



**SRES'S SANJIVANI COLLEGE OF ENGINEERING KOPARGAON**  
**(An Autonomous Institute Affiliated to SPPU Pune)**  
**F.Y. B. TECH. COURSE STRUCTURE-2023 PATTERN**  
**(as per NEP 2020)**

**GROUP A: CIVIL ENGINEERING**  
**SEMESTER I**

Course Title	Course Code	Teaching Scheme			Credits	Contact Hrs	Evaluation Scheme			ESE Hr
		L (hrs.)	T (hrs.)	P (hrs.)			CIA	ESE	Total/ Grade	
BSC										
Induction Programme	BSSH01									
Engineering Mathematics-I	BSSH101	3	1	--	4	4	40	60	100	3
Engineering Physics (Non Circuit)	BSSH102	3	--	--	3	3	40	60	100	3
Engineering Physics Lab	BSSH103	--	--	2	1	2	20	30	50	2
ESC										
Engineering Graphics	ESME111	2*	--	--	2	2	40	60	100	3
Engineering Graphics Lab	ESME112	--	--	4	2	4	20	30	50	2
Programming in C	ESME113	1	--	--	1	1	20	30	50	2
Programming in C Lab	ESME114	--	--	2	1	2	20	30	50	2
Basics of Civil Engg.	ESCE128	2	--	--	2	2	20	30	50	2
Basics of Civil Engg. Lab	ESCE129	--	--	2	1	2	20	30	50	2
AEC										
Professional English	AESH181	2	--	--	2	2	20	30	50	2
CCA										
Music or Dance or Stress Management Through Ayurveda or German or Japanese or Entrepreneurship or Arts and Crafts	CCSH171A/ CCSH171B/ CCSH171C/ CCSH171D/ CCSH171E/ CCSH171F/ CCSH171G	--	--	2	1	2	20	30	50	2
Total		13	1	12	20	26	280	420	700	

L- Lecture, T – Tutorial, P - Practical in Lab, CIA- Continuous Internal Assessment, ESE- End Semester Examination

**Minimum Marks for Passing Theory and Laboratory Course**

1. In End, Semester Examination (ESE) out of 60 marks, 24 marks and CIA+ESE = 40 marks are required.
2. In End, Semester Examination (ESE) out of 30 marks, 12 marks and CIA+ESE = 20 marks are required.
3. In Practical out of 50 marks, 20 marks are required.
4. \*Additional One Lecture for the Practice can be added







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**GROUP A: CIVIL ENGINEERING**  
**SEMESTER II**

SEMESTER II										
Course Title	Course Code	Teaching Scheme			Credits	Contact Hrs	Evaluation Scheme			ESE Hr
		L (hrs.)	T (hrs.)	P (hrs.)			CIA	ESE	Total/ Grade	
BSC										
Engineering Mathematics-II	BSSH104	3	1	--	4	4	40	60	100	3
Engineering Chemistry (Non Circuit)	BSSH105	3	--	--	3	3	40	60	100	3
Engineering Chemistry Lab	BSSH106	--	--	2	1	2	20	30	50	2
ESC										
Basic Electrical Engineering	ESEE117	2	--	--	2	2	20	30	50	2
Engineering Mechanics I	ESCE130	2	--	--	2	2	20	30	50	2
IT for Engineers	ESIT119	1	--	--	1	1	20	30	50	2
IT for Engineers Lab	ESIT120	--	--	2	1	2	20	30	50	2
Engineering Mechanics II	ESCE131	2	--	--	2	2	20	30	50	2
Engineering Mechanics Lab	ESCE132	--	--	2	1	2	20	30	50	2
IKS										
Sociology & Elements of Indian History for Engineers	IKSH151	2	--	--	2	2	20	30	50	2
SEC										
Workshop for Engineers I	SESH161	--	--	2	1	2	10	15	25	2
Workshop for Engineers II	SECE162	--	--	2	1	2	10	15	25	2
CCA										
Sports or Yoga or NSS of Pharmacy for Engineers or Film Making or Photography or Oratory	CCSH172A/ CCSH172B/ CCSH172C/ CCSH172D/ CCSH172E/ CCSH172F/ CCSH172G	--	--	2	1	2	20	30	50	2
Total		15	1	12	22	28	280	420	700	

L- Lecture, T- Tutorial, P - Practical in Lab, CIA- Continuous Internal Assessment, ESE- End Semester Examination

**Minimum Marks for Passing Theory and Laboratory Course**

1. In End, Semester Examination (ESE) out of 60 marks, 24 marks and CIA+ESE = 40 marks are required.
2. In End, Semester Examination (ESE) out of 30 marks, 12 marks and CIA+ESE = 20 marks are required.
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**SECOND YEAR B. TECH CIVIL ENGINEERING**

**SEMESTER III**

SEMESTER III										
Course Code	Course Title	Teaching Scheme			Credits	Contact Hrs.	Exam Head	Evaluation Scheme		
		L (hrs.)	T (hrs.)	P (hrs.)				CIA	ESE	Total Marks
PCC										
PCCE213	Engineering Mathematics-III	3	-	-	3	3*	TH	40	60	100
PCCE214	Strength of Materials	3	-	-	3	3	TH	40	60	100
PCCE215	Strength of Materials Lab	-	-	2	1	2	OR	20	30	50
PCCE203	Surveying	3	-	-	3	3	TH	40	60	100
PCCE204	Surveying Lab	-	-	2	1	2	PR	20	30	50
PCCE212	Computer Aided Building Drawing	-	-	2	1	2	OR	20	30	50
MDM										
MDCE224	Water Supply Engineering	3	-	-	3	3	TH	40	60	100
MDCE225	Water Supply Engineering Lab	-	-	2	1	2	OR	20	30	50
EEM										
EECE241	Engineering Economics	2	-	-	2	2	TH	20	30	50
VEC										
VECE251	Universal Human Value	2	-	-	2	2	OR	20	30	50
CEP										
CECE267	Community Engagement Projects	-	-	4	2	4	OR	20	30	50
Total		16	-	12	22	28				750

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3. In Practical out of 50 marks, 20 marks are required.
4. \*Additional One Lecture for the Tutorial can be added

**Legends:** BSC-Basic Science Course, ESC-Engineering Science Course, PCC-Programme Core Course, PEC-Programme Elective Course, MDM-Multidisciplinary Minor, OE-Open Elective, VSEC-Vocational and Skill Enhancement Course, AEC-Ability Enhancement Course, EEM-Entrepreneurship/Economics Management Courses, IKS-Indian Knowledge System, VEC-Value Education Course, RM-Research Methodology, CEP-Comm. Engg. Project, FP-Field Project, PR-Project, IN/OJ-internship/ OJT, CCA-Co-curricular Courses







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**SECOND YEAR B. TECH CIVIL ENGINEERING**

**SEMESTER IV**

SEMESTER IV										
Course Code	Course Title	Teaching Scheme			Credits	Contact Hrs.	Exam Head	Evaluation Scheme		
		L (hrs.)	T (hrs.)	P (hrs.)				CIA	ESE	Total Marks
PCC [12]										
PCCE207	Concrete Technology	3	-	-	3	3	TH	40	60	100
PCCE208	Concrete Technology Lab	-	-	2	1	2	OR	20	30	50
PCCE209	Geotechnical Engineering	3	-	-	3	3	TH	40	60	100
PCCE210	Geotechnical Engineering Lab	-	-	2	1	2	OR	20	30	50
PCCE211	Theory of Structures	3	1		4	4	TH	40	60	100
MDM [2]										
MDCE223	Pollution Control	2	-	-	2	2	TH	20	30	50
OE [2]										
OECE231	Open Elective I	2	-	-	2	2	TH	20	30	50
VSEC [2]										
SECE261	Programming in Python	1	-	2	2	3	PR	20	30	50
AEC [2]										
AECE281	Soft Skills	2	-	-	2	2	TH	20	30	50
VEC [2]										
VECE252	Environmental Studies	2	-	-	2	2	TH	20	30	50
Total		19	1	6	22	25		260	390	650







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**T.Y. B. TECH. COURSE STRUCTURE-2023 PATTERN**

(as per NEP 2020)

**THIRD YEAR B. TECH CIVIL ENGINEERING (A.Y.2025-26)**

**SEMESTER V**

Course Code	Course Title	Teaching Scheme			Credits	Contact Hrs.	Exam Head	Evaluation Scheme		
		L (hrs.)	T (hrs.)	P (hrs.)				CIA	ESE	Total Marks
PCC										
PCCE301	Steel Structures	3	-	-	3	3	TH	40	60	100
PCCE302	Steel Structures Lab	-	-	2	1	2	OR	20	30	50
PCCE303	Fluid Mechanics	3	-	-	3	3	TH	40	60	100
PCCE304	Fluid Mechanics Lab	-	-	2	1	2	OR	20	30	50
PCCE305	Structural Analysis	3	1	-	4	4	TH	40	60	100
PEC										
PECE311	Professional Elective-I	3	-	-	3	3	TH	40	60	100
PECE312	Professional Elective-I Lab	-	-	2	1	2	OR	20	30	50
MDM										
MDCE321	Solid Waste Management	2	-	-	2	2	TH	20	30	50
OE										
OECE331	Open Elective II	2	-	-	2	2	TH	20	30	50
VSEC										
SECE361	Corporate Readiness- I	-	-	2	1	2	PR	20	30	50
SECE362	Intellectual Property Rights (IPR)	-	-	2	1	2	TW	10	15	25
Total		16	1	10	22	27				700
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### THIRD YEAR B. TECH. SEM-V

#### Professional Elective-I

PEC- Professional Elective-I: (PECE311)		PEC- Professional Elective-I: (PEST311)	
PECE311-A	Advanced Surveying	PEST311-A	Design of Formwork
PECE311-B	Engineering Geology	PEST311-B	Matrix Methods of Structural Analysis
PECE311-C	Disaster Management and Fire Safety	PEST311-C	Advanced Concrete Technology
PECE311-D	Sustainable Building Planning	PEST311-D	Numerical Methods
--	--	PEST311-E	Design of Timber Structures
--	--	PEST311-F	Computing in Structural Engineering

#### Professional Elective Lab-I

PEC- Professional Elective-I: (PECE312)		PEC- Professional Elective-I: (PEST312)	
PECE312-A	Advanced Surveying Lab	PEST312-A	Design of Formwork lab.
PECE312-B	Engineering Geology lab	PEST312-B	Matrix Methods of Structural Analysis lab.
PECE312-C	Disaster Management and Fire Safety lab	PEST312-C	Advanced Concrete Technology lab.
PECE312-D	Sustainable Building Planning Lab	PEST312-D	Numerical Methods Lab.
--	--	PEST312-E	Design of Timber Structures Lab.
--	--	PEST312-F	Computing in Structural Engineering Lab.







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**SEMESTER VI**

Course Code	Course Title	Teaching Scheme			Credits	Contact Hrs.	Exam Head	Evaluation Scheme		
		L (hrs.)	T (hrs.)	P (hrs.)				CIA	ESE	Total Marks
PCC [10]										
PCCE307	Hydrology & Irrigation Engineering	3	-	-	3	3	TH	40	60	100
PCCE308	Design of Reinforced Concrete Structures	3	-	-	3	3	TH	40	60	100
PCCE309	Design of Reinforced Concrete Structures Lab	-	-	2	1	2	OR	20	30	50
PCCE309	Construction Planning and Management	3	-	-	3	3	TH	40	60	100
PEC [4]										
PECE313	Professional Elective-II	3	-	-	3	3	TH	40	60	100
PECE314	Professional Elective-II Lab	-	-	2	1	2	PR	20	30	50
MDM [2]										
MDCE322	Green Technology	2	-	-	2	2	TH	20	30	50
OE [2]										
OECE332	Open Elective III	2	-	-	2	2	TH	20	30	50
VSEC [2]										
SECE363	Computer Aided Analysis & Design of Structures	-	-	2	1	2	PR	20	30	50
SECE364	Soft Skill-III	-	-	2	1	2	PR	20	30	50
		16		8	20	25		280	420	700

**Professional Elective-II PEC [4]**

	Name of Course
A	Water Treatment and Distribution
B	Rural and Urban Planning
C	Ground Improvement Techniques
D	Construction Safety

