Name	Credit
1	III	271040E307	Healthcare Systems/ Medical Electronics	03
3	IV	271040E408	Exploring Arduino	02
5	V	281040E510	Automotive Electronics	03





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Curriculum Structure

of

**B.Tech. in Electronics and
Telecommunication Engineering**

HONOR

Effective from





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B.Tech. in Electronics and Telecommunication Engineering with Honor and Multidisciplinary Minor

1. It is required to complete following NPTEL Courses to earn total of minimum 18 credits under Honor and Multidisciplinary Minor certification.
2. Students shall be required to successfully complete and earn a minimum of 18 credits from the prescribed courses offered from Second Year (Semester III) to Final Year (Semester VIII).
3. Minimum eligibility to opt for a Double Minor degree is a CGPA of 7.5 or above at the end of the first year.
4. Basket of the Honors courses is mentioned in the following table.

Semester wise HONOR Courses

Track: Honor in Advancements in Electronics (SEMESTER III to VII)						
Sr. No.	Semester	Course Code	Course Name		NPTEL Weeks	Credit
1	III	27104HR301	Advanced Digital System Design	https://onlinecourse.s.nptel.ac.in/noc25_e180/preview	08	03
2	IV	27104HR401	Embedded Systems Design	https://onlinecourse.s.nptel.ac.in/noc25_cs30/preview	12	04
3	V	28104HR501	CMOS Digital VLSI Design	https://onlinecourse.s.nptel.ac.in/noc25_e11/preview	08	03
4	VI	28104HR601	VLSI Design Flow: RTL to GDS	https://nptel.ac.in/courses/108106191	12	04
5	VII	29104HR701	Modern Digital Communication Techniques	https://onlinecourse.s.nptel.ac.in/noc25_e130/preview	12	04
Total Credits						18





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Curriculum Structure

of

B.Tech. in Electronics and

Telecommunication Engineering

HONOR WITH RESEARCH

Effective from





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College of Engineering, Satara

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Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere – from 2017

Honors with Research and Multidisciplinary Minor

Eligibility: All clear with 7.5 CGPA at Third Year

SEMESTER-VII & VIII											
Sr. No	Semester	Course Code	Name of Course	Weekly Teaching Scheme			Evaluation Scheme				Credit
				L	T	P	ISE	MSE	ESE	Total	
1	VII	29104HRM701	Research Project Phase I			18	200	-	100	300	09
2	VIII	29104HRM702	Research Project Phase II			18	200	-	100	300	09
	Total			0	0	36	400	-	200	600	18





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Curriculum Structure

of

B.Tech. in Electronics and

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DOUBLE MINOR

Effective from





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List of Multi-Disciplinary Double Minor Courses
Double Minor

1. It is required to complete following NPTEL Courses to earn total of minimum 18 credits under Double Minor (DM) certification.
2. Students shall be required to successfully complete and earn a minimum of 18 credits from the prescribed courses offered from Second Year (Semester III) to Final Year (Semester VIII).
3. Minimum eligibility to opt for a Double Minor degree is a CGPA of 7.5 or above at the end of the first year.
4. Basket of the Double Minor courses and respective semester is mentioned in the following table.

List of Multi-Disciplinary Double Minor Courses

SEMESTER-III to VII					
Sr. No.	Semester	Course Code	Course Name	NPTEL Weeks	Credit
1	III	27104DM301	Basic Electronics https://onlinecourses.nptel.ac.in/e-learning/preview/noc21_ee55	12	04
2	IV	27104DM401	Fundamentals Of Electronic Materials And Devices https://onlinecourses.nptel.ac.in/e-learning/preview/noc20_mm02	08	03
3	V	28104DM501	Digital Circuits https://onlinecourses.nptel.ac.in/e-learning/preview/noc21_ee75	12	04
4	VI	28104DM601	Microprocessors and Microcontrollers https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_ee58	12	04
5	VII	29104DM701	Introduction to Wireless and Cellular Communications https://onlinecourses.nptel.ac.in/e-learning/preview/noc20_ee61	12	04
Total Credits					19