



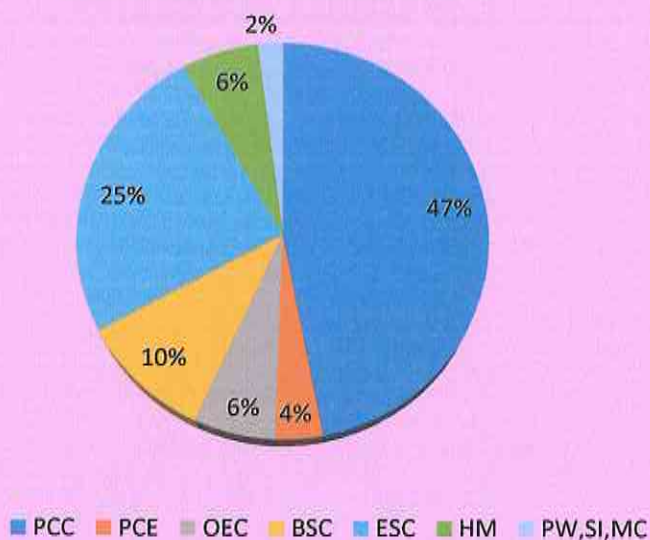
Dinkarrao K. Shinde Smarak Trusts
DR. A. D. SHINDE COLLEGE OF ENGINEERING
Bhadgaon, Gadhinglaj. Dist: Kolhapur Pin:416502
Academic Year 2024-25
Department of Civil Engineering



CREDIT STRUCTURE

Department	Civil Engineering		
Sr. No.	COURSE NAME	ABBREVIATION	PERCENTAGE CREDITS
1	Professional Core Courses [PCC]	PCC	46.91
2	Professional Core Elective [PCE]	PCE	3.61
3	Open Elective Courses [OEC]	OEC	6.19
4	Basic Science Courses [BSC]	BSC	10.31
5	Engineering Science Courses [ESC]	ESC	24.74
6	Humanities [HM]	HM	6.19
7	Project Work, Field Training, Seminar [PW, SI, MC]	PW, SI, MC	2.07

Department of Civil Engineering
PERCENTAGE CREDITS





Dinkarrao K. Shinde Smarak Trusts

DR. A. D. SHINDE COLLEGE OF ENGINEERING.

Bhadgaon, Gadhinglaj. Dist: Kolhapur Pin:416502

Academic Year 2024-25

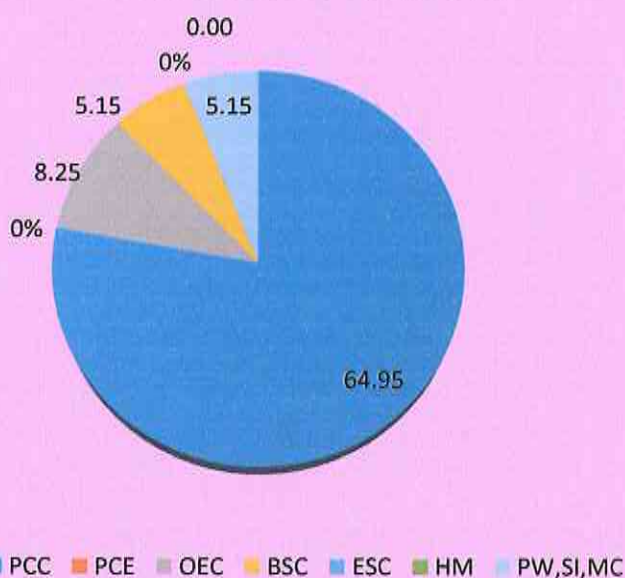
Department of Electrical Engineering



CREDIT STRUCTURE

Department	Electrical Engineering		
Sr. No.	COURSE NAME	ABBREVIATION	PERCENTAGE CREDITS
1	Professional Core Courses [PCC]	PCC	64.95
2	Professional Core Elective [PCE]	PCE	0.00
3	Open Elective Courses [OEC]	OEC	8.25
4	Basic Science Courses [BSC]	BSC	5.15
5	Engineering Science Courses [ESC]	ESC	0.00
6	Humanities [HM]	HM	0.00
7	Project Work, Field Training, Seminar [PW, SI, MC]	PW, SI, MC	5.15

Department of Electrical Engineering PERCENTAGE CREDITS





Dinkarrao K. Shinde Smarak Trusts

DR. A. D. SHINDE COLLEGE OF ENGINEERING

Bhadgaon, Gadhinglaj. Dist: Kolhapur Pin:416502

Academic Year 2024-25

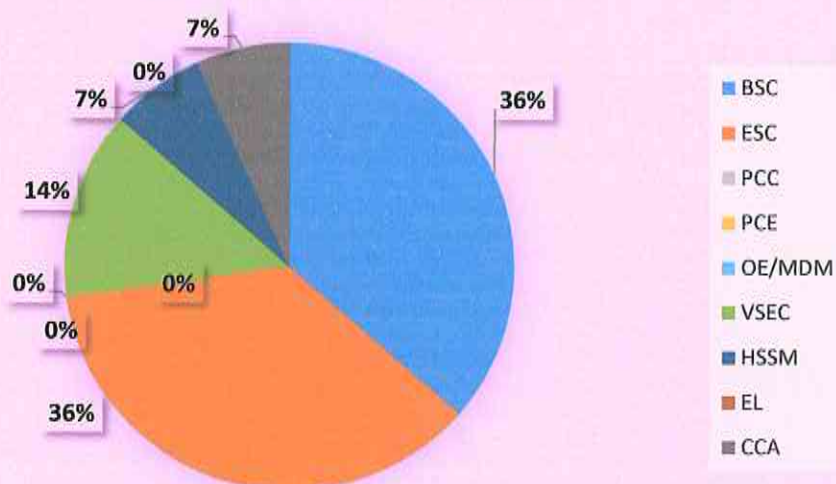
Department of First Year Engineering



CREDIT STRUCTURE

Department	First Year Engineering [NEP 2.0]		
Sr. No.	COURSE NAME	ABBREVIATION	PERCENTAGE CREDITS
1	Basic Science Courses [BSC]	BSC	36.36
2	Engineering Science Courses [ESC]	ESC	36.36
3	Professional Core Courses [PCC]	PCC	0.00
4	Professional Core Elective [PCE]	PCE	0.00
5	Open Elective [OE/MDM]	OE/MDM	0.00
6	Vocational & Skill Enhancement course [VSEC]	VSEC	13.64
7	Humanities Social Science and Management [HSSM]	HSSM	6.82
8	Experiential Learning [EL]	EL	0.00
9	Co-curricular and Extracurricular Activities[CCA]	CCA	6.82

First Year Engineering PERCENTAGE CREDITS





Dinkarrao K. Shinde Smarak Trusts

DR. A. D. SHINDE COLLEGE OF ENGINEERING.

Bhadgaon, Gadhinglaj. Dist: Kolhapur Pin:416502

Academic Year 2024-25

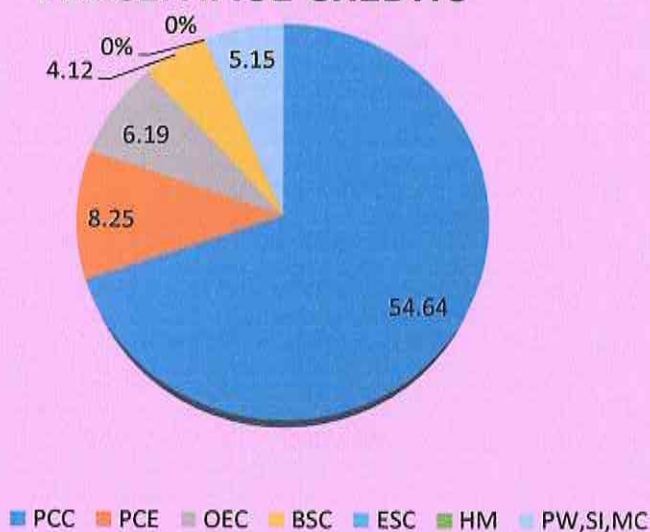
Department of Mechanical Engineering



CREDIT STRUCTURE

Department	Mechanical Engineering		
Sr. No.	COURSE NAME	ABBREVIATION	PERCENTAGE CREDITS
1	Professional Core Courses [PCC]	PCC	54.64
2	Professional Core Elective [PCE]	PCE	8.25
3	Open Elective Courses [OEC]	OEC	6.19
4	Basic Science Courses [BSC]	BSC	4.12
5	Engineering Science Courses [ESC]	ESC	0.00
6	Humanities [HM]	HM	0.00
7	Project Work, Field Training, Seminar [PW, SI, MC]	PW, SI, MC	5.15

Department of Mechanical Engineering PERCENTAGE CREDITS





SHIVAJI UNIVERSITY, KOLHAPUR

SYLLABUS

Third Year (B. Tech.) CBCS

In

CIVIL ENGINEERING

(To be implemented From JUNE 2020)



Third Year CIVIL ENGINEERING – CBCS PATTERN

SEMESTER – V																					
Sr. No	Course (Subject Title)	TEACHING SCHEME									EXAMINATION SCHEME										
		THEORY			TUTORIAL			PRACTICAL			THEORY					PRACTICAL			TERM WORK		
		Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Hours	Mode	Marks	Total Marks	Min	Hours	Max	Min	Hours	Max	Min
1	PCC-CV501	3	3	3	-	-	-	1	2	2		CIE	30	100	40	As per BOS Guidelines	25	10	2	50	20
2	PCC-CV502	4	4	4	-	-	-	1	2	2		ESE	70	100	40		-	-	2	25	10
3	PCC-CV503	3	3	3	-	-	-	1	2	2		CIE	30	100	40		-	-	2	25	10
4	PCC-CV504	4	4	4	-	-	-	1	2	2		ESE	70	100	40		25	10	2	50	20
5	PCC-CV505	2	2	2	-	-	-	2	4	4		-	-	-	-		50	20	2	50	20
6	OEC-CV506	3	3	3	-	-	-	-	-	-		CIE	30	100	40		-	-	-	-	-
												ESE	70								
	TOTAL	19	19	19	-	-	-	6	12	12			500				100			200	
SEMESTER –VI																					
1	PCC-CV601	3	3	3	1	1	1	-	-	-		CIE	30	100	40	As per BOS Guidelines	-	-	2	25	10
2	HM-CV602	4	4	4	-	-	-	1	2	2		ESE	70	100	40		25	10	2	25	10
3	PCC-CV603	4	4	4	-	-	-	1	2	2		CIE	30	100	40		25	10	2	25	10
4	PCC-CV604	4	4	4	-	-	-	1	2	2		ESE	70	100	40		-	-	2	25	10
5	OEC-CV605	3	3	3	-	-	-	-	-	-		CIE	30	100	40		-	-	-	-	-
6	PCC-CV606	-	-	-	-	-	-	2	4	4		ESE	70	-	-		50	20	2	50	20
7	MC-CV607	-	-	-	-	-	-	1	2	2		-	-	-	-		-	-	2	50	20
8	*SI-CV707	-	-	-	-	-	-	-	-	-		-	-	-	-		-	-	-	-	-
	TOTAL	18	18	18	1	1	1	6	12	12			500			75			225		
	TOTAL	37	37	37	1	1	1	12	24	24			1000			175			425		

CIE- Continuous Internal Evaluation
ESE – End Semester Examination



SEMESTER - V					
Sr. No	Code No.	Course (Subject Title)		Semester	Credits
1	PCC-CV501	WRE-I	Water Resource Engineering-I	5	4
2	PCC-CV502	DSS	Design of Steel Structures	5	5
3	PCC-CV503	EE-I	Environmental Engineering-I	5	4
4	PCC-CV504	GTE-I	Geotechnical Engineering-I	5	5
5	PCC-CV505	BPD	Building Planning and Design	5	4
6	OEC-CV506	OE-I	Open Elective-I	5	3
TOTAL					25

SEMESTER -VI					
Sr. No	Code No.	Course (Subject Title)		Semester	Credits
1	PCC-CV601	TOS	Theory of Structures	6	4
2	HM-CV602	EM	Engineering Management	6	5
3	PCC-CV603	EE-II	Environmental Engineering-II	6	4
4	PCC-CV604	GTE-II	Geotechnical Engineering-II	6	5
5	OEC-CV605	OE-II	Open Elective-II	6	4
6	PCC-CV606	SDD-I	Structural Design and Drawing-I	6	2
7	MC-CV607		SEMINAR	6	1
8	*SI-CV707	FT	Field Training	-	-
TOTAL					25



SU/BOS/Sci. & Tech/7400

Date: 21/07/2018

To,

The Principal/ Director,
 All affiliated Engineering Colleges/ Institute,
 Shivaji University, Kolhapur.

Subject : Regarding Guidelines, structure, of CBCS B. Tech. Program and syllabus of
 First Year B. Tech. Program under Faculty of Science and Technology.

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the
 University Authorities have accepted and granted approval to Guidelines, structure of CBCS
 B. Tech. Program and syllabus of First Year B. Tech. Program to following branches under
 Faculty of Science and Technology:

B. Tech. Programme (Branch)

1.	Civil Engineering & Technology
2.	Mechanical Engineering & Technology
3.	Production Engineering & Technology
4.	Automobile Engineering & Technology
5.	Electrical Engineering & Technology
6.	Chemical Engineering & Technology
7.	Electronics Engineering & Technology
8.	Electronics and Telecommunication Engineering & Technology
9.	Biotechnology Engineering & Technology
10.	Information Technology Engineering & Technology
11.	Environmental Engineering & Technology
12.	Computer Science Engineering & Technology

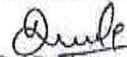
The revised syllabi shall be implemented from the academic year 2018-19 (i.e. from
 July 2018) onwards. A soft copy containing CBCS Guidelines, structure, and syllabus of First
 Year B. Tech. is enclosed herewith. The syllabus is also made available on university website
www.unishivaji.ac.in.

Further, it is hereby informed that the question papers on the pre-revised syllabi shall be
 set for the examination to be held in October/November 2018 and April/May 2019. These chances
 are available for repeater students, if any.

You are therefore, requested to bring this to the notice of all students and teachers
 concerned.

Thanking you,

Yours faithfully,


 Dy. Registrar

Encl:- as above.

Copy to-

- | | |
|---|---------------------------------------|
| 1) I/c Dean, Faculty of Science & Technology | } For information |
| 2) Director, Examination and Evaluation | |
| 3) The Chairman, respective BOS / Co-ordinating Committee | |
| 4) O.E. 4 Section | } For information & necessary action. |
| 5) Appointment Section | |
| 6) Eligibility Section | |
| 7) Meeting Section | |





SHIVAJI UNIVERSITY, KOLHAPUR

FINAL YEAR (B.Tech.) CBCS

In

CIVIL ENGINEERING

(To be implemented from JUNE 2021)



Final Year Civil Engineering - CBCS Pattern

SEMESTER–VII																					
Sr.No	Course(Subject Title)	TEACHINGScheme									EXAMINATIONScheme										
		THEORY			TUTORIAL			PRACTICAL			THEORY					PRACTICAL			TERMWORK		
		Credits	No. of Lectures	Hours	Credits	No. of Lectures	Hours	Credits	No. of Lectures	Hours	Hours	Mode	Marks	Total Marks	Min	Hours	Max	Min	Hours	Max	Min
1	PCC-CV701	4	4	4	-	-	-	1	2	2		CIE	30	100	40	AsperBOS Guidelines	-	-	2	25	20
2	PCC-CV702	3	3	3	1	1	1	-	-	-		ESE	70				100	40	-	-	2
3	PCC-CV703	3	3	3	-	-	-	1	2	2		CIE	30	100	40		25	10	2	25	10
4	PCC-CV704	3	3	3	-	-	-	1	2	2		ESE	70				100	40	25	10	2
5	PCE-CV705	3	3	3	1	1	1	-	-	-		CIE	30	100	40		25	10	2	25	20
6	PCC-CV706	2	2	2	-	-	-	1	2	2		ESE	70				100	40	25	10	2
7	SI-CV707	-	-	-	-	-	-	-	-	-		-	-	-	-		-	-	-	25	20
8	PW-CV708	-	-	-	-	-	-	1	2	2		-	-	-	-		-	-	2	50	20
	TOTAL	18	18	18	2	2	2	5	10	10			500				75			225	
SEMESTER–VIII																					
1	PCC-CV801	4	4	4	-	-	-	1	2	2		CIE	30	100	40	AsperBOS Guidelines	-	-	2	25	10
2	PCC-CV802	3	3	3	-	-	-	1	2	2		ESE	70				100	40	-	-	2
3	PCC-CV803	3	3	3	-	-	-	1	2	2		CIE	30	100	40		-	-	2	25	10
4	PCE-CV804	3	3	3	1	1	1	-	-	-		ESE	70				100	40	-	-	-
5	PCE-CV805	3	3	3	1	1	1	-	-	-		CIE	30	100	40		-	-	-	-	-
6	PCC-CV806	-	-	-	-	-	-	2	4	4		ESE	70				100	40	25	10	2
7	PW-CV807	-	-	-	-	-	-	1	2	2		-	-	-	-		100	40	2	50	20
	TOTAL	16	16	16	2	2	2	7	14	14			500				125			175	
	TOTAL	35	35	35	3	3	3	12	24	24			1000				200			400	



SEMESTER-VII					
Sr. No	CodeNo.	Course(SubjectTitle)		Semester	Credits
1	PCC-CV701	DCS-I	Design of Concrete Structures-I	7	5
2	PCC-CV702	EQ	Earthquake Engineering	7	4
3	PCC-CV703	QSV	Quantity Survey and Valuation	7	4
4	PCC-CV704	TR-I	TransportationEngineering-I	7	4
5	PCE-CV705	EL-I	Professional Elective-I	7	4
6	HM-CV706	LACE	Legal Aspect in Civil Engineering	7	3
7	SI-CV707	FT	Field Training	7	-
8	PW-CV708	PP-I	Project Phase-I	7	1
TOTAL					25

SEMESTER-VIII					
Sr. No	CodeNo.	Course(SubjectTitle)		Semester	Credits
1	PCC-CV801	DCS-II	Design of Concrete Structures-II	8	5
2	PCC-CV802	WRE-II	WaterResourceEngineering-II	8	4
3	PCC-CV803	TR-II	TransportationEngineering-II	8	4
4	PCE-CV804	EL-II	Professional Elective-II	8	4
5	PCE-CV805	EL-III	Professional Elective-III	8	4
6	PCC-CV806	SDD-II	StructuralDesignandDrawing-II	8	2
7	PW-CV708	PP-II	Project Phase-II	8	2
TOTAL					25





SHIVAJI UNIVERSITY KOLHAPUR

**REVISED SYLLABUS AND STRUCTURE
FINAL YEAR (FINAL YEAR B. Tech) BACHELOR OF
TECHNOLOGY**

IN

Computer Science and Engineering

**To be introduced from the academic year 2021-22
(w.e.f. June 2021) onwards**



FINAL YEAR COMPUTER SCIENCE AND ENGINEERING - CBCS PATTERN																
SEMESTER - VII																
		TEACHING SCHEME							EXAMINATION SCHEME							
Sr. No.	Course Subject / Title	THEORY			TUTORIAL		PRACTICAL		THEORY				ORAL / PRACTICAL		TERMWORK	
		Credits	NO. Of Lectures	Hours	Credits	No. of Hours	Credits	No. of Hours	mode	marks	Total Marks	MIN.	MAX	MIN.	MAX	MIN.
1	PCC-CS701 Advanced Computer Architecture	4	4	4	1	1			CIE	30	100	40			25	10
								ESE	70							
2	PCC- CS702 Cloud Computing	3	3	3			1	2	CIE	30	100	40			25	10
								ESE	70							
3	PCC- CS703 Advanced Database Systems	3	3	3			1	2	CIE	30	100	40	50	20	25	10
								ESE	70							
4	PCE- CS704 Elective-I	3	3	3	1	1			CIE	30	100	40			25	10
								ESE	70							
5	PCC- CS705 Web Technologies	3	3	3			2	4					50	20	50	20
6	PW- CS706 Project – I						2	4					50	20	50	20
7	SI-CS707 Internship						1								50	20
	Total (SEM –VII)	16	16	16	2	2	7	12			400		150		250	



FINAL YEAR COMPUTER SCIENCE AND ENGINEERING - CBCS PATTERN																	
SEMESTER - VIII																	
Sr. No.	Course Subject / Title	TEACHING SCHEME							EXAMINATION SCHEME								
		THEORY			TUTORIAL		PRACTICAL		THEORY				ORAL / PRACTICAL		TERMWORK		
		Credits	No. Of Lectures	No. of Hours	Credits	No. of Hours	Credits	No. of Hours	mode	marks	Total Marks	MIN.	MAX	MIN.	MAX	MIN.	MAX
1	PCC- CS801 Big Data Analytics	4	4	4			1	2	CIE	30	100	40	50	20	25	10	
									ESE	70							
2	PCC- CS802 Deep Learning	3	3	3	1	1			CIE	30	100	40			25	10	
									ESE	70							
3	PCE- CS803 Elective-II	3	3	3	1	1			CIE	30	100	40			25	10	
									ESE	70							
4	PCE- CS804 Elective-III	3	3	3	1	1			CIE	30	100	40			25	10	
									ESE	70							
5	PCC- CS805 Mobile Application Development	3	3	3			2	4					50	20	50	20	
6	PW- CS806 Project – II						2	4					50	20	50	20	
7	HM-CS807 Professional Skills				1	1									50	20	
Total (SEM –VIII)		16	16	16	4	4	5	10			400		150		250		
Total		32	32	32	6	6	12	22			800		300		500		

CIE- Continuous Internal Evaluation

ESE – End Semester Examination



• Candidate contact hours per week : 30 Hours (Minimum)	• Total Marks for Final Yr. Sem VII & VIII : 800 + 800 =1600
• Theory and Practical Lectures : 60 Minutes Each	• Total Credits for Final Yr. Sem VII & VIII: 50 (SEM-VII: 25 + SEM-VIII: 25)
• In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE.	
• There shall be separate passing for theory and practical (term work) courses.	

Note:

1. **PCC-CS:** Professional Core Course – Computer Science and Engineering are compulsory.
2. **PCE-CS:** Professional Core Elective – Computer Science and Engineering are compulsory
3. **HM-CS:** Humanities and Management- Computer Science and Engineering are compulsory.
4. **PW-CS:** Domain Specific Mini Project – Computer Science and Engineering are compulsory.
5. **SI-CS:** Internship-Computer Science and Engineering are compulsory.

Professional Core Elective – I

1. Artificial Intelligence
2. Software Testing & Quality Assurance
3. Image Processing

Professional Core Elective – II

1. Project Management
2. Natural Language Processing
3. Ad-Hoc Wireless Sensor Networks

Professional Core Elective – III

1. High Performance Computing
2. Blockchain Technologies
3. Human computer Interaction





SHIVAJI UNIVERSITY, KOLHAPUR

REVISED SYLLABUS AND STRUCTURE THIRD YEAR (C.B.C.S.) BACHELOR OF TECHNOLOGY IN **Computer Science and Engineering**

To be introduced from the academic year 2020-21
(w. e. f. June 2020) onwards



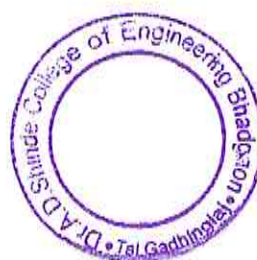
THIRD YEAR COMPUTER SCIENCE AND ENGINEERING - CBCS PATTERN																	
SEMESTER - V																	
Sr. No.	Course Subject / Title	TEACHING SCHEME						EXAMINATION SCHEME									
		THEORY			TUTORIAL		PRACTICAL		THEORY				ORAL / PRACTICAL		TERMWORK		
		Credits	No. Of Lectures	Hours	Credits	No. of Hours	Credits	No. of Hours	mode	marks	Total Marks	MIN.	MAX	MIN.	MAX	MIN.	MAX
1	PCC-CS501 Information Security	3	3	3			1	2	CIE	30	100	40			50	20	
									ESE	70							
2	PCC- CS502 System Programming	3	3	3			1	2	CIE	30	100	40	25	10	50	20	
									ESE	70							
3	PCC- CS503 Object-Oriented Modeling & Design	3	3	3					CIE	30	100	40					
									ESE	70							
4	PCC- CS504 Computer Algorithms	4	4	4	1	1			CIE	30	100	40			25	10	
									ESE	70							
5	OEC- CS505 Computer Graphics & Multimedia	3	3	3					CIE	30	100	40					
	OEC-CS506 Internet of Things								ESE	70							
6	PCC- CS507 Java Programming	3	3	3			2	4					50	20	50	20	
7	HM- CS508 Business English				1	2							25	10	25	10	
	Total (SEM -V)	19	19	19	2	3	4	8			500		100		200		



THIRD YEAR COMPUTER SCIENCE AND ENGINEERING - CBCS PATTERN																
SEMESTER - VI																
Sr. No.	Course Subject / Title	TEACHING SCHEME							EXAMINATION SCHEME							
		THEORY			TUTORIAL		PRACTICAL		THEORY				ORAL / PRACTICAL		TERMWORK	
		Credits	No. Of Lectures	No. of Hours	Credits	No. of Hours	Credits	No. of Hours	mode	marks	Total Marks	MIN.	MAX	MIN.	MAX	MIN.
1	PCC-CS601 Compiler Construction	3	3	3			1	2	CIE	30	100	40			25	10
								ESE	70							
2	PCC- CS602 Operating System-II	4	4	4			1	2	CIE	30	100	40			25	10
								ESE	70							
3	PCC- CS603 Database Engineering	4	4	4			1	2	CIE	30	100	40	50	20	25	10
								ESE	70							
4	PCC- CS604 Machine Learning	3	3	3	1	1			CIE	30	100	40			25	10
								ESE	70							
5	OEC- CS605 E-Commerce & Digital Marketing OEC - CS606 ii) Cyber Security	3	3	3					CIE	30	100	40				
								ESE	70							
6	PCC- CS607 C# Programming	2	2	2			1	2					50	20	25	10
7	PW- CS608 Domain Specific Mini Project						1	2					50	20	25	10
Total (SEM –VI)		19	19	19	1	1	5	10			500		150		150	
Total (SEM - V+ SEM - VI)		38	38	38	3	4	9	18			1000		250		350	

CIE- Continuous Internal Evaluation

ESE – End Semester Examination



• Candidate contact hours per week : 30 Hours (Minimum)	• Total Marks for T.Y. Sem V & VI : 800 + 800 =1600
• Theory and Practical Lectures : 60 Minutes Each	• Total Credits for T.Y. Sem V & VI : 50 (SEM-V: 25 + SEM -VI: 25)
• In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE.	
• There shall be separate passing for theory and practical (term work) courses.	

Note:

1. **PCC-CS:** Professional Core Course – Computer Science and Engineering are compulsory.
2. **HM-CS:** Humanities and Management- Computer Science and Engineering are compulsory.
3. **PW-CS:** Domain Specific Mini Project — Computer Science and Engineering are compulsory.
4. **#OEC-CS: Open Elective Course** – To be offered to Inter departmental students.
 - # - 60% of the students from other branches to be chosen on merit.
 - 40% of the students may be from same branch based on merit.
 - Number of students to be allowed should be 72(Max.) for the branch with intake of 60 students.
 - The above ratio should be followed in proportionate to the sanctioned intake.

OPEN ELECTIVE COURSE-I

Sr. No.	Name of the Subject	Name of the concern Branch
1	i) Computer Graphics & Multimedia ii) Internet of Things	Computer Science and Engineering

OPEN ELECTIVE COURSE-II

Sr. No.	Name of the Subject	Name of the concern Branch
1	i) E-Commerce & Digital Marketing ii) Cyber Security	Computer Science and Engineering



 Estd. 1962 "A++" Accredited by NAAC (2021) With CGPA 3.52	SHIVAJI UNIVERSITY, KOLHAPUR 416 004, MAHARASHTRA PHONE : EPABX - 2609000, BOS Section - 0231-2609094, 2609487 Web : www.unishivaji.ac.in Email: bos@unishivaji.ac.in शिवाजी विद्यापीठ, कोल्हापूर ४१६ ००४, महाराष्ट्र दूरध्वनी - इपीबीएक्स - २०६०९०००, अभ्यासमंडळे विभाग : ०२३१- २६०९०९४, २६०९४८७ वेबसाईट : www.unishivaji.ac.in ईमेल : bos@unishivaji.ac.in	 
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SU/BOS/Sci & Tech/ 488

Date: 26/08/2024

To,

The Principal / Director,
All Concerned Affiliated Colleges / Institutions,
Shivaji University, Kolhapur.

Subject: Regarding New syllabus of **B. Tech. Programme (Affiliated College)**
Part - I (Sem-I-II) under the Faculty of Science and Technology as per
National Education Policy 2020.

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the revised syllabi, Nature of Question paper and equivalence of B. Tech. Part - I (Sem - I & II) under the Faculty of Science & Technology as per National Education Policy 2020.

No.	Affiliated College Course Syllabus
1	Civil Engineering
2	Mechanical Engineering
3	Electrical Engineering and Technology
4	Electronics and Telecommunication Engineering
	Electronics & Computer Science Engineering
5	Computer Science and Engineering
	Computer Science and Engineering (Artificial Intelligence & Machine Learning)
	Computer Science and Engineering (Data Science)

This Syllabus, shall be implemented from the academic year 2024-25 onwards. A soft copy containing the syllabus is attached herewith and it is available on university website www.unishivaji.ac.in. (Student Online Syllabus).

The question papers on the pre-revised syllabi of above-mentioned course will be set for the examinations to be held in October/ November 2024 & March / April 2025. These chances are available for repeater students, if any

You are, therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

Yours faithfully,


Dr. S. M. Kubal
Dy. Registrar

Copy to: for Information and necessary action

1	The I/c Dean, Faculty of Science & Technology	7	Appointment Section A & B
2	The Chairperson, Respective Board of Studies	8	Affiliation Section (T.1) (T.2)
3	OE 4 Section	9	P.G.Admission Section, /P.G Seminar Section
4	Eligibility Section,	10	Computer Centre (IT Cell)
6	Internal Quality Assurance Cell	11	Eligibility Section



SCHEME OF INSTRUCTION & SYLLABI

Branch: - Common to all Branches of Engineering

Scheme of Instructions: First Year B. Tech. Common to all Branches of Engineering

Engineering Physics Group

Semester-I (w.e.f. A.Y. 2024-25)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	BSC		Engineering Physics	3	--	--	3	3	30	10	60	100
2	BSC		Engineering Mathematics -I	3	1	--	4	4	30	10	60	100
3	ESC		Basic Civil Engineering	2	--	--	2	2	30	10	60	100
4	ESC		Engineering Graphics	3	--	--	3	3	30	10	60	100
5	ESC		Basic Electrical Engineering	2	--	--	2	2	30	10	60	100
6	BSC		Engineering Physics Lab	--	--	2	2	1	--	25	--	25
7	ESC		Engineering Graphics Lab	--	--	2	2	1	--	25	25	50
8	HSSM		Professional Communication-I	--	--	2	2	1	--	25	50	75
9	VSEC		Skill Enhancement Course-I	--	--	2	2	1	--	25	25	50
10	CCA		Yoga and NSS	--	--	4	4	2	--	50	--	50
11	VSEC		Programming Languages-I	1	--	2	3	2	--	25	25	50
			Total	14	1	14	29	22	150	225	425	800

L-Lecture

T-Tutorial

P-Practical

MSE-Mid Semester Examination ISE/CA-In Semester Evaluation/Continuous Assessment ESE-End Semester Examination (For Laboratory End Semester performance external Examination)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than Particular Programme (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular & Extracurricular Activities (CCA)
Semester Credits	08	08	--	--	--	03	01	--	02
Cumulative Sum	08	08	--	--	--	03	01	--	02



SCHEME OF INSTRUCTION & SYLLABI

Branch: - Common to all Branches of Engineering

Scheme of Instructions: First Year B. Tech. Common to all Branches of Engineering

Engineering Chemistry Group

Semester-I (w.e.f. A.Y. 2024-25)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	BSC		Engineering Chemistry	3	--	--	3	3	30	10	60	100
2	BSC		Engineering Mathematics -I	3	1	--	4	4	30	10	60	100
3	ESC		Basic Mechanical Engineering	2	--	--	2	2	30	10	60	100
4	ESC		Engineering Mechanics	3	--	--	3	3	30	10	60	100
5	ESC		Basic Electronics Engineering	2	--	--	2	2	30	10	60	100
6	BSC		Engineering Chemistry Lab	--	--	2	2	1	--	25	-	25
7	ESC		Engineering Mechanics Lab	--	--	2	2	1	--	25	25	50
8	HSSM		Professional Communication-I	--	--	2	2	1	--	25	50	75
9	VSEC		Skill Enhancement Course-I	--	--	2	2	1	--	25	25	50
10	CCA		Yoga and NSS	--	--	4	4	2	--	50	-	50
11	VSEC		Programming Languages-I	1	--	2	3	2	--	25	25	50
			Total	14	1	14	29	22	150	225	425	800

L-Lecture

T-Tutorial

P-Practical

MSE-Mid Semester Examination ISE/CA-In Semester Evaluation/Continuous Assessment ESE-End Semester Examination (For Laboratory End Semester performance external Examination)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than Particular Programme (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular and Extracurricular Activities (CCA)
Semester Credits	08	08	--	--	--	03	01	--	02
Cumulative Sum	08	08	--	--	--	03	01	--	02



SCHEME OF INSTRUCTION & SYLLABI

Branch: - Common to all Branches of Engineering

Scheme of Instructions: First Year B. Tech. Common to all Branches of Engineering

Engineering Physics Group

Semester-II (w.e.f. A.Y. 2024-25)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	BSC		Engineering Physics	3	--	--	3	3	30	10	60	100
2	BSC		Engineering Mathematics -II	3	1	--	4	4	30	10	60	100
3	ESC		Basic Civil Engineering	2	--	--	2	2	30	10	60	100
4	ESC		Engineering Graphics	3	--	--	3	3	30	10	60	100
5	ESC		Basic Electrical Engineering	2	--	--	2	2	30	10	60	100
6	BSC		Engineering Physics Lab	--	--	2	2	1	--	25	--	25
7	ESC		Engineering Graphics Lab	--	--	2	2	1	--	25	25	50
8	HSSM		Professional Communication-II	--	--	2	2	1	--	25	50	75
9	VSEC		Skill Enhancement Course-II	--	--	2	2	1	--	25	25	50
10	HSSM		Indian Knowledge Systems (IKS)	2	--	--	2	2	--	50	--	50
11	VSEC		Programming Languages-II	1	--	2	3	2	--	25	25	50
			Total	16	1	10	27	22	150	225	425	800

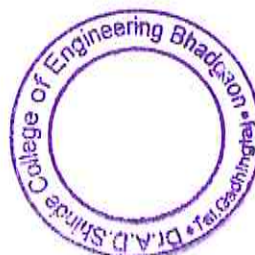
L-Lecture

T-Tutorial

P-Practical

MSE-Mid Semester Examination ISE/CA-In Semester Evaluation/Continuous Assessment ESE-End Semester Examination (For Laboratory End Semester performance external Examination)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than Particular Programme (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular or Extracurricular Activities (CCA)
Last Sem. Cumulative Sum	08	08	--	--	--	03	01	--	02
Semester Credits	08	08	--	--	--	03	03	--	--
Cumulative Sum	16	16	--	--	--	06	04	--	02



SCHEME OF INSTRUCTION & SYLLABI

Branch: - Common to all Branches of Engineering

Scheme of Instructions: First Year B. Tech. Common to all Branches of Engineering

Engineering Chemistry Group

Semester-II (w.e.f. A.Y. 2024-25)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE/CA	ESE	TOTAL
1	BSC		Engineering Chemistry	3	--	--	3	3	30	10	60	100
2	BSC		Engineering Mathematics -II	3	1	--	4	4	30	10	60	100
3	ESC		Basic Mechanical Engineering	2	--	--	2	2	30	10	60	100
4	ESC		Engineering Mechanics	3	--	--	3	3	30	10	60	100
5	ESC		Basic Electronics Engineering	2	--	--	2	2	30	10	60	100
6	BSC		Engineering Chemistry Lab	--	--	2	2	1	--	25	--	25
7	ESC		Engineering Mechanics Lab	--	--	2	2	1	--	25	25	50
8	HSSM		Professional Communication-II	--	--	2	2	1	--	25	50	75
9	VSEC		Skill Enhancement Course-II	--	--	2	2	1	--	25	25	50
10	HSSM		Indian Knowledge Systems (IKS)	2	--	--	2	2	--	50	--	50
11	VSEC		Programming Languages-II	1	--	2	3	2	--	25	25	50
			Total	16	1	10	27	22	150	225	425	800

L-Lecture

T-Tutorial

P-Practical

MSE-Mid Semester Examination ISE/CA-In Semester Evaluation/Continuous Assessment ESE-End Semester Examination (For Laboratory End Semester performance external Examination)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than Particular Programme (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular and Extracurricular Activities (CCA)
Last Sem. Cumulative Sum	08	08	--	--	--	03	01	--	02
Semester Credits	08	08	--	--	--	03	03	--	--
Cumulative Sum	16	16	--	--	--	06	04	--	02





SHIVAJI UNIVERSITY, KOLHAPUR

SYLLABUS AND STRUCTURE
SECOND YEAR (B. Tech.)

Electronics & Computer Science Engineering.

To be introduced from the academic year 2023-24
(i.e., from June 2023) onwards



Semester III

Sr. No	Code No.	Subject	Semester	Credits
1	BSC-ECS-301	Engineering Mathematics – III	3	4
2	PCC-ECS-301	Electronic Devices	3	5
3	PCC-ECS-302	Digital Electronics	3	4
4	PCC-ECS-303	Data Structures and Algorithms	3	4
5	PCC-ECS-304	Database Management System	3	4
6	PCC-ECS-305	Programming in C	3	3
		Total		24

Semester IV

Sr. No	Code No.	Subject	Semester	Credits
1	PCC-ECS-401	Electronic Circuits	4	4
2	PCC-ECS-402	Controls and Instrumentation	4	4
3	PCC-ECS-403	Computer Network	4	4
4	PCC-ECS-404	Microprocessors and Microcontrollers	4	4
5	PCC-ECS-405	Discrete Structure & Automata Theory	4	4
6	PCC-ECS-406	Programming in C++	4	3
7	MC-ECS-401	Environment Studies	4	3
		Total		26

*****For Theory CIE 30 Marks,**

Two tests of 30 marks at college should be conducted and best of two marks should be communicated to university.

*****Guidelines to paper setter:**

In theory ESE examination of 70 marks following pointes should be considered,

1. First question of 10 marks should be allotted to Objective type questions.
2. In Remaining 60 marks, four questions of 15 marks should be considered.

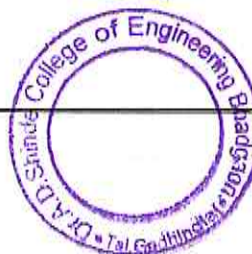


**SECOND YEAR ELECTRONICS & COMPUTER SCIENCE ENGINEERING –
CBCS PATTERN
Semester Examination**

SEMESTER III																								
Sr No	Course (Subject Title)	TEACHING SCHEME									EXAMINATION SCHEME													
		THEORY				TUTORIAL			PRACTICAL			THEORY					PRACTICAL			TERM WORK				
		Credits	No. of Lecture	Hours		Credits	No. of Lecture	Hours	Credits	No. of Lecture	Hours	Hours	Mode	Marks	Total Marks	Min	Hours	Max	Min	Hours	Max	Min		
1	BSC- ECS-301	3	3	3		1	1	1		-	-	-			CIE	30	100	40	As per BOS Guidelines	-	-		25	10
2	PCC- ECS-301	4	4	4		-	-	-		1	2	2			ESE	70					-		-	25
3	PCC- ECS-302	3	3	3		-	-	-		1	2	2			CIE	30	100	40		-	-		25	10
4	PCC- ECS-303	3	3	3		-	-	-		1	2	2			ESE	70				50	20		25	10
5	PCC- ECS-304	3	3	3		1	1	1							CIE	30	100	40		-	-		25	10
6	PCC- ECS-305	2	2	2		-	-	-		1	2	2			ESE	70				50	20		25	10
						-	-	-		1	2	2			CIE	30	100	40		50	20	25	10	
						-	-	-		1	2	2			ESE	70				50	20	25	10	
	TOTAL	18	18	18		2	2	2		4	8	8					500			150		150		
SEMESTER IV																								
1	PCC- ECS-401	3	3	3		-	-	-		1	2	2			CIE	30	100	40	As per BOS Guidelines	50	20		25	10
2	PCC- ECS-402	3	3	3		-	-	-		1	2	2			ESE	70							25	10
3	PCC- ECS-403	3	3	3		-	-	-		1	2	2			CIE	30	100	40		50	20		25	10
4	PCC- ECS-404	3	3	3		-	-	-		1	2	2			ESE	70							25	10
5	PCC- ECS-405	3	3	3		1	1	1		-	-	-			CIE	30	100	40		-	-		-	-
6	PCC-ECS- 406	2	2	2		-	-	-		1	2	2			ESE	70				50	20		50	20
7	MC-ECS- 401	2	2	-		1	1	1		-	-	-			CIE	30	100	40		-	-	-	-	
						-	-	-		-	-	-			ESE	70						-	-	
	TOTAL	19	19	19		2	2	2		5	10	10					600			150		150		
	TOTAL	37	37	37		4	4	4		9	18	18					1100		300		300			

CIE- Continuous Internal Evaluation. ESE – End Semester Examination

- | | |
|---|---|
| • Candidate contact hours per week: 30 Hours (Minimum) | • Total Marks for S.E. Sem III & IV: 1700 |
| • Theory and Practical Lectures: 60 Minutes | • Total Credits for S.E. Sem III & IV: 50 |
| • In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE. | |
| • There shall be separate passing for theory and practical (term work) courses. | |



Note:

1. **BSC-ECS:** Basic Science Course- Electronics & Computer Science Engineering are compulsory.
2. **PCC-ECS:** Professional Core course –Electronics & Computer Science Engineering are compulsory.
3. **MC-ECS:** Mandatory Course: Environmental Studies which is compulsory for theory 70 marks and project work 30 marks.





SHIVAJI UNIVERSITY KOLHAPUR

REVISED STRUCTURE AND SYLLABUS

THIRD YEAR (B. Tech) CBCS

ELECTRICAL ENGINEERING

To be introduced from the academic year 2020-21

(i.e. from June 2020) onwards



SHIVAJI UNIVERSITY, KOLHAPUR

CBCS STRUCTURE FOR T.Y.B. TECH. ELECTRICAL ENGINEERING

(Semester V and Semester VI)

SEMESTER – V (Duration – 6 Months)																			
Sr. No.	Course (Subject Title)				TEACHING SCHEME						EXAMINATION SCHEME								
		THEORY			Tutorial			PRACTICAL			THEORY					PRACTICAL			
		Credits	No. of lectures	Hours	Credits	No. of lectures	Hours	Credits	No. of lectures	Hours	Hours	Mode	Marks	Total Marks	Min	TW		POE	
																Max	Min	Max	Min
1	PCC-EE301/ DEM	3	3	3	-	-	-	1	2	2		CIE	30	100	40	25	10	50	20
											ESE	70							
2	OCE-EE301/ OE- I	2	2	2	-	-	-	1	2	2		CIE	30	100	40	25	10	-	-
											ESE	70							
3	PCC-EE302/ ACM	3	3	3	-	-	-	1	2	2		CIE	30	100	40	25	10	50	20
											ESE	70							
4	PCC-EE303/ PS-II	3	3	3	-	-	-	1	2	2		CIE	30	100	40	50	20	-	-
											ESE	70							
5	PCC-EE304/ ACS	3	3	3	-	-	-	1	2	2		CIE	30	100	40	-	-	-	-
											ESE	70							
6	PCC-EE305/ S&S	3	3	3	1	1	1	-	-	-		CIE	30	100	40	25	10	-	-
											ESE	70							
7	BSC-EE306/ MATLAB	1	1	1	-	-	-	1	2	2	-	-	-	-	-	75	30	-	-
TOTAL		18	18	18	1	1	1	6	10	10				600		225		100	



SHIVAJI UNIVERSITY, KOLHAPUR

CBCS STRUCTURE FOR T.Y.B. TECH. ELECTRICAL ENGINEERING

(Semester V and Semester VI)

SEMESTER – VI (Duration – 6 Months)																			
Sr. No.	Course (Subject Title)				TEACHING SCHEME						EXAMINATION SCHEME								
		THEORY			Tutorial			PRACTICAL			THEORY					PRACTICAL			
		Credits	No. of lectures	Hours	Credits	No. of lectures	Hours	Credits	No. of lectures	Hours	Hours	Mode	Marks	Total Marks	Min	TW		POE	
																Max	Min	Max	Min
1	PCC-EE307/ DSP	4	4	4	-	-	-	-	-	-		CIE	30	100	40	-	-	-	-
											ES E	70							
2	OCE-EE302/ OE - II	2	2	2	-	-	-	1	2	2		CIE	30	100	40	25	10	-	-
											ES E	70							
3	PCC-EE308/ EMD	4	4	4	1	1	1	1	2	2		CIE	30	100	40	50	20	50	20
											ES E	70							
4	PCC-EE309/ PSSC	4	4	4	-	-	-	1	2	2		CIE	30	100	40	50	20	-	-
											ES E	70							
5	PCC-EE310/ ED	3	3	3	-	-	-	1	2	2		CIE	30	100	40	25	10	50	20
											ES E	70							
6	BSC-EE311/ EITM	-	-	-	2	2	2	1	2	2	-	-	-			50	20	-	-
TOTAL		17	17	17	3	3	3	5	10	10				500		200		100	

CIE- Continuous Internal
Evaluation ESE – End Semester
Examination

• Candidate contact hours per week : 30 Hours(Minimum)	• Total Marks for T.E. Sem V & VI :1725
• Theory and Practical Lectures : 60 Minutes Each	• Total Credits for T.E. Sem V & VI :50
• In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE.	
• There shall be separate passing for theory and practical (term work)courses.	

Note:

1. BSC-EE: Basic Science Course- Electrical Engineering are compulsory.
2. PCC-EE: Professional Core course –Electrical Engineering are compulsory.
3. OCE-EE: Open Course Elective for the students from other discipline



Semester V

Sr. No	Code No.	Subject	Credits
1.	PCC-EE301	Digital Electronics And Micro Processor	4
2.	OCE-EE301	Open Elective – I	3
3.	PCC-EE302	AC Machines	4
4.	PCC-EE303	Power System-II	4
5.	PCC-EE304	Advanced Control System	4
6.	PCC-EE305	Signals & Systems	4
7.	PCC-EE306	MATLAB	2
Total			25

Semester VI

Sr. No	Code No.	Subject	Credits
1.	PCC-EE307	Digital Signal Processing	4
2.	OCE-EE302	Open Elective – II	3
3.	PCC-EE308	Electrical Machine Design	6
4.	PCC-EE309	Power System Stability And Control	5
5.	PCC-EE310	Electrical Drives- I	4
6.	PCC-EE311	Electrical Installations testing and maintenance	3
Total			25

Open Elective – I (Any One)

1	Electrical Appliances And Luminaries
2	Domestic /Industrial Electrical Installation, Estimation And Costing

Open Elective – II (Any One)

1	Electrical Energy Audit And Conservation
2	PLC & SCADA





SHIVAJI UNIVERSITY KOLHAPUR

REVISED STRUCTURE AND SYLLABUS

FINAL YEAR (B. Tech) CBCS

ELECTRICAL ENGINEERING

To be introduced from the academic year 2021-

22 (i.e. from June 2021) onwards



SHIVAJI UNIVERSITY, KOLHAPUR

CBCS STRUCTURE FOR FINAL YEAR B.TECH. ELECTRICAL ENGINEERING

(Semester VII and Semester VIII)

SEMESTER – VII (Duration – 6 Months)																			
Sr. No.	Course (Subject Title)	TEACHING SCHEME									EXAMINATION SCHEME								
		THEOR Y			TUTORIAL			PRACTICAL			THEORY					PRACTICAL			
		Credits	No. of lectures	Hours	Credits	Conduction Hours	Hours	Credits	Conduction Hours	Hours	Hours	Mode	Marks	Total Marks	Min	TW		POE	
																Max	Min	Max	Min
1	PCC-EE401/ FACTS	03	03	03	--	--	--	--	--	--	--	CIE	30	100	40	--	--	--	--
											ESE	70							
2	OCE-EE401/ OE-I	03	03	03	01	01	01	--	--	--	--	CIE	30	100	40	25	10	--	--
											ESE	70							
3	PCC- EE402/PQH	03	03	03	01	01	01	--	--	--	--	CIE	30	100	40	25	10	--	--
											ESE	70							
4	PCC- EE403/CMPS	03	03	03	--	--	--	01	--	02	--	CIE	30	100	40	25	10	50	20
											ESE	70							
5	PCC-EE404/ SAP	03	03	03	--	--	--	01	--	02	--	CIE	30	100	40	25	10	50	20
											ESE	70							
6	PCC-EE405/ ITP	01	01	01	01	01	01					CIE	30	100	40	50	20	--	--
											ESE	70							
7	PCC- EE406/PP-I	--	--	--	--	--	--	04	04	04	--	-	-	-	-	50	20	50	20
TOTAL		16			03			06						600		200		150	
TOTAL CREDIT										25	TOTAL MARKS								950



SHIVAJI UNIVERSITY, KOLHAPUR

CBCS STRUCTURE FOR FINAL YEAR B.TECH. ELECTRICAL ENGINEERING

SEMESTER – VIII (Duration – 6 Months)																			
Sr.	Course (SubjectTitle)	TEACHING SCHEME									EXAMINATION SCHEME								
		THEORY			TUTORIAL			PRACTICAL			THEORY					PRACTICAL			
		Credits	No. of lectures	Hours	Credits	Conduction Hours	Hours	Credits	Conduction Hours	Hours	Hours	Mode	Marks	Total Marks	Min	TW		POE	
																Max	Min	Max	Min
1	PCC-EE407/ MED	03	03	03	--	--	--	--	--	--	CIE	30	100	40	50	20	--	--	
										ESE	70								
2	OCE-EE402/ OE-II	03	03	03	01	01	01	--	--	--	CIE	30	100	40	50	20	--	--	
										ESE	70								
3	PCC- EE408/HVDC	03	03	03	--	--	--	01	02	02	CIE	30	100	40	25	10	50	20	
										ESE	70								
4	PCC- EE409/EHVA C	03	03	03	01	01	01	--	--	--	CIE	30	100	40	--	--	--	--	
										ESE	70								
5	PCC-EE410/ EGUT	03	03	03	01	01	01	--	--	--	CIE	30	100	40	25	10	--	--	
										ESE	70								
6	PCC-EE411/ Seminar	--	--	--	02	02	02	--	--	--	CIE	30	--	--	50	20	--	--	
										ESE	70								
7	PCC- EE412/PP-II	--	--	--	--	--	--	04	04	04	-	-	-	-	100	40	100	40	
TOTAL		15			05			05					500		300		150		
TOTAL CREDIT										25	TOTAL MARKS								950



• Candidate contact hours per week : 30 Hours(Minimum)	• Total Marks for T.E. Sem V & VI:1725
• Theory and Practical Lectures : 60 Minutes Each	• Total Credits for T.E. Sem V & VI:50
• In theory examination there will be a passing based on separate head of passing for examination of CIE and ESE.	
• There shall be separate passing for theory and practical (termwork) courses.	

Note:

1. **PCC-EE:** Professional Core course –Electrical Engineering are compulsory.
2. **OCE-EE:** Open Course Elective for the students from other discipline



Semester VII

Sr. No	Code No.	Subject	Credits
1.	PCC-EE401	FACTS	03
2.	OCE-EE401	Open Elective-I	04
3.	PCC-EE402	Power Quality and Harmonics	04
4.	PCC-EE403	Computer Methods in Power Systems	04
5.	PCC-EE404	Advanced Switchgear and Protection	04
6.	PCC-EE405	Industrial Training & Presentation	02
7.	PCC-EE406	Project Phase-I	04
Total			25

Semester VIII

Sr. No	Code No.	Subject	Credits
1.	PCC-EE407	Management & Entrepreneurship Development	03
2.	OCE-EE402	Elective II	04
3.	PCC-EE408	HVDC Systems	04
4.	PCC-EE409	EHVAC	04
5.	PCC-EE410	Electrical Generation, Utilization & Traction	04
6.	PCC-EE411	Seminar	02
7.	PCC-EE412	Project Phase-II	04
Total			25

Open Elective – I (Any One)

1	Smart Grid
2	Electric Vehicle
3	Integrated Resource planning
4	Restructured Power System

Open Elective – II (Any One)

1	PLC and SCADA Application
2	VLSI Design & Embedded System
3	Electrical Maintenance and Electrical Energy Audit
4	Advanced Microcontrollers & Its applications

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