JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Empowered Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)

Department of Civil Engineering
Structure & Syllabi
(2025 Pattern)
w.e.f. Academic Year 2026-2027

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Empowered Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)

Department of Civil Engineering

Vision

To foster excellence in Civil Engineering through quality education, research, and innovation, developing socially responsible professionals and leaders for sustainable development.

Mission

M1: To impart quality Civil Engineering education through effective teaching–learning processes and outcome-based practices.

M2: To promote innovation, interdisciplinary research, and industry collaboration for sustainable engineering solutions.

M3: To develop competent, ethical, and socially responsible professionals and leaders committed to lifelong learning and societal development.

Civil Engineers: Trusted Leaders for a Modern World:

Entrusted by society to create a ***sustainable world*** and enhance the global quality of life, ***civilengineers*** serve ***competently***, ***collaboratively***, and ***ethically*** as ***master***:

- ***Planners, designers, constructors,*** and ***operatorsofsociety'seconomic*** and ***socialengine***—the built environment
- ***Stewards*** of the natural environment and its resources
- ***Innovators*** and ***integrators*** of ***ideas*** and ***technology*** across the public, private, and academic sectors
- ***Managers*** of ***risk*** and ***uncertainty*** caused by natural events, accidents, and other threats and
- ***Leaders*** in ***discussions*** and ***decisions*** shaping public environmental and infrastructure policy.

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

Department of Civil Engineering

Program Outcomes (POs)

Engineering Graduates will be able to:

PO1: Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

PO2: Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

PO3: Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

PO4: Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).

PO5: Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)

PO6: The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

PO7: Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

PO8: Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9: Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences

PO10: Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11: Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

Dr. J. R. Dhanuskar **BoS, C**ivil	Dr. K. P. Moholkar Dean Academics	Dr. A. M. Badadhe Director RSCOE, Pune

Knowledge and Attitude Profile (WK)

WK1: A systematic, theory-based understanding of the natural sciences applicable to the discipline and awareness of relevant social sciences.

WK2: Conceptually-based mathematics, numerical analysis, data analysis, statistics and formal aspects of computer and information science to support detailed analysis and modelling applicable to the discipline.

WK3: A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.

WK4: Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline.

WK5: Knowledge, including efficient resource use, environmental impacts, whole-life cost, reuse of resources, net zero carbon, and similar concepts, that supports engineering design and operations in a practice area.

WK6: Knowledge of engineering practice (technology) in the practice areas in the engineering discipline.

WK7: Knowledge of the role of engineering in society and identified issues in engineering practice in the discipline, such as the professional responsibility of an engineer to public safety and sustainable development.

WK8: Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues.

WK9: Ethics, inclusive behavior and conduct. Knowledge of professional ethics, responsibilities, and norms of engineering practice. Awareness of the need for diversity by reason of ethnicity, gender, age, physical ability etc. with mutual understanding and respect, and of inclusive attitudes.

Department of Civil Engineering

Program Specific Outcomes (PSOs)

PSOs are statements that describe what the graduates of a specific engineering program should be able to do at the time of graduation. Following are the PSO statements;

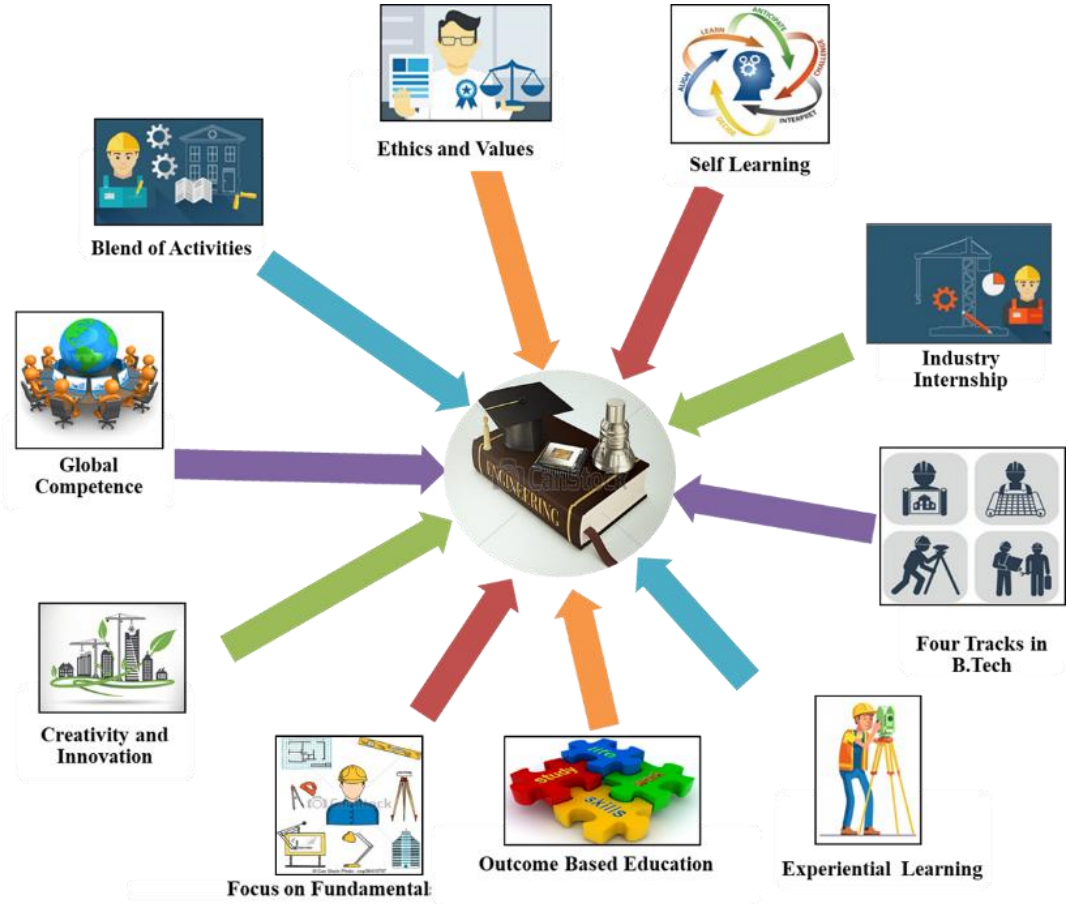
PSO1:
Demonstrate professional competence, leadership, and entrepreneurial abilities to pursue careers in industry, public services, higher education, and research while contributing to sustainable infrastructure development and societal progress.

PSO2:
Graduates will develop the ability to address local and regional infrastructure needs through community engagement, field-based practices, and collaboration with civic and government organizations.

Dr. J. R. Dhanuskar **BoS, C**ivil	Dr. K. P. Moholkar Dean Academics	Dr. A. M. Badadhe Director RSCOE, Pune

Highlights of the Syllabus

Curriculum of UG program for Civil Engineering is designed in association with



Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

Unique features of the curriculum

Unique features of the curriculum

1. Curriculum centered at Outcome Based Education:

The new Curriculum is based on student-centered instruction models that focus on measuring student performance through outcomes. The outcomes include subject knowledge, industry required skills and attitudes.

2. Emphasize on Fundamentals:

The nature of the new curriculum is rigorous and well prescribed so that the students can spend more time on preparation and self-study. The students have to learn core subjects, solve practical based assignments and must attempt periodical quizzes. This will benefit them to grasp and keep a strong hold on fundamentals of Engineering in the most effective way.

3. Experiential Learning:

The curriculum emphasizes on hands-on sessions along with theoretical information. The new curriculum considers Problem Based Learning (PBL) as a teaching pedagogy and includes different subjects that encourage the students for hands on learning through virtual labs, mini-projects, etc. Accordingly, the curriculum maintains good balance between theory and laboratory credits.

4. Promote Creativity and Innovation:

Along with experiential learning, the curriculum also motivates the students to inculcate creativity and innovation. Apart from conventional lab, the curriculum provides a freedom for students to perform industry assignments, pilot projects, innovative development, etc.

5. Inculcating Ethics and Values:

To improvise student's behavior, the curriculum has included systematic courses on ethics and values. The moral principles can help students to make right decisions, lead their professional lives and become ethical citizen.

6. Blend of Curricular and Non-Curricular Activities

The curriculum also gives importance of different activities like co-curricular, extra-curricular, sports, culture, etc. This will help to do all round development of students in all possible ways.

7. Four Tracks in B-Tech:

The curriculum provides four tracks by offering various courses/electives/ flexibility in choosing mentorship to work in specialized field in the curriculum as,

I. Capstone Projects II. Entrepreneur
III. Research and Higher Studies. IV. Industry Internship

8. Global Competence:

Dr. J. R. Dhanuskar	Dr. K. P. Moholkar	Dr. A. M. Badadhe
BoS, Civil	Dean Academics	Director RSCOE, Pune

The curriculum provides a unique opportunity for students to learn and engage in open and effective interaction with people from diverse and interconnected world. The combination of foreign languages (German, Japanese, and English) and international internships in the curriculum help the students to build a capacity to examine global and intercultural issues and to propose perspectives and views.

9. Industry Induced Internship Program

To support ever demanding industry requirements, the curriculum has included an industry internship with an objective to learn technologies pertaining to their discipline and enhance their technical knowledge with a support of the live platform of Industry.

10. Motivation for Self-Learning:

The curriculum also offers a freedom to students to take the initiatives in their learning needs and set the goals with the help of online learning platforms like MOOCs, NPTEL, Swayam, etc.

11. Curriculum centered at Outcome Based Education:

The new Curriculum is based on student-centered instruction models that focus on measuring student performance through outcomes. The outcomes include subject knowledge, industry required skills and attitudes.

12. Emphasize on Fundamentals:

The nature of the new curriculum is rigorous and well prescribed so that the students can spend more time on preparation and self-study. The students have to learn core subjects, solve practical based assignments and must attempt periodical quizzes. This will benefit them to grasp and keep a strong hold on fundamentals of Engineering in the most effective way.

13. Experiential Learning:

The curriculum emphasizes on hands-on sessions along with theoretical information. The new curriculum considers Problem Based Learning (PBL) as a teaching pedagogy and includes different subjects that encourage the students for hands on learning through virtual labs, mini-projects, etc. Accordingly, the curriculum maintains good balance between theory and laboratory credits.

14. Promote Creativity and Innovation:

Along with experiential learning, the curriculum also motivates the students to inculcate creativity and innovation. Apart from conventional lab, the curriculum provides a freedom for students to perform industry assignments, pilot projects, innovative development, etc.

15. Inculcating Ethics and Values:

To improvise student's behaviour, the curriculum has included systematic courses on ethics and values. The moral principles can help students to make right decisions, lead their professional lives and become ethical citizen.

16. Blend of Curricular and Non-Curricular Activities

The curriculum also gives importance of different activities like co-curricular, extra-curricular, sports, culture, etc. This will help to do all round development of students in all possible ways.

Dr. J. R. Dhanuskar	Dr. K. P. Moholkar	Dr. A. M. Badadhe
BoS, Civil	Dean Academics	Director RSCOE, Pune

17. Four Tracks in B-Tech:

The curriculum provides four tracksby offering various courses/electives/ flexibility in choosing mentorship to work in specialized field in the curriculum as,

I. Capstone Projects II. Entrepreneur
III. Research and Higher Studies. IV. Industry Internship

18. Global Competence:

The curriculum provides a unique opportunity for students to learn and engage in open and effective interaction with people from diverse and interconnected world. The combination of foreign languages (German, Japanese, and English) and international internships in the curriculum help the students to build a capacity to examine global and intercultural issues and to propose perspectives and views.

19. Industry Induced Internship Program

To support ever demanding industry requirements, the curriculum has included an industry internship with an objective to learn technologies pertaining to their discipline and enhance their technical knowledge with a support of the live platform of Industry.

20. Motivation for Self-Learning:

The curriculum also offers a freedom to students to take the initiatives in their learning needs and set the goals with the help of online learning platforms like MOOCs, NPTEL, Swayam, etc.

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

Course Type Abbreviations

BSC: Basic Science Course
ESC: Engineering Science Course
PCC: Program Core Course
PEC: Program Elective Course
MDM: Multidisciplinary Minor
OE: Open Elective
VSEC: Vocational and Skill Enhancement Course
HSSM: Humanities Social Science and Management
AEC: Ability Enhancement Course
IKS: Indian Knowledge System
VEC: Value Education Course
CEP: Community Engagement Project
FP: Field Project
CC: Co-curricular Courses
PR: Project Work
IN: Internship

Assessment Type Abbreviations

TA1: Teacher's Assessment 1
TA2: Teacher's Assessment 2
MSE: Mid Semester Examination
ESE: End Semester Examination

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

COURSE WISE CREDIT DISTRIBUTION

Sr. No.	Type of Course	No. of Courses	Total Credits	
			No	%
1	BSC: Basic Science Course	**3**	**20**	**12**
2	ESC: Engineering Science Course	**5**	**17**	**10**
3	PCC: Program Core Course	**20**	**61**	**37**
4	PEC: Program Elective Course	**3**	**10**	**6**
5	MDM: Multidisciplinary Minor	**5**	**14**	**8**
6	OE: Open Elective	**3**	**9**	**5**
7	VSEC: Vocational and Skill Enhancement Course	**3**	**6**	**4**
8	HSSM: Humanities Social Science and Management	**0**		**0**
9	AEC: Ability Enhancement Course		**4**	**2**
10	IKS: Indian Knowledge System	**1**	**2**	**1**
11	VEC: Value Education Course	**1**	**3**	**2**
12	CEP: Community Engagement Project	**1**	**1**	**1**
13	FP: Field Project		0	**0**
14	CC: Co-curricular Courses	**1**	**1**	**1**
15	PR: Project Work	**3**	7	**4**
16	IN: Internship	**1**	12	**7**
	Total		**166**	

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

SEMESTER-WISE CREDIT DISTRIBUTION

Sr. No.	Type of Course	No. of Credits / Semester								
		1	2	3	4	5	6	7	8	Total
1	BSC: Basic Science Course	**8**	**8**	**4**						**20**
2	ESC: Engineering Science Course	**10**	**7**							**17**
3	PCC: Program Core Course			**11**	**19**	**15**	**12**	**4**		**61**
4	PEC: Program Elective Course						**3**	**7**		**10**
5	MDM: Multidisciplinary Minor			**2**	**4**	**3**		**5**		**14**
6	OE: Open Elective					**3**	**3**	**3**		**9**
7	VSEC: Vocational and Skill Enhancement Course	**4**	**2**							**6**
8	HSSM: Humanities Social Science and Management									
9	AEC: Ability Enhancement Course		**3**				**1**			**4**
10	IKS: Indian Knowledge System		**2**							**2**
11	VEC: Value Education Course			**3**						**3**
12	CEP: Community Engagement Project									**1**
13	FP: Field Project									0
14	CC: Co-curricular Courses			**1**						**1**
15	PR: Project Work					**1**	**3**	**3**		7
16	IN: Internship								12	12
	Total	**22**	**22**	**21**	**23**	**22**	**22**	**22**	**12**	**166**

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

S. Y. B. Tech (Civil Engineering)
Semester -III Structure

SN	Course Category	Course Code	Course title	Teaching Scheme, Classroom Contact hr/week (Contact hr/semester)			Self-learning (Contact hr/ semester)	Total Classroom Contact hr/week (Contact hr/ semester)	Credit	Examination scheme (Marks)				Total Mark
										Continuous Assessment			Semester End Examination	
				L	T	P	SL	Hr	C	TA1	MSE	TA2	ESE	
1	BS	ES2301T	Differential Equation and vector Calculus	3 (45)	1 (15)	0 (0)	- (60)	4 (120)	4	10	30	10	50	100
2	VSEC/ MDM	CE2301L	Introduction to Python for Programming and Data Science	0 (0)	0 (0)	4 (40)	- (20)	4 (60)	2	20	20	20	40	100
3	VEC	HS2301T	Universal Human Values & Professional Ethics	2 (30)	1 (15)	0 (0)	- (45)	3 (90)	3	20*	30*	20	30	100
4	PCC	CE2302T	Solid Mechanics	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
5	PCC	CE2302L	Solid Mechanics Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
6	PCC	CE2303T	Geotechnical Engineering	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
7	PCC	CE2303L	Geotechnical Engineering Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
8	PCC	CE2304T	Building Materials	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
9	CC	CCA2301L	Extra-Curricular	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	30	10	-	50
Total				**13**	**02**	**10**	**290**	**630**	**21**	**110**	**220**	**110**	**310**	**750**

" * " – No Pen and Paper Exam

"The medium of answering for the course *Universal Human Values & Professional Ethics* shall be English, Hindi, or Marathi. Students are permitted to write their answers in any one of these languages."

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

S. Y. B. Tech (Civil Engineering)
Semester -IV Structure

SN	Course Category	Course Code	Course title	Teaching Scheme, Classroom Contact hr/week (Contact hr/semester)			Self-learning (contact hr/	Total Classroom Contact hr/week (Contact hr/ semester)	Credit	Examination scheme (Marks)				Total Mark
										Continuous Assessment			Semester End Examination	
				L	T	P	SL	Hr	C	TA1	MSE	TA2	ESE	
1	BSC/ MDM	ES2303L	Computational Mathematics	0 (0)	0 (0)	4 (40)	- (20)	4 (60)	2	20	20	20	40	100
2	PR/ MDM	CE2305L	Design thinking and Innovation Lab	0 (0)	0 (0)	4 (40)	- (20)	4 (60)	2	20	20	20	40	100
3	PCC	CE2306T	Building Planning and Architecture	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
4	PCC	CE2306L	Building Planning and Architecture Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
5	PCC	CE2307T	Analysis of Structures	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
6	PCC	CE2308T	Surveying and Geomatics	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
7	PCC	CE2308L	Surveying and Geomatics Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
8	PCC	CE2309T	Concrete Technology	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
9	PCC	CE2309L	Concrete Technology Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
10	PCC	CE2310T	Fluid Mechanics	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
11	PCC	CE2310L	Fluid Mechanics Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
Total				**15**	**00**	**16**	**305**	**690**	**23**	**130**	**230**	**130**	**410**	**900**

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Empowered Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)

T. Y. B. Tech (Civil Engineering)
Semester -V Structure

SN	Course Category	Course Code	Course title	Teaching Scheme, Classroom Contact hr/week (Contact hr/semester)			Self-learning (Contact hr/ semester)	Total Classroom Contact hr/week (Contact hr/ semester)	Credit	Examination scheme (Marks)				Total Marks
										Continuous Assessment			Semester End Examination	
				L	T	P	SL	Hr	C	TA1	MSE	TA2	ESE	
1	PR	CE3301L	Engineering Innovation and society - I	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
2	MDM	HS3301T	Economics for Engineers	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
3	PCC	CE3302T	Hydrology and Water Resources Engineering	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
4	PCC	CE3302L	Hydrology and Water Resources Engineering Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
5	PCC	CE3303T	Transportation Engineering	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
6	PCC	CE3303L	Transportation Engineering Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
7	OE	OE - I	Open Elective - I	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	25			75	100
8	PCC	CE3304T	Project Management	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
9	PCC	CE3305T	Design of Steel Structures	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
10	PCC	CE3305L	Design of Steel Structures Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
Total				**18**	**0**	**08**	**310**	**660**	**22**	**100**	**220**	**100**	**380**	**800**

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Empowered Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)

T. Y. B. Tech (Civil Engineering)
Semester -VI Structure

SN	Course Category	Course Code	Course title	Teaching Scheme, Classroom Contact hr/week (Contact hr/semester)			Self-learning (Contact hr/ semester)	Total Classroom Contact hr/week (Contact hr/ semester)	Credit	Examination scheme (Marks)				Total Marks
										Continuous Assessment			Semester End Examination	
				L	T	P	SL	Hr	C	TA1	MSE	TA2	ESE	
1	AEC	CCA3301L	Workplace Communication and Analytical Skills	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
2	PCC	CE3306T	Environmental Engineering	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
3	PCC	CE3306L	Environmental Engineering Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
4	PCC	CE3307T	Design of Reinforced Concrete Structure	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
5	PCC	CE3307L	Design of Reinforced Concrete Structure Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
6	PCC	CE3308T	Dams and Hydraulic Structures	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
7	PEC	CE3309T	Professional Elective-I	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
8	PCC	CE3310L	Seminar	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
9	OE	OE-II	Open Elective II	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
10	PR	CE3311L	Engineering Innovation and society - II	0 (0)	0 (0)	6 (60)	- (30)	6 (90)	3	30	30	30	60	150
Total				**15**	**0**	**14**	**295**	**660**	**22**	**120**	**220**	**120**	**390**	**850**

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

Professional Elective I			
Course Code	**Course Name**	**MODE**	**Offering Institute/ weeks/ Course Link**
CE3309T-A	Air Pollution and Control	Offline	JSPM's RSCOE
CE3309T-B	Data Analytics	Offline	JSPM's RSCOE
CE3309T-C	Water Power Engineering	Offline	JSPM's RSCOE
CE3309T-D	Advanced Concrete Technology	Offline	JSPM's RSCOE
CE3309T-E	Infrastructure Planning And Management	NPTEL Online	IIT Madras 12 weeks https://archive.nptel.ac.in/courses/105106188/
CE3309T -F	Sustainable Materials And Green Buildings	NPTEL Online	IIT Delhi 12 weeks https://archive.nptel.ac.in/courses/105102195/

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

Final Year B. Tech (Civil Engineering)
Semester -VII Structure

SN	Course Category	Course Code	Course title	Teaching Scheme, Classroom Contact hr/week (Contact hr/semester)			Self-learning (Contact hr/ semester)	Total Classroom Contact hr/week (Contact hr/ semester)	Credit	Examination scheme (Marks)				
										Continuous Assessment			Semester End Examination	Total Marks
				L	T	P	SL	Hr	C	TA1	MSE	TA2	ESE	
1	PCC	CE4301T	Quantity Surveying and Contracts and Tenders	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
2	PCC	CE4301L	Quantity Surveying and Contracts and Tenders Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
3	PEC	CE4302T	Professional Elective II	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
4	PEC	CE4302L	Professional Elective II Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
5	PEC	CE4303T	Professional Elective III	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
6	MDM	CE4304T	Disaster Management	2 (30)	0 (0)	0 (0)	- (30)	2 (60)	2	10	30	10	50	100
7	OE	OE-III	Open Elective -III	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
8	MDM	HS4301T	Foundation of Management & Entrepreneurship	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
9	PR	CE4305T	Engineering Innovation and society III	0 (0)	0 (0)	6 (60)	- (30)	6 (90)	3	30	30	30	60	150
Total								**660**	**22**	**110**	**230**	**110**	**400**	**850**

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

Professional Elective II		Professional Elective II Lab	
Course Code	**Course Name**	**Course Code**	**Course Name**
CE4302T-A	Open Channel Flow	**CE4302L-A**	Open Channel Flow Lab
CE4302T -B	Advanced Project Management	**CE4302L -B**	Advanced Project Management Lab
CE4302T -C	Industrial Waste Water Treatment	**CE4302L -C**	Industrial Waste Water Treatment Lab
CE4302T -D	Advanced Design of Steel Structures	**CE4302L -D**	Advanced Design of Steel Structures Lab

Professional Elective III			
Course Code	**Course Name**	**MODE**	**Offering Institute/ weeks/ Course Link**
CE4303T-A	Solid Waste Management	Offline	JSPM's RSCOE
CE4303T-B	Remote Sensing and GIS	Offline	JSPM's RSCOE
CE4303T-C	Pre-stressed Engineering	Offline	JSPM's RSCOE
CE4303T-D	Infrastructure Engineering And Construction Techniques	Offline	JSPM's RSCOE
CE4303T-E	Geotechnical Engineering II Foundation Engineering	NPTEL Online	IIT Kharagpur 12 weeks https://archive.nptel.ac.in /courses/ 105105185/
CE4303T-F	Integrated Waste Management For A Smart City	NPTEL Online	IIT Kharagpur 12 weeks https://archive.nptel.ac.in /courses/ 105105160/

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

Final Year B. Tech (Civil Engineering)
Semester -VIII Structure

SN	Course Category	Course Code	Course title	Teaching Scheme, Classroom Contact hr/week (Contact hr/semester)			Self-learning	Total Classroom Contact hr/week (Contact hr/ semester)	Credit	Examination scheme (Marks)				
										Continuous Assessment			Semester End Examination	Total Marks
				L	T	P	SL	Hr	C	TA1	MSE	TA2	ESE	
1	IN	CE4306L	Industrial Internship / Research Internship/ Start-up	0	0	0	540	540#	12	100	100	100	200	500
Total				**0**	**0**	**0**	**540**	**540**	**12**	**100**	**100**	**100**	**200**	**500**

" # " 1 credit is 40 to 45 hrs. of work as per AICTE internship guidelines

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune

JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Empowered Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)

B. Tech (Honor Course)
Earthquake Engineering Structure

SN	Course Category	Course Code	Course title	Teaching Scheme, Classroom Contact hr/week (Contact hr/semester)			Self-learning	Total Classroom Contact hr/week (Contact hr/ semester)	Credit	Examination scheme (Marks)				
										Continuous Assessment			Semester End Examination	Total Marks
				L	T	P	SL	Hr	C	TA1	MSE	TA2	ESE	
1	PCC (Sem 4)	CEH2301T	Engineering Seismology	4 (60)	0 (0)	0 (0)	- (60)	4 (120)	4	10	30	10	50	100
2	PCC (Sem 5)	CEH3301T	Seismic analysis of structures	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
3	PCC (Sem 5)	CEH3301L	Seismic analysis of structures Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
4	PCC (Sem 6)	CEH3302T	Earthquake resistant design of structures	3 (45)	0 (0)	0 (0)	- (45)	3 (90)	3	10	30	10	50	100
5	PCC (Sem 6)	CEH3302L	Earthquake resistant design of structures Lab	0 (0)	0 (0)	2 (20)	- (10)	2 (30)	1	10	10	10	20	50
6	PCC (Sem 7)	CEH4301T	Restoration and Rehabilitation of structures	4 (60)	0 (0)	0 (0)	- (60)	4 (120)	4	10	30	10	50	100
7	PCC (Sem 7)	CEH4302L	Mini Project	0 (0)	0 (0)	4 (40)	- (20)	- (60)	2	20	10	20	50	100
Total				**14**	**0**	**8**	**250**	**540**	**18**	**80**	**150**	**80**	**290**	**600**

Dr. J. R. Dhanuskar
BoS, Civil

Dr. K. P. Moholkar
Dean Academics

Dr. A. M. Badadhe
Director RSCOE, Pune