

K.E. Society's Rajarambapu Institute of Technology, Sakharale (An Autonomous Institute, affiliated to Shivaji University, Kolhapur)

Curriculum Structure and Evaluation **Batch: 2018-2022**

To be implemented from (2018-19)

Rev: CE Course Structure/RIT/01/2018-19

Class: S. Y. Civil	Semester-IV	L	Т	Р	Credits
Course Code: CE2102	Course Name: <mark>Human Values</mark>	1			3
	and Professional Ethics	.7			3

Course Outcomes:

After completing the course, the student should be able to: -

- 1. Practice the moral value in engineering profession.
- 2. Resolve the moral issues in the profession.
- 3. Justify the moral judgment concerning the profession.

COURSE CONTENT							
Unit No.	Details of Content	Hrs					
1	Human Values:	06					
	Moral values, ethics, integrity, service learning virtues, respect for others,						
	living peacefully, caring and sharing, honesty, courage, value time, co-						
	operation, commitment, empathy, challenge in the work place, spirituality.						
2	Engineering Ethics	06					
-	Sense of engineering ethics, variety of moral issues, moral dilemma, moral						
	autonomy & development, consensus & controversy, profession &						
	professional role models, responsibility, ethical theories, self interest,						
	customs, religion.						
3	Engineering as Social Experimentation:	06					
	Engineering & experimentation, engineers as responsible experiments, codes						
	of ethics, industrial standards, balanced outlook on law.						
4	Safety, Responsibility & Rights	06					
	Safety & risk, risk analysis, assessment of safety & risk, safe exit, risk benefit						
	analysis, safety lessons, loyalty, confidentiality, conflict of interests,						
	occupational crimes, whistle blowing.						
5	Global Issues	06					
	Globalization, multinational corporations, computer ethics, weapon						
	development, moral leadership, ethics & codes of business conduct in MNC,						
	corporate social responsibility, ethical audit.						
6	Case Studies	06					
	6 to 8 case studies based on professional ethics						

References:

- "A textbook on professional ethics & human values" by R. S. Naagarazan, New Age International Publishers, 2nd Edition.
- 2. "Professional ethics & human values" by M. Govindarajan, S. Natarajan, V. S. Senthikumar, PHI learning private ltd. Delhi, Third Printing





Rev: CE/RIT/01/2018-22

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Class	: S. Y. B. Tech.								S	emester:	TIT
]	[eac]	ning S	Scheme			Evalua	tion Sc		
Course	Course							Theory (Marks)			actical Iarks)
Code		L	T	F P Cr S		Scheme	Max		n. for sing%	Max.	Min. for passing %
	Duild's DI					ISE	20			-	-
CE2012	Building Planning and	3	1 -	-	3	UT1	15	40	40	-	-
	Design					UT2	15		40	-	-
		+		_		ESE	50	40		-	-
	e.					ISE	20			-	-
CE2032	Engineering Mechanics	3	_	-	3	UT1	15	40	10	-	
	5 5					UT2	15		40	-	-
		1				ESE	50	40	1	-	
						ISE	20			-	-
CE2052	Strength of Material	2	-		2	UT1	15	40		-	-
0.22002	Suchgui of Matchiai		-	-		UT2	15	1	40	-	_
						ESE	50	40	1	_	-
			ISE	20	. Constants	1	-	-			
SH2052	Engineering	3	1		1	UT1	15	40	10	-	-
	Mathematics III		1	1 -	4	UT2	15	1	40	-	-
						ESE	50	40	1	_	-
						ISE	20			-	# (%)
CE2072	Surveying	2	-	-	2	UT1	15	40	10	-	Pay 1
					2	UT2	15		40	-	- 7-12
	T. I. I. I. I.		-			ESE	50	40	1 1	-	-
SH2172	Environmental Science	1*	-		1	ISE	50	40	40	-	-
CEANOA	D 111 D1				^	ESE	50	40	40	-	-
CE2092	Building Planning and	_	-	4	2	ISE	-	-	-	50	50
	Design lab				2	ESE	-	-	-	50	50
CE2112	Surveying Lab	_	_	2	1	ISE	-	-		50	50
CEALAA					1	ESE		-		50	50
CE2132	Strength of Material lab	-	-	2	1	ISE	-	-	-	100	50
CE2152	Comprehensive Exam I		-	-	1	ESE	-	-	-	100	50
CE2172	Engineering Mechanics Lab	-	-	2	1	ISE	-	-	-	100	50
SH2602	Environment Project	-	-	2	1	ISE	1			100	50
	Open Elective –II Choice Based Soft Skill Program-I	-	-	2	1	ISE	1	-	-	100	50
	TOTAL	14	01	14	23	-	-	-	-	-	-
Total Con	ntact Hours/week		: 29						102		-

Notes:

* One extra lecture to be allotted to Environment Science in time table.

**Internship will be carried out after completion of semester III for 4 Weeks. The evaluation will be done at the U dend of semester IV. ou Institu

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Rev: CE/RIT/01/2018-22

Courses for Comprehensive Exam: Engg. Mathematics, Engg. Mechanics, Strength of Materials, Advanced Surveying

ISE = In Semester Evaluation, UT-1 = Unit Test-1, UT-2 = Unit Test- 2 & ESE = End Semester Examination

Open Elective –II

List of Choice Based Soft Skill Program-I

Sr. No.		Course Code		
1.	Choice Based Soft	Personal Effectiveness & Body	SH2592	
	Skill Program-I & II	Language		
2.		Interpersonal Skills (Work life	SH2612	
		Balance)		
3.]	Leadership & Public Speaking	SH2632	
4.		Innovation Tools and Methods for	SH2692	
		Entrepreneurs		
5.		German Language – Basic Level	SH2732	
6.		Japanese Language – Basic Level	SH2712	

Note:

- 1. A student has to complete any two courses out of six choices offered under Choice Based Soft Skills Programme. A course in each semester will be allocated without any repetition.
- 2. The students who have completed 'German Language Lab' or 'Japanese Language Lab' in F.Y. B. Tech should not give their choice for 'German Language – Basic Level' and 'Japanese Language – Basic Level'. Such students may give their choices for 'German Language – Advanced Level' and 'Japanese Language – Advanced Level' (batch size 40 each) in the S.Y. B. Tech Sem-IV only.
- 3. The students who will select and will successfully complete 'German Language Basic Level' and 'Japanese Language Basic Level' in S.Y. B. Tech Sem-III will by default (mandatorily) appear for Advance Levels of said courses in Semester-IV.







K.E. Society's Rajarambapu Institute of Technology, Sakharale (An Autonomous Institute, affiliated to Shivaji University, Kolhapur) Curriculum Structure and Evaluation With effective from 2018-22 [2018-22 & 2019-23 Batch] Department of Civil Engineering

Rev: CE/RIT/01/2018-22

Class	: S. Y. B. Tech.					Semester: IV					
		Te	eachin	g Sch	eme	Evaluation Scheme					
								Theory		Practical	
Course	Course						(]	Marks)	(M	larks)
Code	Course		T	P	Cr	Scheme		Min	. for	Max	Min. for
							Max.		ing%	1	passing
								passi	ing /u	•	%
-			*	1		ISE	20	-		-	-
CE2022	Engineering Geology	2	-	1 -	2	UT1	15	40	40	-	-
						UT2	15			-	
				-		ESE	50	40		-	
					1	ISE	20	10		-	-
CE2042	Concrete Technology	3	-	-	3	UT1	15	40	40	-	-
		-				UT2	15		-	-	
			-			ESE	50	40		-	-
						ISE	20			-	
CE2062	Fluid Mechanics	3	-	-	3	UT1	15	40	40	-	-
						UT2	15		57.000	-	-
		-				ESE	50	40		-	-
					ISE	20 15	10		-	-	
CE2082	82 Mechanics of Structures	3	-	-	3	UT1		40	40	-	
			UT2 ESE	15 50	40	1	-	-			
						ISE		40		-	-
	Human Values and					UT1	20 15	40		-	-
CE2102	Professional Ethics	2	-	-	2	UT2	15	40	40	-	
_	Torossionar Lanco			1		ESE	50	40		_	-
	Applications of				-						
CE2122	Programming Language	-	-	2	1	ISE	_	_		100	50
	in Civil Engineering									100	50
CE2142	Engineering Geology			2	1	TOP					_
CE2142	Lab	-	-	2	1	ISE	-	-		100	50
CE2162	Fluid mechanics Lab	-	-	2	1	ISE	-	-		100	50
CE2182	Concrete Technology	-	-	2	1	ISE	-	_		100	50
	Lab										
CE2202	Comprehensive Exam II	-	-	-	1	ESE	-	-		100	50
	Open Elective –III Choice Based Soft Skill	-	-	2	1	ISE	-	-		100	50
	Program-II										
CE2222	Internship	-	-	-	2	ISE	-	-	2	100	50
	TOTAL	13	0	10	21			-			-

Total Contact Hours/week : 23 **Total Credits** :21

Courses for Comprehensive Exam: Mechanics of Structures, Fluid Mechanics, Concrete Technology

SE = In Semester Evaluation, UT-1 = Unit Test-1, V

pit Test-2 & ESE = End Semester Examination



Rev: CE/RIT/01/2018-22

Open Elective –III

List of Choice Based Soft Skill Program-I & II

Sr. No.		Subject Name					
1.	Choice Based Soft Skill Program-I & II	Personal Effectiveness & Body Language	SH2592				
2.]	Interpersonal Skills (Work life	SH2612				
		Balance)					
3.		Leadership & Public Speaking	SH2632				
4.		Innovation Tools and Methods for Entrepreneurs	SH2692				
5.		German Language – Basic Level	SH2732				
6.	1	Japanese Language – Basic Level	SH2712				

Note:

- 1. A student has to complete any two courses out of six choices offered under Choice Based Soft Skills Programme. A course in each semester will be allocated without any repetition.
- The students who have completed 'German Language Lab' or 'Japanese Language Lab' in F.Y. B. Tech should not give their choice for 'German Language Basic Level' and 'Japanese Language Basic Level'. Such students may give their choices for 'German Language Advanced Level' and 'Japanese Language Advanced Level' (batch size 40 each) in the S.Y. B. Tech Sem-IV only.
- 3. The students who will select and will successfully complete 'German Language Basic Level' and 'Japanese Language Basic Level' in S.Y. B. Tech Sem-III will by default (mandatorily) appear for Advance Levels of said courses in Semester-IV.







Rev: CE/RIT/01/2018-22

	Class	: T	Y. B.	Tech.
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Semester: V

			Feacl	ning	Scheme		E	valuat	ion Sch	eme	
Course	Course						r	Theor Marks	y	Pr	actical Iarks)
Code			T	P	Cr	NAME AND ADDRESS AND ADDRESS ADDRE		Min. for passing%		Max.	Min. for passing %
	1	ec.		1		ISE	20			-	-
CE3012	Design of Steel Structures	3	-	-	3	UT1	15	40	40	-	-
						UT2	15		40	-	-
		_	-	_		ESE	50	40		-	-
						ISE	20			-	-
CE3032	Geotechnical Engineering	3		-	3	UT1	15	40	40	=	-
	0 0					UT2	15		40	-	-
			-			ESE	50	40		-	-
						ISE	20			-	-
CE3052	Irrigation and Hydraulic	3	_	-	3	UT1	15	40	40	-	-
	Structures					UT2	15		40	-	-
					1	ESE	50	40		-	-
		1	1			ISE	20			-	11 2
CE3072	Environmental	3	_	-	3	UT1	15	15	40	-	-
	Engineering					UT2	15		40	-	-
						ESE	50	40		-	-
	1_					ISE	20			-0	-
CE3092	Transportation	3	-	-	3	UT1	15	40	40	-	-
	Engineering				5	UT2	15		40	-	-
					1. Al	ESE	50	40		-	-
					á –	ISE	20			-	-
	Programme Elective - I	3		-	3	UT1	15	40	40	-	-
						UT2	15	1	40	-	-
100						ESE	50	40		-	-
CE3112	Geotechnical Engineering	-	-	2	1	ISE	-	-	-	50	50
	lab				1	ESE	-	-	-	50	50
CE3132	Environmental		_	2	1	ISE	-	-	-	50	50
	Engineering lab			2	*	ESE	-	-	-	50	50
CE3152	Transportation	_	-	2	1	ISE	-	-	-	50	50
	Engineering lab				1	ESE	-	-	-	50	50
						ISE	20				
SH3032	Aptitude Training -I	2*	2*		2	UT1	15	40	40		
		-				UT2	15		40	-	-
ODATE	~					ESE	50	40			
CE3172	Comprehensive Exam III	-	-	-	1	ESE	-	-	-	100	50
SH301	Indian Constitution	2	-		Audit	ISE	100	40	-	-	-
	TOTAL	22	00	06	24	-	-	-	-	i H	-

Total Contact Hours/week: 28Total Credits: 24

U MSNote:

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* One extra lecture to be allotted to Environment Science in time table



Rev: CE/RIT/01/2018-22

Courses for Comprehensive Exam III: Design of Steel Structures, Geotechnical Engineering, Environmental Engineering, Transportation Engineering, Irrigation and Hydraulic Structures

ISE = In Semester Evaluation, UT-1 = Unit Test-1, UT-2 = Unit Test-2 & ESE = End Semester Examination

List of Program Elective-PE I

Sr. No.	Course Code	Domain	Course				
1	CE3192		Structural Analysis				
2	CE3212	Structural Engineering	Composite Materials				
3	CE3232	Construction Management	Construction Safety and Quality Management				
4	CE3252	Construction Management	Advanced Construction Techniques				
5	CE3272	General Civil Engineering	Instrumental Monitoring of Environment and Modeling				
6	CE3292	(Environmental, Geotechnical,	Tunnel Docks and Harbor Engineering				
7	CE3312	Transportation etc.)	Urban Transportation Systems				







Rev: CE/RIT/01/2018-22

Class	: T. Y. B. Tech.						Sen	nester: V	VΙ		
		Te	eachi	ng Sc	heme			Eva	luation	1 Scheme	•
Course	Course							Theory Marks		Practical (Marks)	
Code			T	P	Cr	Scheme	Max.		n. for ing%	Max.	Min. for passing %
CE 3022	Theory of Structures	3	-	_	3	ISE UT1	20 15	40	40	-	-
						UT2 ESE	15 50	40		-	-
CE 3042	Estimation & Contracts	2	-		2	ISE UT1 UT2 ESE	20 15 15 50	40	40	-	-
CE 3062	Design of Reinforced	4	_	_	4	ISE UT1	20 15	40	40	-	-
	Concrete Structures					UT2 ESE	15 50	40		-	-
	Program Elective –II	3	-	-	3	ISE UT1 UT2	20 15 15	40	40	-	-
						ESE ISE	50 20	40		-	-
	Program Elective –III	3	-	-	3	UT1 UT2	15 15	40	40	-	-
						ESE ISE	50 20	40		-	-
	Open Elective -IV	3	-	-	3	UT1 UT2 ESE	15 15 50	40	40	-	-
SH 302	Biology for Engineers	3	-	-	3	ISE ISE UT1 UT2	20 15 15	40	40	-	-
CE 3082	Estimation & Contracts Laboratory	-	-	4	2	ESE ISE ESE	50 -	40 - -		- 50 50	- 50 50
CE 3102	Design of Steel Structures Laboratory	-		2	1	ISE ESE	-	-		50 50 50	50 50 50
CE 3122	Comprehensive Exam-IV	-	-	2	1	ESE	-	-		100	50
CE 3482	Capstone Project phase-I	ж	Ξ	2	2	ISE				100	50
SH3042	Aptitude Training II	2*	-	-	2	ISE UT1 UT2 ESE	20 15 15 50	40	40	-	-
	TOTAL	23	00	10	29	-	-	-	-	-	- 1.00

Total Contact Hours/week : 33 PU IN Total Credits : 29

Courses for Technical Aptitude-IV: Theory of Structure

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Rev: CE/RIT/01/2018-22

Note:

*One extra lecture will be allotted in the time table.

ISE = In Semester Evaluation, UT-1 = Unit Test-1, UT-2 = Unit Test-2 &ESE = End Semester Examination

List of Program Elective PE-II

Sr. No.	Course Code	Domain	Course
1	CE 3162	Structural Engineering	Design of Industrial Structures
2	CE 3182	Su doturar Engineering	Repair and Rehabilitation of Structures
3	CE 3202	Construction Monogenerat	Construction Economics and Finance
4	CE 3222	Construction Management	Disaster Preparedness and Planning
5	CE 3242	General Civil Engineering	Air Quality Monitoring and Modeling
7	CE 3262	(Environmental, Geotechnical, Transportation etc.)	Railway and Airport Engineering

List of Program Elective PE-III

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Sr. No.	Course Code	ode Discipline Course				
1	CE 3302	Structural Engineering	Design of Bridges			
2	CE 3322	Su dotar al Engineering	Design of Earthquake Resistant Structures			
3	CE 3342	CE 3342 Construction Management Advanced Construction Equipment				
4	CE 3382		Environmental Management System			
5	CE 3402	General Civil Engineering	Geographical Information System (GIS)			
6	CE 3422	(Environmental, Geotechnical, Transportation etc.)	Foundation Engineering			
7	CE 344		Intelligent Transport System			



Rev: CE/RIT/01/2018-22

Open Elective-IV

Sr. No.	Branch	Course Code	Open Elective-IV Courses
1	Automobile	OE3022	Reliability Engineering
2	Automobile	OE3042	Renewable Energy Sources
3	Civil	OE3062	Environmental Impact Assessment
4	Civil	OE3082	Material Management.
5	Computer	OE3102	Network Administration
6	Computer	OE3122	Information Technology Foundation Program
7	E&TC	OE3142	Mechatronics
8	Electrical	OE3162	Electrical Materials
9	Electrical	OE318	Industrial Drives
10	CS&IT	OE320	Artificial Intelligence
11	CS&IT	OE322	Cyber Forensics
12	MBA	OE3242	Marketing for Engineers
13	Mechanical	OE3262	Aircraft Systems
14	Mechanical	OE3282	Supply Chain Management
15	Mechanical	OE330	New Product Design and Development
16	Mechanical	OE3322	Entrepreneurship Development
17	Mechanical	OE334	Research Methodology



Rev: CE/RIT/01/2018-22

Class	: Final Year. B. Tech.	Т	agohir	ng Scho			1	Free		ester:	81 C235611
Course	Course					Exam		Eva Theory Marks	1		e actical Iarks)
Code		L	T	TP	Cr		Max.	Min. for passing%		Max.	Min. for passing %
	Constanting and the constant of the constant o	-		-	-	ISE	20			-	-
CE 4632	Construction	3	-		3	UT1	15	40	40	-	-
	Management	5				UT2	15		40	-	-
						ESE	50	40		-	-
	Construction					ISE	20	_		-	-
CE 4032	Equipment and	3	-	-	3	UT1	15	40	40	-	-
CL 4032	Methods	5			5	UT2	15		40	-	-
	memous					ESE	50	40		-	
						ISE	20			-	-
	Program Elective -IV	3	-	-	3	UT1	15	40	10	-	_
					3	UT2	15		40	-	-
						ESE	50	40	1	-	-
						ISE	20		10	-	-
	Program Elective -V	3	-	-	3	UT1	15	40		-	<u>-</u>
		5	1		5	UT2	15		40	_	-
						ESE	50	40	1	-	-
CE 4612	Site Experience	-	-	-	2	ISE	-	H	-	100	50
	Program Elective -IV	-	-	2	1	ISE	-	-	_	50	50
	Lab			Z	1	ESE	-	-	-17	50	50
CE 4052	Design of Concrete	-	ш. ¹	2	1	ISE	-	-	-	50	50
CE 4052	Structures Laboratory			2	1	ESE	-	-	-	50	50
CE 4372	Capstone Project	-	-	4	4	ISE	-	-	-	100	50
	Phase-II					ESE	-	-	-	100	50
CE 4072	Employment Enhancement Skills (Software in Civil Engg.)	-		2	1	ISE	-	-	-	100	50
arti Costini,	TOTAL	12	00	10	21	-	-	_	-	-	

ISE = In Semester Evaluation, UT-1 = Unit Test-1, UT-2 = Unit Test-2 & ESE = End Semester Examination



Total Contact Hours/week

Total Credits

: 22

:21





Rev: CE/RIT/01/2018-22

List of Program Elective (PE) - IV

Sr. No.	Course Code	Discipline	Course			
1	CE 4092	Structural Engineering	Advanced Structural Analysis			
2	CE 4112	Structural Engineering	Finite Element Analysis			
3	CE 4132	Construction Management	Project Management			
4	CE 4152	General Civil Engineering	Rock Mechanics			
5	CE 4172	(Environmental,	Industrial Waste Management			
6	CE 4192	Geotechnical, Transportation etc.)	Pavement Analysis and Design			

List of Program Elective (PE) - IV Laboratory

Sr. No.	Course Code	Discipline	Course				
1	CE 4212	Structural Engineering	Advanced Structural Analysis Laboratory				
2	CE 4232	Structural Engineering	Finite Element Analysis Laboratory				
4	CE 4652	Construction Management	Project Management Laboratory				
5	CE 4272	General Civil Engineering	Rock Mechanics Laboratory				
6	CE 4672	(Environmental, Geotechnical,	Industrial Waste Management Laboratory				
7	CE 4312	Transportation etc.)	Pavement Analysis and Design Laboratory				

List of Program Elective (PE)-V

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Sr. No.	Course Code	Domain	Course
1	CE 4392		Advanced Structural Design
2	CE 4412	Structural Engineering	Pre-stressed Concrete structures
3	CE 4432		Matrix Method of Structural Analysis
4	CE 4452	Construction	Construction Resource Planning and Management
5	CE 4472	Management	Total Quality Management
6	CE 4492		Air Pollution and Control
7	CE 4512	General Civil	Fundamentals of Urban and Regional Planning
8	CE 4532	Engineering	Solid and Hazardous Waste management
9	CE 4552	(Environmental, Geotechnical,	Photogrammetry Surveying
10	CE 4572	Transportation etc.)	Geo-informatics for Engineering
11	CE 4592		Docks, Harbors and Airport Engineering





Rev: CE/RIT/01/2018-22

Open Elective-V

Sr. No.	Branch	Course Code	Open Elective-IV Courses
1	Automobile	OE3022	Reliability Engineering
2	Automobile	OE3042	Renewable Energy Sources
3	Civil	OE3062	Environmental Impact Assessment
4	Civil	OE3082	Material Management.
5	Computer	OE3102	Network Administration
6	Computer	OE3122	Information Technology Foundation Program
7	E&TC	OE3142	Mechatronics
8	Electrical	OE3162	Electrical Materials
9	Electrical	OE318	Industrial Drives
10	CS&IT	OE320	Artificial Intelligence
11	CS&IT	OE322	Cyber Forensics
12	MBA	OE3242	Marketing for Engineers
13	Mechanical	OE3262	Aircraft Systems
14	Mechanical	OE3282	Supply Chain Management
15	Mechanical	OE330	New Product Design and Development
16	Mechanical	OE3322	Entrepreneurship Development
17	Mechanical	OE334	Research Methodology







Rev: CE/RIT/01/2018-22

Track I: Industry Internship & Projects (IIP)

Class: Final Year B. Tech

Semester: VIII

			Teaching Scheme				Evaluation Scheme					
Course Code	Course				lits	me	Theory (Marks)			Practical (Marks)		
		L	T	P	Credits	Scheme	Max	Min. t passir		Max.	Min. for passing%	
OE438	Finance for Engineers (Online Course)	2	-	-	2	ISE	25	40	40			
	(0					ES	75	40				
OE436	Engineering Management &	2	-	_	2	ISE	25	40	40			
	Economics (Online Course)					ES E	75	40				
						ISE				50	50	
IP4022	Internship & Project	-	-		8	ES E				50	50	
	TOTAL	04	-		12							

ISE = In Semester Evaluation, ESE = End Semester Examination

Total Contact Hours/week: 04Total Credits: 12

Notes:

- 1. Weekly Contact hours are not mentioned for IP4022 course, as student is expected to be in industry regularly for 20 weeks. However, student needs to report to Institute mentors as and when required.
- 2. For online course, lecture videos of each unit will be made available through college platform to the students. For each unit there will be separate assignment. Students need to submit all assignments within specified time.

Weightage: 25% weightage for unit wise assignments + 75% weightage for final exam. Final exam will be held at college campus.







Rev: CE/RIT/01/2018-22

Track II: Undergraduate Research Experience (URE)

Class: Final Year B. Tech

Semester: VIII

		Teaching Scheme				Evaluation Scheme						
Course Code	Course				its	me		Theory Marks		Practical (Marks)		
Couc		Credits		Scheme	Max.	. Min. for passing (%)		Max.	Min. for passing (%)			
OE438	Finance for Engineers (Online Course)	2	-	-	2	ISE	25	40	40			
						ESE	75	40	1			
OE436	Engineering Management &	2	2 -	_	2	ISE	25	40	40			
	Economics (Online Course)					ESE	75	40				
RE4042	Research Project	-	8	8	8	ISE				50	50	
INDITUT#			574	0	0	ESE			50	50		
	TOTAL	04	-	08	12							

ISE = In Semester Evaluation, ESE = End Semester Examination

Total	Contact Hours/week	: 12
Total	Credits	`: 12

Note:

For online course, lecture videos of each unit will be made available through college platform to the students. For each unit there will be separate assignment. Students need to submit all assignments within specified time.

Weightage: 25% weightage for unit wise assignments + 75% weightage for final exam. Final exam will be held at college campus.







Rev: CE/RIT/01/2018-22

Track III: Entrepreneurship Development (ED)

Class: Final Year B. Tech

Semester: VIII

			Teaching Scheme			Eva	luatio	on Sc	Scheme			
Sr.No	Course Code	Course	L	T	P	Credits	Scheme	Theory	(Mar	ks)	f	ractical Marks)
					I		Sch	Max	Min. for passing%		Max	Min. for passing%
							ISE	20				
1	ED4102	Project Management	2*	-		2	UT-1	15	40	40		
		5 8					UT-2	15		40		
				<u> </u>		<u> </u>	ESE	50	40			
							ISE	20				
2	ED4042	Commercial Aspects of	2*	_		2	UT-1	15	40	10		
-	LDTUTE	the Project	2	-	-	2	UT-2	15		40		
							ESE	50	40			
3	ED4062	Entrepreneurship Development Program (EDP)	-	-	-	1	ISE				100	50
4	F. 17(18.)	Entrepreneurship Development Project	-	-	7	7	ISE ESE				50 50	50
I	and the second	Total	4		7	12		-				
ISE = In	Semester F	Evaluation, $UT-1 = Unit Test-1$,		- 2 =	1		t_2	ESE = Er	nd Sor	monto	r Eva	mination
Total C	ontact Hou	rs/week : 11	, 01-	2	om	103	- ∠	LOL - EI	iu Sel	neste	I EXa	manon
Total C		: 12										

Note:

1] * One extra lecture to be allotted to Project Management and Commercial Aspects of the Project course in time table.





Class:- S Y B Tech (Mech.)	Semester-III	L	Т	Р	Credits
Course Code : SH2011	Course Name :		L T P 1		
	Environmental Science	1			1

Course Description:

(

The syllabus of Environmental Science provides an integrated, quantitative and interdisciplinary approach to the study of environmental systems. The students of Engineering undergoing this course would develop a better understanding of human relationships, perceptions and policies towards the environment and focus on design and technology for improving environmental quality. Their exposure to subjects like understanding of earth processes, evaluating alternative energy systems, pollution control and mitigation, natural resource management and the effects of global climate change, will help the students to bring a systems approach to the analysis of environmental problems.

Course Learning Outcomes:

After successful completion of the course, students will be able to,

- 1. Interpret impacts of human activities on natural resources and its control measures.
- 2. Apply ecological knowledge to solve environmental problems.
- 3. Select the appropriate technology to control environmental pollution.
- 4. Plan waste management and disaster management practices.
- 5. Justify methods to assess impacts of developmental activities on environment.
- 6. Analyze environmental change and its social impacts.

Unit No.	Description	Hrs
1.	Natural Resources: Renewable and Non-renewable resources, Forest resources, water resources, Mineral resources, food resources, Energy resources, alternative energy resources Land resources, Role of individual in conservation of natural resources, Equitable use of resources for Sustainable life styles.	02
2.	Ecology and Environment: Definition, Principles and Scope of ecology, Ecosystem: Structure and Functions, biotic and abiotic components, energy flows, food chains, food web, ecological pyramids, Biodiversity, types of biodiversity, conservation of biodiversity	02
3.	Environmental Pollution and Control Measures: Environmental Pollution, types of pollution, Air pollution, Water Pollution, Noise Pollution, Soil Pollution, Marine Pollution, Radioactive	02

	Pollution, Thermal Pollution (Causes, sources and effects, abatement methods), Pollution Case studies-Bhopal Gas Tragedy, Chernobyl Accident: A nuclear Disaster, Ganga Water Pollution.	
4.	Solid Waste, Hazardous Waste and Disaster Management: Solid Waste management, Urban & industrial Waste Management, (Causes, sources, effects & control measures), Hazardous waste management, Plastic waste management, E-waste management, Waste minimization technology, Disaster management. Disaster management and risk analysis: Flood, Earthquakes, Cyclones, Landslides, Draught, Tsunami etc.	02
5.	Environmental Management: Environmental impact assessment, Impact Assessment Methodologies, Environmental impact statement and environmental management plan, Environmental audit, Cost-benefit analysis, Role of Central Pollution Control Board (CPCB),State Pollution Control Board, Role of NGO's, Role of Information technology in environment & human health, Environmental Ethics: Issues & possible solutions, Awareness of Environmental Legislation.	02
6.	 Social Issues and Environment: From unsustainable to sustainable development, Urban problems related to energy, Water conservation: Rainwater harvesting, Watershed management, Resettlement & rehabilitation of people: Problems & concerns, Climate change, Global Warming, Ozone layer depletion, Acid Rain, Consumerism & waste Products, Concepts of Eco-labeled products, Eco-mark, Public Environmental education & awareness regarding environmental issues. 	02

References -

Text Books:

)

- 1. D.K.Asthana, Meera Asthana, A Textbook of Environmental Studies, S.Chand Publication Revised edition, 2006.
- 2. S. Deswal& A. Deswal, Basic course in environmental Studies, Dhanpat Rai & Co ltd., Delhi, Second revised edition, 2009.

Reference Books:

- 1. Eldon D Enger, Bradley F. Smith, Environmental science a study of interrelationships Wm C Brown Publishers 1989
- 2. Francois Ramade Ecology of Natural resources, John wiley& Sons
- 3. Robert Leo Smith, Ecology and field biology, Harper Collins Publishers
- 4. Gilbert M.Masters, Introduction to Environmental Engineering & Science, Prentice Hall International Inc. Second Edition





K.E. Society' Rajarambapu Institute of Technology, Sakharale

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Curriculum Structure and Evaluation

Implemented from 2018-19

Semester: III

Rev: ETC Engg. Course Structure/RIT/02/2018-19 Department Electronics and Talas

Departi	nent: Electronics and	relecommunication Engineering
Class:	S. Y. B. Tech	с с

Evaluation Scheme Teaching scheme Credits **Theory Marks Practical Marks** Scheme **Course** Code **Course Title** Min for Т Min for L Р Max Max Passing Passing Marks Marks (%) (%) ISE 20 --UT1 15 40 EC2012 **Electronic Devices** --3 3 -----40 UT2 15 _ -ESE 50 40 -ISE 20 -_ **Digital System** UT1 15 40 EC2032 -3 3 ---___ 40 Design UT2 15 --ESE 50 40 --ISE 20 -_ Analog UT1 15 40 EC2052 3 --3 -----40 Communication UT2 15 --ESE 50 40 _ -ISE 20 -UT1 15 40 EC2072 -Network Theory 3 ---3 ----40 UT2 15 --ESE 50 40 --ISE 20 -_ Engineering UT1 15 40 SH2112 --3 1 4 ---40 Mathematics III UT2 15 --ESE 50 40 --Comprehensive --------EC2092 1 ESE 100 50 -_ _ Exam I **Electronic Devices** ISE --------50 -50 EC2112 Lab 2 1 -ESE --50 50 -------Digital System ISE --50 50 EC2132 2 1 Design Lab ESE -50 --50 Analog -----ISE 50 50 EC2152 -2 1 Communication Lab -ESE --50 50 -**Open Elective Choice** ISE 50 -50 SH* based Soft Skill 2 1 -----Program-II ESE -50 -50 Total 15 01 08 21

Total Contact Hours/week Total Credits :21

:24

Comprehensive Exam Subjects : Electronic Devices, Digital System Design, Network Theory, Engineering Mathematics III, Analog Communication

ISE = In Semester Exam, MSE (UT1+UT2) UT-I = Unit Test-I, UT-II = Unit Test-II ESE = End Semester Exam

Page 1 of 16 (Date: 04/07/2019)



Rev: ETC Engg. Course Structure/RIT/02/2018-19

Open Elective II &III

Sr. No	Name of Course		Course Code
1		Personal Effectiveness and Body Language	SH2592
2		Interpersonal Skills (Work Life Balance)	SH2612
3	Choice based Soft Skill	Leadership and Public Speaking	SH2632
4	Program-II	Innovation Tools and Method for Entrepreneurs	SH2692
5		German Language -Basic Level	SH2732
6		Japanese language -Basic Level	SH2712
7		German Language -Advanced Level	SH2642
8		Japanese language - Advanced Level	SH2622

Note:

- 1. A student has to complete any two courses out of six choices offered under Choice Based Soft Skills Programme. A course in each semester will be allocated without any repetition.
- 2. The students who have completed 'German Language Lab' or 'Japanese Language Lab' in F.Y.B.Tech should not give their choice for 'German Language Basic Level' and 'Japanese Language Basic Level'. Such students may give their choices for 'German Language Advanced Level' and 'Japanese Language Advanced Level' (batch sizes 40 each) in the SYBTech Sem-IV only.
- 3. The students who will select and will successfully complete 'German Language Basic Level' and 'Japanese Language Basic Level' in SYBTech Sem-III will by default (mandatorily) appear for Advance Levels of said courses in Semester-IV.



Page 2 of 16 (Date: 04/07/2019)



K.E. Society'

Rajarambapu Institute of Technology, Sakharale

(An Autonomous Institute, affiliated to Shivaji University, Kolhapur)

Curriculum Structure and Evaluation

Implemented from 2018-19

Rev: ETC Engg. Course Structure/RIT/02/2018-19

Department: Electronics and Telecommunication Engineering Class: S. Y. B. Tech

Semester: IV

			aching eme			Evaluati	on Sche	me		emester	
Course Code	Course Title		1		Credits	(b)	Theor	y Marl	(S	Practic	al Marks
	Course Thie	L	T	Р	Cre	Scheme	Max	Min Passi (%)	for	Max	Min for Passing (%)
						ISE	20			-	-
CE2262	Engineering Mechanics	2			2	UT1	15	40	10	-	-
CELLOL	Engineering Weenames	2			2	UT2	15		40	-	-
						ESE	50	40		-	-
						ISE	20			-	-
EC2022	Analog Circuits	3			3	UT1	15	40	40	-	-
	0				5	UT2	15		40	-	-
						ESE	50	40		-	-
				-		ISE	20			-	-
EC2042	Microcontrollers	3			3	UT1	15	40	40	- *	-
						UT2	15	10	-	-	-
						ESE	50	40		-	
						ISE	20	10		-	
EC2062	Digital Communication	3	"		3	UT1 UT2	15	40	40	-	-
							15	10		-	-
						ESE	50	40	10	-	-
						ISE	20	10	40	-	-
EC2082	Signals and System	3			3	UT1 UT2	15 15	40		-	-
						ESE	50	40		-	-
EC2102	Comprehensive Exam II			0	1	ESE	100	50	-	-	-
CE2282	Engineering Mechanics			2		ISE	-	-	-	50	50
CE2282	Lab			2	1	ESE	-		-	50	50
EC2122	Analog Circuits Lab			2	1	ISE	-	-	-	50	50
L02122	Analog Circuits Lab			2	1	ESE	-	-	-	50	50
EC2142	Microcontrollers Lab			2		ISE	-	-	-	50	50
LC2142	Microcontrollers Lao				1	ESE	-	-	-	50	50
	Digital Communication					ISE	-	-	-	50	50
EC2162	Lab			2	1	ESE		-	-	50	50
SH*	Open Elective Choice based Soft Skill					ISE	-	-	-	50	50
	Program-III			2	1	ESE	-	-	-	50	50
SH2172	Environmental Science	1*			1	ISE ESE	50 50	40 40	40	-	-
SH2602	Environmental Science Project			2	1	ISE	-	-	-	100	50
	Total	15	00	12	22						

Total Credits

: 22

Comprehensive Exam Subjects: Analog Circuits, Digital Communication, Signals & Systems, Microcontroller ISE = In Semester Exam, MSE (UT1+UT2) UT-I = Unit Test-I, UT-II = Unit Test-II ESE = End Semester Exam **Note:** 1. * Department should allot one extra lecture to Environment Science in time Table

2. Students are required to undergo industrial/field training of minimum 4 weeks in the vacation of semester IV, and its evaluation will be carried out in Semester V.

Page 3 of 16 (Date: 04/07/2019)





Rev: ETC Engg. Course Structure/RIT/02/2018-19

Open Elective II &III

Sr. No	Name of Course		Course Code
1		Personal Effectiveness and Body Language	SH2592
2		Interpersonal Skills (Work Life Balance)	SH2612
3	Choice base soft Skill	Leadership and Public Speaking	SH2632
4	Program-III	Innovation Tools and Method for Entrepreneurs	SH2692
5		German Language -Basic Level	SH2732
6	-	Japanese language -Basic Level	SH2712
7		German Language -Advanced Level	SH2642
8		Japanese language - Advanced Level	SH2622

Note:

- 1. A student has to complete any two courses out of six choices offered under Choice Based Soft Skills Programme. A course in each semester will be allocated without any repetition.
- 2. The students who have completed 'German Language Lab' or 'Japanese Language Lab' in F.Y.B.Tech should not give their choice for 'German Language Basic Level' and 'Japanese Language Basic Level'. Such students may give their choices for 'German Language Advanced Level' and 'Japanese Language Advanced Level' (batch sizes 40 each) in the SY B.Tech Sem-IV only.
- 3. The students who will select and will successfully complete 'German Language Basic Level' and 'Japanese Language Basic Level' in SY BTech Sem-III will by default (mandatorily) appear for Advance Levels of said courses in Semester-IV.



Page 4 of 16 (Date: 04/07/2019)



K.E. Society'

Rajarambapu Institute of Technology, Sakharale

(An Autonomous Institute, affiliated to Shivaji University, Kolhapur)

Curriculum Structure and Evaluation

Implemented from 2018-19

Rev: ETC Engg. Course Structure/RIT/02/2018-19

Department: Electronics and Telecommunication Engineering

	s: T.Y. B.Tech		each		Τ				ester: ion Sc		
a a i			scher	ne	lits		Theor	w Ma		Duri	
Course Code	Course Title	L	Т	Р	Credits	Scheme	Max	Mi Pa	in for ssing %)	Max	ical Marks Min for Passing (%)
EC3012	Digital Signal Processing	3			3	ISE UT1 UT2 ESE	20 15 15 50	40	40	-	-
EC3032	Power Electronics	3			3	ISE UT1 UT2 ESE	20 15 15 50	40	40		-
EC3052	Product Design	3			3	ISE UT1 UT2 ESE	20 15 15 50	40	40	-	-
EC3072	Electromagnetic Waves & Antenna Theory	3			3	ISE UT1 UT2 ESE	20 15 15 50	40	40		-
PE I*	Program Elective – I	3			3	ISE UT1 UT2 ESE	20 15 15 50	40	40	-	-
EC3192	Comprehensive Exam III				1	ESE	100	50	-	-	-
EC3212	Digital Signal Processing Lab using MATLAB			2	1	ISE ESE	-	-	-	50 50	50 50
EC3232	Power Electronics Lab			2	1	ISE ESE	-	-	-	50	50
EC3252	Object Oriented Programming using C++ Lab			2	1	ISE ESE	-	-	-	50 50	50 50
EC3272	Antenna Lab			2	1	ISE ESE	-	-	-	50 50 50	50 50 50
SH3032	Aptitude Training I	2*			2	ISE UT1 UT2	20 15 15	40	40		50 50 - -
	Summer Internship (4 weeks)				2	ESE ISE	50	- 40	-	- 100	- 50
SH3012	Mandatory Course(Indian Constitution/Essence of Indian Traditional Knowledge				Audit	ISE	100	50	50	-	-
	Total	17	0	08	24						-

Total Contact Hours/week Total Credits

:24

Comprehensive Exam Subjects : Electromagnetic Waves & Antenna Theory, Digital Signal Processing,

CMOS VLSI Design

ISE = In Semester Exam, MSE (UT1+UT2) UT-I = Unit Test-I, UT-II = Unit Test-II, ESE = End Semester Exam **Note*:** Department should allot one extra lecture to Aptitude Training-I in time Table.

Page 5 of 16 (Date: 04/07/2019)



Rev: ETC Engg. Course Structure/RIT/02/2018-19

	PROGRAM ELECTIVE I							
Sl.No	Course code	Domain	Course Name					
1	EC3092	Communication	Information Theory and Coding					
2	EC3112	Embedded System	Mixed Mode Controller					
3	EC3132	Signal Processing	Audio Video Engineering					
4	EC3152	VLSI DVT	RTL Simulation and Synthesis with PLDs					
5	EC3172	Industrial Automation	Control System					



Page 6 of 16 (Date: 04/07/2019)



Rev: ETC Engg. Course Structure/RIT/02/2018-19

Department:	Electronics and 7	Felecommunication	Engineering
~	and the second se		0 0

		Tea	ching s	cheme	s	Evalu	ation Sch	eme			
					Credits	e	Theor	y Mar	ks	Practi	cal Marks
Course Code	Course Title	L	Т	Р	C	Scheme	Max	Min Pas (%)		Max	Min for Passing (%)
						ISE	20		Sec.	-	-
EC3022		3			3	UT1	15	40	40	-	-
	CMOS VLSI Design			-		UT2	15		1.0	-	-
		-				ESE	50	40		-	-
						ISE	20			-	-
EC3042	Robotics	3			3	UT1	15	40	40	-	-
						UT2	15			9 -	-
			-			ESE	50	40		-	-
						ISE	20			-	-
EC3062	Artificial Intelligence	3			3	UT1	15	40	40	-	-
						UT2	15		40	-	
						ESE	50	40		-	-
						ISE	20			-	-
PE II*				1.1		UT1	15	40		-	-
PE II*	Program Elective – II	3			3	UT2	15		40	-	-
5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1						ESE	50	40		-	
						ISE	20			-	- 1
SH3022		3			3	UT1	15	40	10	-	_
5115022	Biology for Engineers	5			3	UT2	15		40	-	-
						ESE	50	40		-	-
EC3182	Comprehensive Exam IV				1	ESE	100	50	-	-	-
EC3202	CMOS VLSI Design Lab			12		ISE	-	-	-	50	50
LC3202	CMOS VESI Design Lab			2	1	ESE		-	-	50	50
EC3222	Python Programming			2	1	ISE	-	-	-	50	50
	Lab				1	ESE	-	-	-	50	50
EC3242	Electronic			2	1	ISE	-	-	-	50	50
	Measurement Lab		1	2	1	ESE	-	-	-	50	50
EC3262	Mini Project/Electronic			2	1	ISE	-	-	-	50	50
	Design workshop			-	-	ESE	-	-	-	50	50
						ISE	20			100	50
SH3052	Aptitude Training II	2*			2	UT1	15	40	40	-	-
		2				UT2	15		40	-	-
						ESE	50	40		-	-
	Total	17	00	08	22						

Total Contact Hours/week Total Credits

Comprehensive Exam Subjects : Power Electronics, Robotics, Electronic Measurement

:22

ISE = In Semester Exam, MSE (UT1+UT2) UT-I = Unit Test-I, UT-II = Unit Test-II, ESE = End Semester Exam Note*: Department should allot one extra lecture to Aptitude Training-II in time Table.

Page 7 of 16 (Date: 04/07/2019)



Rev: ETC Engg. Course Structure/RIT/02/2018-19

PROGRAM ELECTIVE II							
Sl.No	Course code	Domain	Course Name				
1	EC3082	Communication	Scientific Computing				
2	EC3102	Embedded System	MEMS				
3	EC3122	Signal Processing	Wavelets				
4	EC3142	VLSI DVT	Nano electronics				
5	EC3162	Industrial Automation	Automotive Electronics				



Page 8 of 16 (Date: 04/07/2019)



K.E. Society'

Rajarambapu Institute of Technology, Sakharale

(An Autonomous Institute, affiliated to Shivaji University, Kolhapur)

Curriculum Structure and Evaluation

Implemented from 2018-19

Rev: ETC Engg. Course Structure/RIT/02/2018-19

Department: Electronics and Telecommunication Engineering Class: Final Year B. Tech

Semester: VII

		Tea sche	ching me		s	Evalua	tion Sche	eme			
Course Code	Course Title		T		Credits	ల	Theory	Marks	6	Practio	cal Marks
		L	T	Р	C	Scheme	Max	Min Pass (%)		Max	Min fo Passing (%)
						ISE	20			-	-
EC4012	Computer Network	3			3	UT1	15	40	40	-	-
	computer retwork					UT2	15	1		-	-
						ESE	50	40		-	-
						ISE	20			-	-
EC4032	Internet of Things	3			3	UT1	15	40	40	-	-
	internet of Things					UT2	15		40	-	-
						ESE	50	40		-	-
						ISE	20	40			-
PE III*	Program Elective- III	3			3	UT1	15		40	-	-
						UT2	15				-
			-			ESE	50	40		-	-
						ISE	20				-
PE IV*	Program Elective -	3			3	UT1 UT2	15	40	40	-	-
	IV					ESE	15 50	10		-	-
								40	10	-	-
	Onen Election IV					ISE	20	40	40	-	-
OE-I*	Open Elective -IV	3			3	UT1	15			-	-
				÷.,		UT2	15			-	-
	Commuter Network			-		ESE	50	40		-	-
EC4252	Computer Networks and IoT Lab	magan		2		ISE	-	-	-	50	50
LCH2J2						ESE	-	-	-	50	50
PEL III*	Program Elective -			2	1	ISE	-	-	-	50	50
I LL III	III Lab			2		ESE	-	-	-	50	50
	Phase I			2	1	ISE	-	-		100	50
	Total	15		06	18						

Total Contact Hours/week Total Credits

:18

ISE = In Semester Exam, MSE (UT1+UT2) UT-I = Unit Test-I, UT-II = Unit Test-II, ESE = End Semester Exam

Sr.No.	Choice Based Track	Phase –I Details	Course Code
1	Internship & Project (IIP)	Liberal Learning	IP4012
2	Undergraduate Research Experience (URE)	URE Synopsis	RE4012
3	Entrepreneurship Development (ED)	Prefeasibility Report	ED4012
4	Regular Capstone Project (CP)	CP Synopsis	EC4372

Note: Students should work on Phase I of Choice based track allotted to them.

Page 9 of 16 (Date: 04/07/2019)



Rev: ETC Engg. Course Structure/RIT/02/2018-19

PROGRAM ELECTIVE III

Sl.No	Course code	Domain	Course Name					
1	EC4052	Communication	Microwave Theory and Techniques					
2	EC4072	Embedded System	Embedded Systems					
3	EC4092	Signal Processing	Bio-Medical Electronics					
4	EC4112	VLSI DVT	System Verilog					
5	EC4132	Industrial Automation	Programmable Logic Control (PLC)					
1	EC4272	PROGRAM ELEC						
1	EC4272 Communication		Microwave Theory and Techniques Lab					
2	EC4292	Embedded System	Embedded Systems Lab					
3	EC4312	Signal Processing	Bio-Medical Electronics Lab					
4	EC4332	VLSI DVT	System Verilog Lab					
5	EC4352	Industrial Automation	Programmable Logic Control (PLC)Lat					
		PROGRAM ELE	CTIVE IV					
	Course code	Domain	Course Name					
1	EC4152	Communication	Mobile Communication and Networks					
2	EC4172	Embedded System	Embedded Linux					
3	EC4192	Signal Processing	Mixed Signal Design					
4	EC4212	VLSI DVT	Low Power VLSI					
5	EC4232	Industrial Automation	Advanced Power Electronics					

OPEN ELECTIVE IV

Sr. No.	Branch	Course Code	Semester-VII Open Elective-IV Courses
1	Automobile	OE4012	Reliability Engineering
2	Automobile	OE4032	Product Design and Development
3	Automobile	OE4052	Design Thinking & Innovation
4	Civil	OE4072	Metro Systems and Engineering.
5	Civil	OE4092	Engineering Economics.
6	Civil	OE4112	Industrial Safety and Risk Management.
7	Computer	OE4132	Cyber Laws
8	Computer	OE4152	Database Administration
9	Electrical	OE4172	Optimization Techniques
10	Electrical	OE4192	Electrical Materials
11	E&TC	OE4212	Mechatronics
12	IT	OE4232	Open Source Software
13	Mechanical	OE4252	Aircraft Systems
14	Mechanical	OE4272	Supply Chain Management
15	Mechanical	OE4292	Non-conventional Energy Sources
16	Mechanical	OE4312	New Product Design and Development
17	MBA	OE4332	Marketing for Engineers

Page 10 of 16 (Date: 04/07/2019)



K.E. Society'

Rajarambapu Institute of Technology, Sakharale

(An Autonomous Institute, affiliated to Shivaji University, Kolhapur)

Curriculum Structure and Evaluation

Implemented from 2018-19

Rev: ETC Engg. Course Structure/RIT/02/2018-19

Track I: Industry Internship & Projects (IIP) Department: Electronics and Telecommunication Engineering

		Teach	ing Sc	heme			Eva	luation S	Scheme	
Course	Comm				dits	le	Theory Marks		Practical Mari	
Code	Course	L	Т	Р	Credits	Scheme	Max	Min. for passing (%)	Max	Min. for passing (%)
IPEC4002	Online Course- I/Self learning course-I	-	-	-	3	ESE*	-	-	100	50
OE4362	Engineering Management& Economics (Online Course)	-	-	-	2	ESE*	-	-	100	50
IP4022	Internship & Project	_	_	-	11	ISE	-	-	50	50
		1			11	ESE	-	-	50	50
	Total	·	-	-	16					

Total Contact Hours/week :--Total Credits : 16

ISE = In Semester Evaluation ,ESE = End Semester Exam

Note: 1] Online or self-learning course may be:

- A] Online Certification Course
- B] Self-study course approved by Dean Academics
 - All courses should be related to Industry project.

2] Engineering Management is Compulsory online course.

*Indicates that, student needs to produce certificate of online or certification course at the time of ESE. If student fails to produce this certificate, he or she will not be eligible to give ESE of Online course.

3] Weekly Contact hours are not mentioned as student is expected to be in industry regularly for 20 weeks. However, student needs to report to Institute mentors as and when required.

Guidelines for subject code of Self-study or online course:

1] XX is abbreviation of the department. Abbreviations are given below.

Mechanical Engineering-ME

Automobile Engineering-AE

Electrical Engineering-EE

Civil Engineering-CE

Information Technology-IT

Computer Science and Engineering-CS

Electronics and Telecommunication Engineering-EC

2] YYY is individual subject number. Department has to decide this number. While giving the number YYY to the subject following care must be taken.

A Number should start it 000

A] Number should start with 002

B] It should be even number.

Page 11 of 16 (Date: 04/07/2019)



K.E. Society'

Rajarambapu Institute of Technology, Sakharale

(An Autonomous Institute, affiliated to Shivaji University, Kolhapur)

Curriculum Structure and Evaluation

Implemented from 2018-19

Rev: ETC Engg. Course Structure/RIT/02/2018-19

Track II: Undergraduate Research Experience (URE)

Department: Electronics and Telecommunication Engineering **Class:** Final Year B. Tech

Semester: VIII

			Teaching Scheme			Evaluation Scheme						
Course Code	Course				Credit s	ne	The	ory N	larks	Practical Mark		
		L	Sch	Scł	Max	pas	n. for sing %)	Max	Min. for passing (%)			
RE4022	Research Methodology	3	-	-	3	ISE UT-1 UT-2 ESE	20 15 15 50	40	40	-	-	
RE4062	Research Methodology Lab	-	-	2	1	ISE	-	-	-	100	50	
OE4362	Engineering Management& Economics (Online Course)	-	-	-	2	ESE*	-	-	-	100	50	
RE4042	Research Project	-	-	10	10	ISE ESE	-	-	-	50 50	50 50	
	Total	03	-	12	16							

Total Contact Hours/week: 15Total Credits: 16ISE = In Semester Evaluation,UT-I = Unit Test-I, UT-II = Unit Test-IIESE = End Semester Exam

Note:

1] Engineering Management is Compulsory online course.

*For Online Certification course, student needs to produce certificate of online course at the time of ESE. If student fails to produce this certificate, he or she will not be eligible to give ESE of Online course. All courses should be related to research project

	1				
1	39	In	stit	120	
	X	8)	2		
	1	*/			

Page 12 of 16 (Date: 04/07/2019)



Rev: ETC Engg. Course Structure/RIT/02/2018-19

Track III: Entrepreneurship Development (ED)

Department: Electronics and Telecommunication Engineering Class: Final Year B. Tech

Semester: VIII

			Teaching Scheme			Evaluation Scheme						
Course Code	Course				Credits	ne	Theo	ry M	arks	Practical Marks		
coue		L	T	Р	C	Scheme	Max	pas	n. for sing %)	Max	Min. for passing (%)	
						ISE	20					
ED4102	Project Management	3	-	-	3	UT-1	15	40	40			
	5					UT-2	15		40		-	
						ESE	50	40				
		3	-	-	3	ISE	20	40				
ED4042	Commercial Aspects					UT-1	15		40			
DD 1012	of the Project					UT-2	15				-	
						ESE	50					
ED4062	Entrepreneurship Development Program (EDP)	-	-	-	1	ISE	-	-	-	100	50	
	Entrepreneurship		-	0		ISE				50	50	
LD4002	Development Project	-	-	9	9	ESE	-	-		50	50	
	Total	06	-	09	16		-	-	-	-		

Total Contact Hours/week :15 **Total Credits** :16

ISE = In Semester Evaluation, UT-I = Unit Test-I, UT-II = Unit Test-II ESE = End Semester Exam



Page 13 of 16 (Date: 04/07/2019)



Rev: ETC Engg. Course Structure/RIT/02/2018-19

Track IV: Regular Capstone Project (CP)

Department: Electronics and Telecommunication Engineering Class: Final Year B. Tech

Semester: VIII

				ichin heme		Evaluation Scheme						
Course							Theor	ry Ma	irks	Practical Marks		
Code	Course	L	T	P	Credits	Scheme	Max	for passing (%)		Max.	Min. for passing (%)	
			-	-	3	ISE	20			-	-	
PE V*	Program Elective-V	3				UT1	15	40	40	-	-	
						UT2	15		40	-	-	
						ESE	50	40		-	-	
					3	ISE	20			-	-	
OE V*	Open Elective-V	3	-	-		UT1	15	40	40	-	-	
						UT2	15			-	-	
						ESE	50	40		-	-	
OE4362	Engineering Management & Economics (Online Course)	-	-	-	2	ESE*	-	-	-	100	50	
EC4122	Capstone Project Phase II			8	0	ISE	-	-		50	50	
507122	Capstone i roject r nase II	-	-	δ	8	ESE	-	-		50	50	
	TOTAL	06	-	08	16							

Total Contact Hours/week : 14

Total Credits :16

ISE = In Semester Evaluation, UT-I = Unit Test-I, UT-II = Unit Test-II ESE = End Semester Exam

1] Engineering Management is Compulsory online course.

*For Online Certification course, student needs to produce certificate of online course at the time of ESE. If student fails to produce this certificate, he or she will not be eligible to give ESE of Online course



Page 14 of 16 (Date: 04/07/2019)



Rev: ETC Engg. Course Structure/RIT/02/2018-19

PROGRAM ELECTIVE V

Sl.No	Course code	Domain	Course Name
1	EC4022	Communication	Satellite Communication
2	EC4042	Embedded System	Real Time Embedded Systems
3	EC4062	Signal Processing	Computer Architecture
4	EC4082	VLSI DVT	Mixed mode VLSI Design
5	EC4102	Industrial Automation	Electric Drives

OPEN ELECTIVE V

Sr. No.	Branch	Course Code	Semester-VIII
1	Automobile	OE4022	Open Elective-V Courses Renewable Energy Sources
2	Automobile	OE4042	Transport Management
3	Automobile	OE4062	Electric and Hybrid Electrical Vehicle
4	Civil	OE4082	Smart Cities and Sustainable Development.
5	Civil	OE4102	Material Management.
6	Computer	OE4122	Network Administration
7	Computer	OE4142	Information Technology Foundation Program
8	Electrical	OE4162	Finance Management
9	Electrical	OE4182	Electrical Installations and Maintenance
10	E&TC	OE4202	Image Processing
11	IT	OE4222	Information Technology and Business Management
12	Mechanical	OE4242	Computational Fluid Dynamics
13	Mechanical	OE4262	Entrepreneurship Development
14	Mechanical	OE4282	Hybrid Vehicles
15	Mechanical	OE4302	Maintenance Management
16	Mechanical	OE4322	Reverse Engineering and Benchmarking
17	MBA	OE4342	Finance for Engineers



Page 15 of 16 (Date: 04/07/2019)



Rev: ETC Engg. Course Structure/RIT/02/2018-19

B.Tech Honors

Semester	Course codes	B.Tech Honors
IV	EC4142	Electronics Enclosures and Thermal Issues
V	EC4162	Programming Data Structure & Algorithm in Python
V	EC4182	Android App development
VI	EC4202	Industrial Automation & Control
VI	EC4222	Deep learning for Visual Computing/ Introduction to Soft computing
VII	EC4242	Remote Sensing & Digital image Processing of Satellite data
VII	EC4262	Architecture of IC
VIII	EC4282	Cryptography and Network Security

B.Tech Minor

Semester	Course codes	B.Tech Minor
IV	EC4302	Analog Circuit/Basis Electronics
V	EC4322	Digital Circuits
V	EC4342	OP-AMP Practical Application
VI	EC4362	Microprocessors and Microcontrollers
VI	EC4382	Control Systems
VII	EC4402	Internet of Things
VII	EC4422	Image Processing
VIII	EC4424	Embedded System Design



Page 16 of 16 (Date: 04/07/2019)



				ching ieme	1	7)		Carlos and a second		Scheme	
Course	Course				ij	۰.	Theory (Marks)			Practical (Mark	
Code		L	Т	Р	Credi	Sche	Max	Min.		Max.	Min. fo
					-		~~	passi	ng(%)		passing(%)
						ISE UT1	20	40			
ME2012	Material Science & Metallurgy	3	=	-	3	UT2	15		40		
						ESE	50	40			
						ISE	20				Adverte Attente
					-	UT1	15	40	10		
ME2032	Engineering Thermodynamics	3	-	о н :	3	UT2	15		40		
						ESE	50	40			
						ISE	20	1			
					3	UT1	15	40	40		
ME2052	Engineering Mechanics	3	50	1	Э	UT2	15		40		
						ESE	50	40			
						ISE	20	- 40		()=>=(=)	(100000)
100070	Fluid Mechanics and Fluid Machines	3	-	-	3	UT1	15	40	40	2-0-00-0 	(1778)
ME2072	Fluid Mechanics and Fluid Machines				~	UT2	15		-		
						ESE	50	40			
						ISE	20	10			
ME2092	Manufacturing Processes and Machine	3	-	-	3	UT1	15 15	40	40		
WILL OF L	Tools					UT2 ESE	50	40	-		
					-	ISE	20	10	40		
	e					UTI	15	40			
ME2112	Electrical Technology	2	-	-	2	UT2	15				
		-				ESE	50	40			(1000)
	Environmental Science	1*		-	1	ISE	50	40	40		
SH2172	Environmental Science	1 '		-		ESE	50	40	365		
ME2512	Engineering Mechanics Lab	-	-	2	1	ISE		*****		100	50
		-		2	1	ISE				50	50
ME2532	Thermal Engineering Lab-I	-	-			ESE	****			50	50
ME2552	Material Science & Metallurgy Lab	-	-	2	1	ISE				100	50
ME2572	Workshop Practice –I	-	-	2	1	ISE				100	50
ME2592	Comprehensive Exam-I	-	-	-	1	ESE	1995	-		100	50
SH2602	Environmental Project	-	-	2	1	ISE				100	50
	Open Elective- II Choice Based Soft Skill Program-I	-	-	2	1	ISE		-	-	100	50
	TOTAL	18	-	12	25						

ISE = In Semester Evaluation, UT1 = Unit Test-I, UT2 = Unit Test-II ESE = End Semester Examination

Total Credits

Total

Note*: One extra lecture to be allotted to Environment Science in time Table.

: 30

: 25

Comprehension Exam Courses: Material Science, Engineering Thermodynamics, Engineering Mechanics, Fluid Mechanics and Fluid Machines, Manufacturing Processes and Machine Tools





Sr. No.	Subject Name		Course Code
1	Choice Based	Personal Effectiveness & Body Language	SH2592
2.	Soft Skill	Interpersonal Skills (Work life Balance)	SH2612
3	Program-I & II	Leadership & Public Speaking	SH2632
4.		Innovation Tools and Methods for	SH2692
19242		Entrepreneurs	
5		German Language – Basic Level	SH2732
6.	_	Japanese Language – Basic Level	SH2712

Note:

- 1. A student has to complete any two courses out of six choices offered under Choice Based Soft Skills Programme. A course in each semester will be allocated without any repetition.
- 2. The students who have completed 'German Language Lab' or 'Japanese Language Lab' in F.Y. B. Tech should not give their choice for 'German Language Basic Level' and 'Japanese Language Basic Level'. Such students may give their choices for 'German Language Advanced Level' and 'Japanese Language Advanced Level' and 'Japanese Language Advanced Level' (batch sizes 40 each) in the S.Y. B. Tech Sem-IV only.
- 3. The students who will select and will successfully complete 'German Language Basic Level' and 'Japanese Language Basic Level' in S.Y. B. Tech Sem-III will by default (mandatorily) appear for Advance Levels of said courses in Semester-IV.





K.E. Society's Rajarambapu Institute of Technology, Rajaramnagar (An Autonomous Institute, affiliated to Shivaji University, Kolhapur) Curriculum Structure and Evaluation Scheme With effective from 2018-22 [2018-22 & 2019-23 Batch] Department of Mechanical Engineering

Department: Mechanical Engineering

	Y. B. Tech			0.1			F			er: IV Schem	e
Course	Course	L		g Sch	eme			y (Ma		Pract	ical (Marks)
Code		y a di.			Credits	Scheme	Max	Min. passi (%)	for	Max	Min. for passing (%)
SH2062	Engineering Mathematics –III	3	1	-	4	ISE UT1 UT2	20 15 15	40	40		
	Mathematics –III					ESE ISE	50 20	40			
ME2022	Strength of Material	3	-		3	UT1 UT2 ESE	15 15 50	40	40		
ME2042	Applied Thermodynamics	3	-	-	3	ISE UT1 UT2	20 15 15	40	40		
ME2042	Applied Thermody		-	-	-	ESE ISE	50 20	40			
ME2062	Manufacturing Engineering	3	-	-	3	UT1 UT2 ESE	15 15 50	40	40		
ME2082	Kinematics of Machines	3		-	3	ISE UT1 UT2	20 15 15	40	40		
ME2082			-			ESE ISE	50 20	40			
ME2102	Computer Programming C++	2	35	-	2	UT1 UT2 ESE	15 15 50	40	40		
ME2522	Machine Drawing Lab	-	-	2	1	ISE ESE		-		50 50	50 50
ME2542	Kinematics of Machines Lab		-	2	1	ISE				100 50	50
ME2562	Computer Programming C++ Lab	-	-	2	1	ISE ESE ISE				50	50 50 50
ME2582	Workshop Practice – II	-	-	2	1	ESE		-		50	50
ME2602	Comprehensive Exam-II	-	-	-	1	ESE				100	50
	Open Elective- III Choice Based Soft Skill Program-II	-	-	2	1	ISE	-	-		100	50
	TOTAL	17	1	10	24		10			_	

ISE = In Semester Evaluation, UT1 = Unit Test-I, UT2 = Unit Test-II ESE = End Semester Examination

: 28 **Total Contact Hours/week**

Total Credits

: 24 Comprehension Exam Courses : Strength of Material, Applied Thermodynamics, Engineering Mathematics -- III, Manufacturing Engineering, Kinematics of Machines

Note: Students are required to undergo industrial / field training of minimum four weeks in the vacation of Semester-IV and its evaluation will be carried out in the Semester-V





Sr. No.		Subject Name	Course Code
1	Choice Based	Personal Effectiveness & Body Language	SH2592
2.	Soft Skill	Interpersonal Skills (Work life Balance)	SH2612
3.	Program-I & II	Leadership & Public Speaking	SH2632
4.	Trogram	Innovation Tools and Methods for	SH2692
		Entrepreneurs	1
5.		German Language – Advanced Level	SH2642
6.	-	Japanese Language - Advanced Level	SH2622

Note:

- 1. A student has to complete any two courses out of six choices offered under Choice Based Soft Skills Programme. A course in each semester will be allocated without any repetition.
- 2. The students who have completed 'German Language Lab' or 'Japanese Language Lab' in F.Y. B.Tech should not give their choice for 'German Language - Basic Level' and 'Japanese Language - Basic Level'. Such students may give their choices for 'German Language - Advanced Level' and 'Japanese Language - Advanced Level' (batch sizes 40 each) in the S.Y. B. Tech. Sem-IV only.
- 3. The students who will select and will successfully complete 'German Language Basic Level' and 'Japanese Language - Basic Level' in S.Y. B.Tech Sem-III will by default (mandatorily) appear for Advance Levels of said courses in Semester-IV.





Department: Mechanical Engineering

Class:	T. Y. B. Tech								- Alter at the second	ester:	- VV
Course	Course	Tea	chi	ng Sc	heme			Eva	luation S	Schem	e
Code	Course	L	T	P		a	Theory (Marks)			Practical (Marks)	
					Credits	Scheme	Max	Min. f passin		Max	Min. fo passing(%)
						ISE	20				
				. 1		UT1	15	40	40		
ME3012	Dynamics of Machines	3	-		3	UT2	15		40	(095
		1				ESE	50	40			
		1000				ISE	20				
	Design of Machine	2	1		3	UT1	15	40	40		
ME3032	Elements	3	-	:=	5	UT2	15		10		
	Elements					ESE	50	40			
						ISE	20				
	Metrology & Control	2			3	UT1	15	40	40		
ME3052	Engineering	3	-	-	5	UT2	15				
	Engineering		_			ESE	50	40			
						ISE	20				
		3		-	3	UTI	15	40	40		
ME3072	Heat Transfer	2	-	-	5	UT2	15				
			1			ESE	50	40			
						ISE	20		40		
				16	100	UT1	15	40			
	Program Elective-I	3	-		3	UT2	15	1	40		
	0					ESE	50	40	1 .		
			1000			ISE		0.5 507		50	50
ME3512	Workshop Practice – III	-	1	2	1	ESE				50	50
WIE5512	A WARRANT AND A WARRANT	-	-	1		ISE				50	50
ME3532	Dynamics of Machinery Lab	-	-	2	1	ESE				50	50
ME3552	Metrology & Measurement Lab	-	-	2	1	ISE				100	50
ME3572	Thermal Engineering Lab-II		-	2	1	ISE			2 00	100	50
ME3592	CAD-Modelling	-	-	2	1	ISE				100	50
ME3592 ME3612	Comprehensive Exam-III	-	-	-	1	ESE			2000 C	100	50
ME3012	Comprehensive Exam III					ISE	20		1.01.025		
		1				UT1	15	40	40		
SH3032	Aptitude Training I	2*	-	-	2	UT2	15		40		
JAROULA						ESE	50	40			
ME3632	Summer Internship	-	-	-	2	ISE				100	50
SH301	Indian Constitution	2	4	-	Audit	ISE	100	50 (P/N)		-	
SHSUI	TOTAL	19	-	10	25						
1	IUIAD		1	1	1. CC (11	-		10	ter Examin	ation	

ISE = In Semester Evaluation, UT1 = Unit Test-I, UT2 = Unit Test-II ESE = End Semester Examination

Total Contact Hours/week

: 29

: 25 **Total Credits** Note*: One extra lecture to be allotted to Aptitude Training-I in time Table.

Dynamics of Machines, Design of Machine Elements, Metrology & Control Comprehensive exam Courses: Engineering, Heat Transfer





Sr. No.	Course Code	Domain	Course							
1.	ME3312	Desis	Mechanics of Composite Material							
2.	ME3332	Design	Textile Technology							
3.	ME3352	Thermal	Energy Conversion and Management							
4.	ME3372	Thermal	Nuclear Power Engineering							
5.	ME3392		World Class Manufacturing							
6.	ME3412		Non Traditional Machining Processes							
7.	ME3432	Manufacturing	Advanced Casting & Joining Processes							
8.	ME3452	1	Industrial Organization and Management							

Program Elective-I





Class:	T. Y. B. Tech									er: VI	
		Tead	ching	Sch	eme			Evalua	tion Se	cheme	
Course					ts	e	Theor	y (Marks)	Practical (Marks	
Code	Course	L	T	Р	Credits	Scheme	Max	Min. for passing(%)		Max	Min. for passing(%)
	-					ISE	20				
					~	UT1	15	40	40		
ME3022	Machine Design	3	-	-	3	UT2	15		40		
						ESE	50	40			
						ISE	20				
	Engines and	2			3	UT1	15	40	40		
ME3042	Refrigeration	3	-	-	3	UT2	15		1.0		
						ESE	50	40			
						ISE	20				
	B. Flooting II	3	-	lies 1	3	UT1	15	40	40		
	Program Elective-II	5	-		-	UT2	15				100
		-				ESE	50	40			
						ISE	20				
	Open Elective-IV	3	1 -	-	3	UT1	15	40	40		
	Open Elective-IV	1	- 10 E			UT2	15	10			
			-			ESE	50	40	1		
						ISE	20	40	1	1. 1000	
SH302	Biology for Engineers	3	-	-	3	UT1 UT2	15 15	- 40	40		
511502	Dioxogy for Engineer				Ales	ESE	50	40	-		
						ISE		40		50	50
ME3522	Thermal Engineering		-	2	1	ESE			1.11	50	50
and the same the spectrum set	Lab-III		-	2	1	ISE				100	50
ME3542	Software Training-I			-		ESE				100	50
ME3562	Comprehensive exam-IV	-	-	-	1			-	and the second second	100	50
ME3582	Capstone Project phase-I	-	-	2	2	ISE			-		
		-			-	ISE	20	-			
CITAC IS	Aptitude training- II	2*	-	-	2	UT1	15	40	40		
SH3042				1	-	UT2	15		_		
				-		ESE	50	40	1		
	TOTAL	17	-	6	22				- 4 ₁ ,		

ISE = In Semester Evaluation, UT1 = Unit Test-I, UT2 = Unit Test-II ESE = End Semester Examination

Total Contact Hours/week : 23 Total Credits : 22

Note*: One extra lecture to be allotted to Aptitude Training-II in time Table.

Comprehensive exam Courses: Machine Design, Engines and Refrigeration





Program Elective - II

Sr. No.	Course Code	Discipline	Course
1.	ME3622		Solid Mechanics
2.	ME3642		Biomechanics
3.	ME3662	Design	Tribology
4.	ME3682		Fracture Mechanics
5.	ME3702		Finite Element Method
6.	ME3722		Alternative fuels
7.	ME3742	The second 1	Steam Engineering
8.	ME3762	Thermal	Gas turbines & Jet Propulsion
9.	ME3782		Power Plant engineering
10.	ME3802	_	Additive Manufacturing
11.	ME3822		Computer Integrated Manufacturing System
12.	ME3842	Manufacturing	Industrial Hydraulics and Pneumatics
13.	ME3862		Operation Research
14.	ME3882		Total Productive Maintenance





Open Elective-IV

Sr. No.	Branch	Course Code	Open Elective-IV Courses
1.	Automobile	OE3022	Reliability Engineering
2.	Automobile	OE3042	Renewable Energy Sources
3.	Civil	OE3062	Environmental Impact Assessment
4.	Civil	OE3082	Material Management.
5.	Computer	OE3102	Network Administration
6.	Computer	OE3122	Information Technology Foundation Program
7.	E&TC	OE3142	Mechatronics
8.	Electrical	OE3162	Engineering Materials
9.	Electrical	OE318	Industrial Drives
10.	CS&IT	OE320	Artificial Intelligence
11.	CS&IT	OE322	Cyber Forensics
12.	MBA	OE3242	Marketing for Engineers
13.	Mechanical	OE3262	Aircraft Systems
14.	Mechanical	OE3282	Supply Chain Management
15.	Mechanical	OE330	New Product Design and Development
16.	Mechanical	OE3322	Entrepreneurship Development
17.	Mechanical	OE334	Research Methodology





K.E. Society's Rajarambapu Institute of Technology, Sakharale (An Autonomous Institute, affiliated to Shivaji University, Kolhapur) Curriculum Structure and Evaluation Scheme (To be implemented from 2019-20)

Rev: SH Course Structure/RIT/01/2019-20

Department: Sciences and Humanities

Class: F. Y. B. Tech

Semester: I

Group A: Mechanical, Civil and Mechanical Engineering Automobile

			leacl Sche			5 5	E	valuat	ion Sc	heme	
Course Code	Course				its		Theory	(Marks	s %)	Practica	l (Marks %)
Code		L	Т	P	Credits	Scheme	Max.	Min Pas		Max.	Min. for Passing
						ISE	20			·	
SH 131	Engineering Physics	3	_	_	3	UT1	15	40	40		
511 151	Engineering Titysies	5			5	UT2	15		40		
<u></u>						ESE	50	40			
\bigcirc						ISE	20				
SH 1053	Engineering Mathematics I	3	1	-	4	UT1	15	40	40		
	2					UT2	15				
				-		ESE	50	40			
						ISE	20		동안은		
SH 1132	Engineering Graphics	1	-	ж	1	UT1	15	40	40		
ь. 1						UT2 ESE	15 50	40			
						ISE	20	40			
						UT1	15	40			
	Open Elective - I	2	-		2	UT2	15		40		
			8			ESE	50	40			
SH 187	Engineering Physics Lab	14	-	2	1	ISE			-	100	50
SH 1552	Engineering Graphics Lab	18	-	4	2	ISE			-	100	50
	Open Elective - I Lab	-	-	2	1	ISE			-	100	50
Su 1831/	English Proficiency Lab I/ Japanese Language Lab Level					ISE			-	60	-
SH 1582/ SH 1601	I /German Language Lab Level I	-	-	4	2	ESE			-	40	50
SH 185	Engineering Practice Lab I			2	1	ISE				100	50
CII 190	Engineering Exploration and		o solare	1	2	ISE			-	80	50
SH 189	Design Project	4 2			ESE			-	20	50	
	Total:	9	1	18	19						
Т	otal Contact Hours:		28		19	5					

Total Contact Hours/week: 28

Total Credits: 19

ISE = In Semester Exam, MSE (UT1+UT2) UT-I = Unit Test-I, UT-II = Unit Test-II

ESE = End Semester Exam





Class:

K.E. Society's Rajarambapu Institute of Technology, Sakharale (An Autonomous Institute, affiliated to Shivaji University, Kolhapur) Curriculum Structure and Evaluation Scheme (To be implemented from 2019-20)

Rev: SH Course Structure/RIT/01/2019-20

Department: Sciences and Humanities

F. Y. B. Tech

Semester: II

Group A: Mechanical, Civil and Mechanical Engineering Automobile

				hing eme				Evalu	ation Sch	neme	17 17 - 19 17 - 19
Course	Comme	T				el.	Theory	(Mai	·ks %)	Practic	al (Marks %)
Code	Course	L	T	P	Credits	Scheme	Max.		n. for Issing	Max.	Min. for Passing
					-	ISE	20				
						UT1	15	40	40		
SH 1033	Engineering Chemistry	3	-	-	3	UT2	15		40		
1 m						ESE	50	40			
S						ISE	20				
- 1	T	3	1	-	4	UT1	15	40	40		
SH 1023	Engineering Mathematics II	3	1	-	4	UT2	15		10		
2						ESE	50	40			
1						ISE	20				
·		3	-	_	3	UT1	15	40	40		
SH 1291	Electrical Engineering	5	5 -			UT2	15	1			
ie in the second se					21	ESE	50	40			
						ISE	20				(4) = 4)
	Programming for Problem Solving	2	_	-	2	UT1	15	40	40		
SH 133	Programming for Problem Solving	2			1	UT2	15				
а р.						ESE	50	40			
SH 1532	Engineering Chemistry Lab —	-	-	2	(1)	ISE				100	50
SH 1791	Electrical Engineering Lab	-	-	2	1	ISE				100	50
SH 191	Programming for Problem Solving Lab	-	-	4	2	ISE				100	50
SH 162/	English Proficiency Lab. II/			4		ISE				60	50
SH 1661 /SH168	Japanese Language Lab Level II/ German Language Lab Level II	-	-	4	2	ESE				40	
SH 164	Engineering Practice Lab II	-	-	2	1	ISE				100	50
	Total:	11	1	14			_				
	Total Contact Hours:		26	i	19					. 10	

Total Contact Hours/week: 26

Total Credits: 19

ISE = In Semester Exam, MSE (UT1+UT2) UT-I = Unit Test-I, UT-II = Unit Test-II ESE = End Semester Exam





K.E. Society's Rajarambapu Institute of Technology, Sakharale (An Autonomous Institute, affiliated to Shivaji University, Kolhapur) Curriculum Structure and Evaluation Scheme (To be implemented from 2019-20)

Rev: SH Course Structure/RIT/01/2019-20

Department: Sciences and Humanities

Class: F. Y. B. Tech

Semester: I

Group B: Electronics & Telecommunication, Electrical, Computer Science and Engineering & Computer Science and Information Technology

		,	Teac Scho	-				Evalu	ation Sc	heme	
Course	Course				ts		Theory	(Mai	rks %)	Practical (Marks %	
Code	Course	L	Т	P	Credits	Scheme	Max.		n. for Issing	Max.	Min. for Passing
		-				ISE	20				
					3	UT1	15	40	40		
SH 1033	Engineering Chemistry	3	-	-	2	UT2	15		40		
\cap						ESE	50	40			
						ISE	20				
		3	1		4	UT1	15	40	40		
SH 1053	Engineering Mathematics I	3	1		4	UT2	15				
						ESE	50	40			
						ISE	20				
CTT 1301	Electrical Engineering	3	_	_	3	UT1	15	40	40		
SH 1291	Electrical Engineering	5	_		5		UT2 15				
	-					ESE	50	40	1.1	2 2, 7,	
						ISE	20				
	D fan Duchlam	2	_	_	2	UT1	15	40	40		
SH 133	Programming for Problem Solving	4	-		2	UT2	15	-			
	Solving					ESE	50	40	1		(
SH 1532	Engineering Chemistry Lab		-	2	1	ISE				100	50
SH 1791	Electrical Engineering Lab	-	14	2	1	ISE				100	50
(JH 191	Programming for Problem Solving Lab	-	-	4	2	ISE				100	50
SH 1831/	English Proficiency Lab I/					ISE				60	50
SH 1582/ SH 1601	Japanese Language Lab Level I/ German Language Lab Level I	-	-	4	2	ESE				40	
SH 185	Engineering Practice Lab I	-	-	2	1	ISE				100	50
	Total:	11	1	14	10						
,	Total Contact Hours:		26		19				12	5	
		1	Arrest Test				Cradite	10		want to see a second second	

Total Contact Hours/week: 26

Total Credits: 19

ISE = In Semester Exam, MSE (UT1+UT2) UT-I = Unit Test-I, UT-II = Unit Test-II ESE = End Semester Exam





K.E. Society's Rajarambapu Institute of Technology, Sakharale (An Autonomous Institute, affiliated to Shivaji University, Kolhapur) Curriculum Structure and Evaluation Scheme

(To be implemented from 2019-20)

Rev: SH Course Structure/RIT/01/2019-20

Department: Sciences and Humanities **Class:** F. Y. B. Tech

Semester: II

Group B: Electronics & Telecommunication, Electrical, Computer Science and Engineering & Computer Science and Information Technology

Course				ach cher	0			Evalua	tion S	cheme	
Code	Course	L	Т	, F	Cradite	Schem		y (Marl	ks %)	Practic	cal (Marks %)
					2		Max.	Min. for Passing		Max.	Min. for Passing
						ISE	20	_			
SH 106	Engineering Physics	3	-	-	3	UT1	15	40	40		
	54 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -					UT2	15		40		
5		+	+	-		ESE	50	40			
0						ISE	20	-			
SH 1023	Engineering Mathematics II	3	1	-	4	UT1	15	40	40		
						UT2	15		10		
		-	+	+		ESE	50	40			
						ISE	20		8		
SH 1132	Engineering Graphics	1	18	-	1	UT1 UT2	15	40	40		
						ESE	15	10			
		-	-	┼──	-	ISE	50	40			
						UT1	20				
	Open Elective- I	2	-	-	2	UT2		40	40		
						ESE	15	10			
SH 1512	Engineering Physics Lab	_		2	1		50	40			
SH 1552		_		-		ISE			-3	100	50
511 1552	Engineering Graphics Lab	-	-	4	2	ISE			-	100	50
	Open Elective- I Lab	-	-	2	1	ISE				100	50
९५ 162/	English Proficiency Lab. II/					ISE				(0	
Sef 1661	Japanese Language Lab Level II	-	1	4	2					60	50
/SH168	/German Language Lab Level II					ESE				40	20
SH 164	Engineering Practice Lab II	-	-	2	1	ISE				100	50
SH 189	Engineering Exploration and	_		4	2	ISE				80	
	Design Project	_	-	4	2	ESE				20	50
	Total:			18	10						
T		28		19							
Tota	l Contact Hours/week : 28						11		Total C	Credits: 19	

Total Credits: 19

ISE = In Semester Exam, MSE (UT1+UT2) UT-I = Unit Test-I, UT-II = Unit Test-II ESE = EndSemester Exam



K.E. Society's Rajarambapu Institute of Technology, Sakharale (An Autonomous Institute, affiliated to Shivaji University, Kolhapur) Curriculum Structure and Evaluation Scheme (To be implemented from 2019-20)

Rev: SH Course Structure/RIT/01/2019-20

Sr. No.	Course	Department	Course Title						
	Code	Sole:							
1.	SE1011	Electronics and	Basics of Electronics Engineering						
2.	SE1511	telecommunications Engineering	Basics of Electronics Engineering Lab						
3.	SE1051	Circil Engineering	Basics of Civil Engineering						
4.	SE1551	Civil Engineering	Basics of Civil Engineering Lab						
5.	SE1071		Thermodynamics						
6.	SE1571	Mashaniaal Engineering	Thermodynamics Lab						
7.	SE1091	Mechanical Engineering	Engineering Materials						
8.	SE1591		Engineering Materials Lab						
9.	SE1131	Civil Engineering	Green Technology						
10.	SE1631	Civil Engineering	Green Technology Lab						
11.	SE143	Mechanical Engineering	Basics of Mechanical Engineering						
12.	SE165	Automobile & Mechanical Engineering	Basics of Mechanical Engineering Lab						
13.	SE145	Machanical Engineering	Creativity, Design Thinking and Entrepreneurial Mindset						
14.	SE167	Mechanical Engineering	Creativity, Design Thinking and Entrepreneurial Mindset Lab						

Humanities & Social Science: Choice Based Languages

Sr. No.	Course Code	Department	Course Title
1.	SH1831	Sciences and Humanities Department	English proficiency Lab I
2.	SH162		English proficiency Lab II
3.	SH1582		Japanese Language Lab Level I
4.	SH1661		Japanese Language Lab Level II
5.	SH1601		German Language Lab Level I
6.	SH168		German Language Lab Level II

