DEPARTMENT OF TECHNOLOGY
SHIVAJI UNIVERSITY, KOLHAPUR

STRUCTURE
For
FIRST YEAR
TO
FINAL YEAR B. TECH.
CIVIL ENGINEERING

TO BE EFFECTIVE FROM
ACADEMIC YEAR 20-21

DEPARTMENT OF TECHNOLOGY

FIRST YEAR B.TECH

Civil Engineering

Scheme of Teaching and Examination Semester – I

Semester – I (Group-A)

Course Code	Sr. No.	Course Title	Teaching Scheme with Credits (Hours / Week)				Examination Scheme (Marks)					
							Theory			Practical/Tutorial		
			L	T	P	Credits	Scheme	Max. Marks	Min. Passing $	Scheme	Max. Marks	Min. Passing $
BS-11A1	1.	Engineering Mathematics–I	4	1	-	05	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-11A2	2.	Engineering Physics	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11A1	3.	Basics of Mechanical Engineering	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11A2	4.	Engineering Mechanics	4	-	-	04	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11A3	5.	Basic Electronics Engineering	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-11A3	6.	Lab. –I Engineering Physics	-	-	2	01	---	---	---	IPE	50	20
ES-11A4	7.	Lab.–II Basics of Mechanical Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-11A5	8.	Lab.–III Engineering Mechanics	-	-	2	01	---	---	---	IPE	50	20
ES-11A6	9.	Lab.–IV Basic Electronics Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-11A7	10.	Lab.–V Computer Programming	1	-	2	02	---	---	---	IPE	50	20
ES-11A8	11.	Lab.–VI Workshop Practice	-	-	2	01	---	---	---	IPE	50	20
		Total	**18**	**1**	**12**	**25**		**500**			**300**	

Total Credits: 25

Total Contact Hours/Week: 31 hrs

Note:

$: In theory student should appear for the CIE (Mid Semester Exam), submit the assignment and must secure 40% marks in SEE.

Tutorials and practical shall be conducted in batches with batch strength not exceeding 15 students.

CIE – Continuous Internal Evaluation

SEE – Semester End Examination

IPE – Internal Practical Evaluation

* Semester End Examination duration will be 4 hrs

DEPARTMENT OF TECHNOLOGY

FIRST YEAR B.TECH

Civil Engineering

Scheme of Teaching and Examination Semester – II

Semester – II (Group-A)

Course Code	Sr. No.	Course Title	Teaching Scheme with Credits (Hours / Week))				Examination Scheme (Marks)					
							Theory			Practical/Tutorial		
			L	T	P	Credits	Scheme	Max. Marks	Min. Passing $	Scheme	Max. Marks	Min. Passing $
BS-12A1	1.	Engineering Mathematics–II	4	1	-	05	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-12A2	2.	Engineering Chemistry	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12A1	3.*	Engineering Graphics	4	-		04	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12A2	4.	Basic Civil Engineering	3	-		03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12A3	5.	Basic Electrical Engineering	3	-		03	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-12A3	6.	Lab.–I Engineering Chemistry	-	-	2	01	---	---	---	IPE	50	20
ES-12A4	7.	Lab.–II Engineering Graphics	-	-	2	01	---	---	---	IPE	50	20
ES-12A5	8.	Lab.–III Basic Civil Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-12A6	9.	Lab. –IV Basic Electrical Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-12A7	10.	Lab. –V Programming with Scilab and Matlab	-	1	-	01	---	---	---	IPE	50	20
HS-12A1	11.	Lab.–VI Professional Communication	2	-	-	02	---	---	---	IPE	50	20
		Total	**19**	**2**	**8**	**25**		**500**			**300**	

Total Credits: 25
Total Contact Hours/Week: 29 hrs

Note:
$: In theory student should appear for the CIE (Mid Semester Exam), submit the assignment and must secure 40% marks in SEE.
Tutorials and practical shall be conducted in batches with batch strength not exceeding 15 students.
CIE – Continuous Internal Evaluation
SEE – Semester End Examination
IPE – Internal Practical Evaluation
* Semester End Examination duration will be 4 hrs

DEPARTMENT OF TECHNOLOGY

FIRST YEAR B.TECH

Civil Engineering

Scheme of Teaching and Examination Semester – I

Semester – I (Group-B)

Course Code	Sr. No.	Course Title	Teaching Scheme with Credits (Hours / Week))				Examination Scheme (Marks)					
							Theory			Practical/Tutorial		
			L	T	P	Credits	Scheme	Max. Marks	Min. Passing $	Scheme	Max. Marks	Min. Passing $
BS-11B1	1.	Engineering Mathematics–I	4	1	-	05	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-11B2	2.	Engineering Chemistry	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11B1	3.*	Engineering Graphics	4	-		04	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11B2	4.	Basic Civil Engineering	3	-		03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-11B3	5.	Basic Electrical Engineering	3	-		03	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-11B3	6.	Lab.–I Engineering Chemistry	-	-	2	01	---	---	---	IPE	50	20
ES-11B4	7.	Lab.–II Engineering Graphics	-	-	2	01	---	---	---	IPE	50	20
ES-11B5	8.	Lab.–III Basic Civil Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-11B6	9.	Lab. –IV Basic Electrical Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-11B7	10.	Lab. –V Programming with Scilab and Matlab	-	1	-	01	---	---	---	IPE	50	20
HS-11B1	11.	Lab.–VI Professional Communication	2	-	-	02	---	---	---	IPE	50	20
		Total	**19**	**2**	**8**	**25**		**500**			**300**	

Total Credits: 25
Total Contact Hours/Week: 29 hrs

Note:
$: In theory student should appear for the CIE (Mid Semester Exam), submit the assignment and must secure 40% marks in SEE.
Tutorials and practical shall be conducted in batches with batch strength not exceeding 15 students.
CIE – Continuous Internal Evaluation
SEE – Semester End Examination
IPE – Internal Practical Evaluation
* Semester End Examination duration will be 4 hrs

DEPARTMENT OF TECHNOLOGY

FIRST YEAR B.TECH

Civil Engineering

Scheme of Teaching and Examination Semester – II

Semester – II (Group-B)

Course Code	Sr. No.	Course Title	Teaching Scheme with Credits (Hours / Week)				Examination Scheme (Marks)					
							Theory			Practical/Tutorial		
			L	T	P	Credits	Scheme	Max. Marks	Min. Passing $	Scheme	Max. Marks	Min. Passing $
BS-12B1	1.	Engineering Mathematics–II	4	1	-	05	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-12B2	2.	Engineering Physics	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12B1	3.	Basics of Mechanical Engineering	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12B2	4.	Engineering Mechanics	4	-	-	04	CIE	30	40	---	---	---
							SEE	70		---	---	---
ES-12B3	5.	Basic Electronics Engineering	3	-	-	03	CIE	30	40	---	---	---
							SEE	70		---	---	---
BS-12B3	6.	Lab. –I Engineering Physics	-	-	2	01	---	---	---	IPE	50	20
ES-12B4	7.	Lab.–II Basics of Mechanical Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-12B5	8.	Lab.–III Engineering Mechanics	-	-	2	01	---	---	---	IPE	50	20
ES-12B6	9.	Lab.–IV Basic Electronics Engineering	-	-	2	01	---	---	---	IPE	50	20
ES-12B7	10.	Lab.–V Computer Programming	1	-	2	02	---	---	---	IPE	50	20
ES-12B8	11.	Lab.–VI Workshop Practice	-	-	2	01	---	---	---	IPE	50	20
		Total	**18**	**1**	**12**	**25**		**500**			**300**	

Total Credits: 25
Total Contact Hours/Week: 31 hrs

Note:
$: In theory student should appear for the CIE (Mid Semester Exam), submit the assignment and must secure 40% marks in SEE.
Tutorials and practical shall be conducted in batches with batch strength not exceeding 15 students.
CIE – Continuous Internal Evaluation
SEE – Semester End Examination
IPE – Internal Practical Evaluation
* Semester End Examination duration will be 4 hrs

DEPARTMENT OF TECHNOLOGY

SECOND YEAR B.TECH

Civil Engineering

Scheme of Teaching and Examination Semester – III

To be implemented from Academic Year 2021- 22

Course Code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
						Theory			Practical		
		L	T	P	Credits	Scheme	Max. marks	Min. Passing $	Scheme	Max. marks	Min. Passing
MA 211	Engineering Mathematics-III	04	01	-	05	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 211	Strength of Materials	04	01	-	05	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 212	Fluid Mechanics-I	03	01	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
*CE 213	Building Construction	04	-	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 214	Engineering Geology	03	-	-	03	CIE	30	40	--------	-------	---------
						SEE	70		--------	-------	---------
CEL 215	Lab- I Fluid Mechanics-I	-	-	02	01	--------	-------	--------	EPE	50	20
									IOE	50	20
CEL 216	Lab-II Strength of Materials	-	-	02	01	--------	-------	--------	EOE	50	20
CEL 217	Lab-III Building Construction	-	-	02	01	------	-------	--------	EPE	50	20
									IPE	50	20
CEL 218	Lab-IV Engineering Geology	-	-	02	01	--------	-------	--------	IPE	50	20
									--------	-------	---------
	Total	**18**	**03**	**08**	**25**	--------	**500**	--------	--------	**300**	--------
Audit Courses											
AC211	Environmental Studies	2	-	-	-----	Institute/ Departmental Level	Project* Theory*	30 70	------	-------	40
AC212	Introduction to performing Arts	2	-	-	-----	Institute/ Departmental Level	100	40	-------	-------	------

Total Credits: 25

Total Contact Hours/Week: 29+2+2=33

Note:

$: In theory student should appear for the CIE (Mid Semester Exam) submit the assignment and must secure 40% marks in SEE.

• Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

*Theory paper will be 4 hours.

CIE – Continuous Internal Evaluation, SEE – Semester End Examination,
IPE – Internal Practical Evaluation, EPE–External Practical Examination,
IOE– Internal Oral Evaluation, EOE–External Oral Examination,

DEPARTMENT OF TECHNOLOGY

SECOND YEAR B.TECH

Civil Engineering

Scheme of Teaching and Examination Semester – IV

To be implemented from Academic Year 2021-22

Course Code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
						Theory			Practical		
		L	T	P	Credits	Scheme	Max. marks	Min. Passing $	Scheme	Max. marks	Min. Passing
CE 221	Theory of Structures-I	04	01	-	05	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 222	Surveying	04	-	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 223	Concrete Technology	03	-	-	03	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 224	Fluid Mechanics II	03	01	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
*CE 225	Building Planning and Drawing	03	-	-	03	CIE	30	40	--------	-------	---------
						SEE	70		--------	-------	---------
CEL 226	Laboratory- I Surveying	-	-	04	02	--------	-------	--------	IPE	50	20
									EPE	50	20
CEL 227	Lab-II Concrete Technology	-	-	02	01	--------	-------	--------	IPE	50	20
									EPE	50	20
CEL 228	Lab-III Fluid Mechanics-II	-	-	02	01	------	-------	--------	IPE	50	20
CEL 229	Lab-IV Building Planning and Drawing	-	-	04	02	--------	-------	--------	EPE	50	20
	Total	**17**	**02**	**12**	**25**	--------	**500**	--------	--------	**300**	--------
Audit Courses											
AC 221	Environmental Studies	2	-	-	-----	Institute/ Departmental Level	Project* Theory*		---	----	------- 30 70
AC 222	Soft Skills Development	2	-	-	-----	Institute/ Departmental Level	100		----	----	------- 40

Total Credits: 25

Total Contact Hours/Week: 31+2+2=35

Note:

$: In theory student should appear for the CIE (Mid Semester Exam) submit the assignment and must secure 40% marks in SEE

• Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

*Theory paper will be 4 hours.

CIE – Continuous Internal Evaluation, SEE – Semester End Examination,
IPE – Internal Practical Evaluation, EPE–External Practical Examination,
IOE– Internal Oral Evaluation, EOE–External Oral Examination

Note: After semester IV, during vacation period, students will undergo Internship I for minimum 4 weeks in a reputed industry from standpoint Civil Engineering principles. The students will submit a report of the training. This particular activity is equivalent to one credit and it carries 50 marks as an Internal Oral Evaluation (IOE) which is included in Semester V. For

submission of the activity report, all the students will follow one specific format recommended by the Program Advisory Board.

Equivalence for the Subject

Semester III and IV

The above detailed syllabus is a revised version of the Second Year. B. Tech (Civil Engineering) course being conducted by the Shivaji University at the Technology Department of the University. This syllabus is to be implemented from Academic year 2021-2022. The prime feature of this revision is the transformation of the existing curriculum into the Outcome based curriculum as specified in NBA rules and regulations.

The Equivalence for the subjects/courses of Civil Engineering at Second Year B Tech Semester IV and V pre-revised course under the faculty of Engineering and Technology is as follows.

Second Year B. Tech Semester III (Civil Engineering)

Sr. No	Pre-revised syllabus	Revised syllabus	Remark
1.	Engineering Mathematics-III	Engineering Mathematics-III	Syllabus revised.
2.	Surveying	Surveying	Shifted to Sem IV and Syllabus Revised
3.	Strength of Materials	Strength of Materials	Syllabus revised.
4.	Building Construction	Building Construction	Syllabus revised.
5.	Fluid Mechanics-I	Fluid Mechanics-I	Syllabus revised.
6.	Lab-I Fluid Mechanics-I	Lab-I Fluid Mechanics-I	Syllabus revised.
7.	Lab-II Strength of Materials	Lab-II Strength of Materials	Syllabus revised.
8.	Lab-III Building Construction	Lab-III Building Construction	Syllabus revised.
9.	Lab-IV Surveying	Lab-IV Surveying	Shifted to Sem IV and Syllabus Revised
10.	Introduction to Foreign Languages	Introduction to Performing Arts	Syllabus revised.
11.	Environmental Studies	Environmental Studies	Syllabus revised.

Second Year B. Tech Semester IV (Civil Engineering)

Sr. No	Pre-revised syllabus	Revised syllabus	Remark
1.	Theory of structures -I	Theory of structures -I	Syllabus revised.
2.	Engineering Geology	Engineering Geology	Shifted to Sem III and Syllabus Revised
3.	Fluid Mechanics-II	Fluid Mechanics-II	Syllabus revised.
4.	Concrete Technology	Concrete Technology	Syllabus revised.
5.	Building Planning and Drawing	Building Planning and Drawing	Syllabus revised.
6.	Lab-I Engineering Geology	Lab-I Engineering Geology	Shifted to Sem III and Syllabus Revised
7.	Lab-II Fluid Mechanics-II	Lab-II Fluid Mechanics-II	Syllabus revised.
8.	Lab-III Concrete Technology	Lab-III Concrete Technology	Syllabus revised.
9.	Lab-IV Building Planning and Drawing	Lab-IV Building Planning and Drawing	Syllabus revised.
10.	Introduction to Performing Arts	Soft Skills development	Syllabus revised.
11.	Environmental Studies	Environmental Studies	Syllabus revised.

DEPARTMENT OF TECHNOLOGY

THIRD YEAR B.TECH

Civil Engineering

Scheme of Teaching and Examination Semester – V

To be implemented from Academic Year 2022 - 23

Course Code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
						Theory			Practical		
		L	T	P	Credits	Scheme	Max. marks	Min. Passing $	Scheme	Max. marks	Min. Passing
CE 311	Design of Steel Structures	03	01	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 312	Theory of Structures –II	04	01	-	05	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 313	Geotechnical Engineering- I	04		-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 314	Environmental Engineering-I	04	-	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 315	Transportation Engineering-I	03	-	-	03	CIE	30	40			
						SEE	70		--------	-------	---------
CEL 316	Lab-I Transportation Engineering –I	-	-	02	01	--------	-------	--------	IOE	50	20
									EPE	50	20
CEL 317	Lab-II Geotechnical Engineering- I	-	-	02	01	--------	-------	--------	EPE	50	20
CEL 318	Lab-III Environmental Engineering-I	-	-	02	01	------	-------	--------	EPE	50	20
CE 319	Seminar	-	-	02	01	--------	-------	--------	IPE	50	20
CE 320	Internship-I	-	-	-	01	-------	------	--------	IOE	50	20
	Total	**18**	**02**	**08**	**25**	--------	**500**	--------	--------	**300**	--------
Audit Course III											
AC 330	Introduction to foreign language	2	-	-	-----	Institute/ Departmental Level	100	--------	--------	------	40

Total Credits: 25

Total Contact Hours/Week: 30 + 2 = 32 hrs

Note:

$: In theory student should appear for the CIE (Mid Semester Exam) submit the assignment and must secure 40% marks in SEE

• Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

CIE – Continuous Internal Evaluation, SEE – Semester End Examination,
IPE – Internal Practical Evaluation, EPE–External Practical Examination,
IOE– Internal Oral Evaluation, EOE–External Oral Examination

Note: After semester IV, during vacation period, students will undergo Internship I for minimum 4 weeks in a reputed industry from standpoint Civil Engineering principles. The students will submit a report of the training. This particular activity is equivalent to one credit and it carries 50 marks as an Internal Oral Evaluation (IOE) which is included in Semester V. For submission of the activity report, all the students will follow one specific format recommended by the Program Advisory Board.

DEPARTMENT OF TECHNOLOGY

THIRD YEAR B.TECH

Civil Engineering

Scheme of Teaching and Examination Semester – VI

To be implemented from Academic Year 2022 - 23

Course Code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
						Theory			Practical		
		L	T	P	Credits	Scheme	Max. marks	Min. Passing $	Scheme	Max. marks	Min. Passing
CE 321	Construction Management	04	-	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 322	Water Resource Engineering –I	04	-	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 323	Transportation Engineering –II	04	-	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 324	Environmental Engineering-II	04	-	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 325	Geotechnical Engineering- II	03	01	-	04	CIE	30	40	--------	-------	---------
						SEE	70		--------	-------	---------
CEL 326	Lab-I Geotechnical Engineering- II	-	-	02	01	--------	-------	--------	EOE	50	20
CEL 327	Lab-II Environmental Engineering-II	-	-	02	01	--------	-------	--------	EPE	50	20
CEL 328	Lab-III Design and Drawing of Steel Structures	-	-	02	01	--------	------	-------	IOE	50	20
									EOE	50	20
CE 329	Internship-II	-	-	-	01	-------	------	--------	IOE	50	20
CE 330	Mini Project	-	-	02	01	--------	-------	--------	IPE	50	20
	Total	**19**	**01**	**08**	**25**	--------	**500**	--------	--------	**300**	--------
Audit Course IV											
AC331	Research Methodology	2	-	-	-	Institute/ Departmental Level	100	--------	--------	-------	40

Total Credits: 25
Total Contact Hours/Week: 28+ 2 = 30 hrs

Note:
$: In theory student should appear for the CIE (Mid Semester Exam) submit the assignment and must secure 40% marks in SEE

• Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

CIE – Continuous Internal Evaluation, SEE – Semester End Examination,
IPE – Internal Practical Evaluation, EPE–External Practical Examination,
IOE– Internal Oral Evaluation, EOE–External Oral Examination

Note: After semester V, during vacation period, students will undergo Internship II for minimum 4 weeks in a reputed industry from standpoint Civil Engineering principles. The students will submit a report of the training. This particular activity is equivalent to one credit and it carries 50 marks as an Internal Oral Evaluation (IOE) which is included in Semester VI. For submission of the activity report, all the students will follow one specific format recommended by the Program Advisory Board.

Equivalence of Third Year B. Tech (Civil Engineering)

Semester V and VI

The above detailed syllabus is a revised version of the Third Year. B. Tech (Civil Engineering) course being conducted by the Shivaji University at the Technology Department of the University. This syllabus is to be implemented from Academic year 2022-2023. The prime feature of this revision is the transformation of the existing curriculum into the Outcome based curriculum as specified in NBA rules and regulations.

The Equivalence for the subjects/courses of Civil Engineering at Third Year B Tech Semester V and VI pre-revised course under the faculty of Engineering and Technology is as follows.

Third Year B. Tech Semester V (Civil Engineering)

Sr. No	Pre-revised syllabus	Revised syllabus	Remark
1.	Design of steel Structures	Design of steel Structures	Syllabus revised.
2.	Transportation Engineering –I	Transportation Engineering –I	Syllabus revised.
3.	Geotechnical Engineering- I	Geotechnical Engineering- I	Syllabus revised.
4.	Environmental Engineering-I	Environmental Engineering-I	Syllabus revised.
5.	Construction Management	Construction Management	Shifted to Sem VI and Syllabus Revised.
6.	Lab-I Transportation Engineering –I	Lab-I Transportation Engineering –I	Syllabus revised.
7.	Lab-II Geotechnical Engineering- I	Lab-II Geotechnical Engineering- I	Syllabus revised.
8.	Lab-III Environmental Engineering-I	Lab-III Environmental Engineering-I	Syllabus revised.
9.	Seminar	Seminar	Syllabus revised.
10.	Internship-I	Internship-I	Syllabus revised.
11.	Presentation and Communication Techniques	Presentation and Communication Techniques	Syllabus revised.

Third Year B. Tech Semester VI (Civil Engineering)

Sr. No	Pre-revised syllabus	Revised syllabus	Remark
1.	Theory of structures –II	Theory of structures -II	Shifted to Sem V and Syllabus Revised.
2.	Water Resource Engineering –I	Water Resource Engineering -I	Syllabus revised.
3.	Transportation Engineering –II	Transportation Engineering –II	Syllabus revised.
4.	Environmental Engineering-II	Environmental Engineering-II	Syllabus revised.
5.	Geotechnical Engineering- II	Geotechnical Engineering- II	Syllabus revised.
6.	Lab-I Geotechnical Engineering- II	Lab-I Geotechnical Engineering- II	Syllabus revised.
7.	Lab-II Environmental Engineering-II	Lab-II Environmental Engineering-II	Syllabus revised.
8.	Lab-III Structural Design Drawing-I	Lab-III Design and Drawing of Steel Structures	Syllabus revised.
9.	Mini Project	Mini Project	Syllabus revised.
10.	Internship- II	Internship- II	Syllabus revised.
11.	Research Methodology	Research Methodology	Syllabus revised.

DEPARTMENT OF TECHNOLOGY
FINAL YEAR B.TECH
Civil Engineering
Scheme of Teaching and Examination Semester – VII
To be implemented from Academic Year 2023-24

Course Code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
						Theory			Practical		
		L	T	P	Credits	Scheme	Max. marks	Min. Passing $	Scheme	Max. marks	Min. Passing
CE 411	Design of RCC Structures –I	03	01	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 412	Structural dynamics and Earthquake Engineering	03	-	-	03	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 413	Estimating and Costing	03	-	-	03	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE 414	Water Resources Engineering – II	03	-	-	03	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	--------
CE	Elective-I	04	-	-	04	CIE	30	40	--------	-------	--------
						SEE	70		--------	-------	---------
CEL 415	Major Project Phase-I	-	-	02	03	--------	-------	--------	IOE	50	20
CEL 416	Lab-I RCC Design and Drawing – I	-	-	02	01	--------	-------	------	EOE	50	20
CEL 417	Lab-II Structural dynamics and Earthquake Engineering	-	-	02	01	--------	-------	--------	EOE	50	20
CEL 418	Lab-III Estimating and Costing	-	-	02	01	--------	-------	--------	EOE	50	20
CEL	Lab IV Elective-I	-	-	02	01	--------	-------	--------	IOE	50	20
CEL 419	Internship III	-	-	-	01	--------	------	-----	IOE	50	20
	Total	**16**	**01**	**10**	**25**	--------	**500**	--------	--------	**300**	--------
Audit Course - VI											
AC 416	Introduction to Constitution of India	2	-	-	-	Institute/ Departmental Level	100	--------	--------	--------	40

Total Credits: 25

Total Contact Hours/Week: 27+2 = 29 hrs

$: In theory student should appear for the CIE (Mid Semester Exam) submit the assignment and must secure 40% marks in SEE

• Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

• Contact hours of 2 with Guide for Project Phase I for a group of students.(AICTE guidelines)

CIE – Continuous Internal Evaluation, SEE – Semester End Examination,
IPE – Internal Practical Evaluation, EPE–External Practical Examination,
IOE– Internal Oral Evaluation, EOE–External Oral Examination

Note: After semester VI, during vacation period, students will undergo Internship III for minimum 4 weeks in a reputed industry from standpoint Civil Engineering principles. The students will submit a report of the training. This particular activity is equivalent to one credit and it carries 50 marks as an Internal Oral Evaluation (IOE) which is included in Semester VII. For submission of the activity report, all the students will follow one specific format recommended by the Program Advisory Board.

Elective-I

CE 428 Advanced Analysis of Structure

CE 429 Energy Efficient and Cost-Efficient Building Technology

CE 430 Human Resource Management in construction

CE 431 Transportation in Infrastructure planning and Demand Estimation

CE 432 Watershed Management

Lab IV Elective-I

CEL 433 Advanced Analysis of Structure

CEL 434 Energy Efficient and Cost-Efficient Building Technology

CEL 435 Human Resource Management in construction

CEL 436 Hydrology and Watershed Management

CEL 437 Transportation in Infrastructure planning and Demand Estimation

DEPARTMENT OF TECHNOLOGY
FINAL YEAR B.TECH
Civil Engineering
Scheme of Teaching and Examination Semester – VIII
To be implemented from Academic Year 2023-24

Course Code	Course Title	Teaching Scheme (Hours / Week)				Examination Scheme (Marks)					
						Theory			Practical		
		L	T	P	Credits	Scheme	Max. marks	Min. Passing $	Scheme	Max. marks	Min. Passing
CE 421	Design of RCC Structures-II	03	01	-	04	CIE	30	40	-------	-------	--------
						SEE	70		-------	-------	--------
CE 422	Construction Practices	03	-	-	03	CIE	30	40	-------	-------	--------
						SEE	70		-------	-------	--------
CE 423	Town and Country Planning	03	-	-	03	CIE	30	40	-------	-------	--------
						SEE	70		-------	-------	--------
CE	Elective-II	04	-	-	04	CIE	30	40	-------	-------	--------
						SEE	70		-------	-------	--------
CE	Elective-III	04	-	-	04	CIE	30	40	-------	-------	--------
						SEE	70		-------	-------	---------
CEL 424	Major Project Phase - II	-	-	02**	04	--------	-------	--------	IOE	50	20
									EOE	100	40
CEL 425	Lab-I RCC Design and Drawing – II	-	-	02	01	--------	-------	--------	EOE	50	20
CEL	Lab-II Elective-II	-	-	02	01	--------	-------	--------	EOE	50	20
						--------	-------	--------			
CEL	Lab-III Elective-III	-	-	02	01	--------	-------	--------	IOE	50	20
	Total	**17**	**01**	**08**	**25**	--------	**500**	--------	-------	**300**	--------
Audit Course - VII											
AC 427	Professional Ethics	02	-	-	02	Institute/ Departmental Level	100	40	--------	--------	--------

Total Credits: 25Total Contact Hours/Week: 28 hrs

Note:

$: In theory student should appear for the CIE (Mid Semester Exam) submit the assignment and must secure 40% marks in SEE

• Tutorials and practical shall be conducted in batches with batch strength not exceeding 18 students.

** Students are expected to do self study for 2 hrs as per the guidance given by the project guide hence contact hours to be taken as 2 for the calculation of contact hrs.

CIE – Continuous Internal Evaluation, SEE – Semester End Examination,

IPE – Internal Practical Evaluation, EPE–External Practical Examination,

IOE– Internal Oral Evaluation, EOE–External Oral Examination

Elective-II

CE 438 Advanced Design of Structures

CE 439 Advanced Geotechnical Engineering

CE 440 Development Engineering

CE 441 Design of Concrete Bridges

CE 442 Structural Dynamics

CE 443 Advanced Surveying

Lab II Elective-II

CEL 443 Advanced Design of Structures

CEL 444 Advanced Geotechnical Engineering

CEL 445 Development Engineering

CEL 446 Design of Concrete Bridges

CEL 447 Structural Dynamics

CEL 448 Advanced Surveying

Elective-III (Open Elective)

CE 449 Engineering Optimization

CE 450 Engineering Economics and Valuation

CE 451 Finite Element Method

CE 452 Numerical Methods

CE 453 Remote Sensing and GIS application

CE 454 Structural Health Monitoring and Retrofitting

Lab III Elective-III (Open Elective)

CEL 455 Engineering Optimization

CEL 456 Engineering Economics and Valuation

CEL 457 Finite Element Method

CEL 458 Numerical Methods

CEL 459 Remote Sensing and GIS application

CEL 460 Structural Health Monitoring and Retrofitting

Equivalence of subject

Final Year B. Tech (Civil Engineering) Semester VII and VIII

The above detailed syllabus is a revised version of the Final Year. B. Tech (Civil Engineering) course being conducted by the Shivaji University at the Technology Department of the University. This syllabus is to be implemented from Academic year 2023-2024. The prime feature of this revision is the transformation of the existing curriculum into the Outcome based curriculum as specified in NBA rules and regulations.

The Equivalence for the subjects of Civil Engineering at Final Year B Tech Semester VII and VIII pre-revised course under the faculty of Engineering and Technology is as follows.

Final Year B. Tech Semester VII (Civil Engineering)

Name Course (Old Syllabus)	Equivalent Course (New Syllabus)	Remarks
CE 411 Design of RCC Structures –I	CE 411 Design of RCC Structures -I	Syllabus Revised
CE 412 Structural Dynamics and Earthquake Engineering	CE 412 Structural Dynamics and Earthquake Engineering	Syllabus Revised
CE 413 Estimating and Costing	CE 413 Estimating and Costing	Syllabus Revised
CE 414 Water Resources Engineering – II	CE 414 Water Resources Engineering - II	Syllabus Revised
CEL 415 Major Project Phase-I	CE 415 Major Project Phase-I	
CEL 416 Lab-I Structural Design and Drawing – II	CEL 416 Lab-I RCC Design and Drawing - I	Syllabus Revised
CEL 417 Lab-II Structural Dynamics and Earthquake Engineering	CEL 417 Lab-II Structural Dynamics and Earthquake Engineering	Syllabus Revised
CEL 418 Lab-III Estimating and Costing	CEL 418 Lab-III Estimating and Costing	Syllabus Revised
CEL 419 Internship III	CEL 419 Internship III	Syllabus Revised
Elective-I		
CE 428 Advanced Analysis of Structure	CE 428 Advanced Analysis of Structure	Syllabus Revised
CE 429 Energy Efficient and Cost-Efficient Building Technology	CE 429: Energy Efficient and Cost-Efficient Building Technology	Syllabus Revised
CE 430: Human Resource Management in construction	CE 430 Human Resource Management in construction	Syllabus Revised
CE 431 Transportation in Infrastructure planning and Demand Estimation	CE 431 Transportation in Infrastructure planning and Demand Estimation	Syllabus Revised
CE 432 Watershed Management	CE 432 Watershed Management	Syllabus Revised
Lab IV Elective-I		
CEL 433 Advanced Analysis of Structure	CEL 433 Advanced Analysis of Structure	Syllabus Revised
CEL 434 Energy Efficient and Cost-Efficient Building Technology	CEL 434 Energy Efficient and Cost-Efficient Building Technology	Syllabus Revised
CEL 435 Human Resource Management in construction	CEL 435 Human Resource Management in construction	Syllabus Revised
CEL 436 Hydrology and Watershed Management	CEL 436 Hydrology and Watershed Management	Syllabus Revised
CEL 437 Transportation in Infrastructure planning and Demand Estimation	CEL 437 Transportation in Infrastructure planning and Demand Estimation	Syllabus Revised

Final Year B. Tech Semester VIII (Civil Engineering)

Name Course (Old Syllabus)	Equivalent Course (New Syllabus)	Remarks
CE 421 Design of RCC Structures-II	CE 421 Design of RCC Structures-II	Syllabus Revised
CE 422 Construction Practices	CE 422 Construction Practices	Syllabus Revised
CE 423 Town and Country Planning	CE 423 Town and Country Planning	Syllabus Revised
CEL 424 Major Project Phase – II	CEL 424 Major Project Phase - II	Syllabus Revised
CEL 425 Lab-I Structural Design and Drawing - III	CEL 425 Lab-I RCC Design and Drawing - II	Syllabus Revised
Elective-II		
CE 443 Advanced Design of Structures	CE 443 Advanced Design of Structures	Syllabus Revised
CE 444 Advanced Geotechnical Engineering	CE 444 Advanced Geotechnical Engineering	Syllabus Revised
CE 445 Development Engineering	CE 445 Development Engineering	Syllabus Revised
CE 446 Design of Concrete Bridges	CE 446 Design of Concrete Bridges	Syllabus Revised
CE 447 Structural Dynamics	CE 447 Structural Dynamics	Syllabus Revised
----	CE 448 Advanced Surveying	Newly Introduced
Elective-III		
CE 448 Engineering Optimization	CE 449 Engineering Optimization	Syllabus Revised
CE 449 Engineering Economics and Valuation	CE 450 Engineering Economics and Valuation	Syllabus Revised
CE 450 Finite Element Method	CE 451 Finite Element Method	Syllabus Revised
CE 451 Numerical Methods	CE 452 Numerical Methods	Syllabus Revised
CE 452 Remote Sensing and GIS application	CE 453 Remote Sensing and GIS application	Syllabus Revised
----	CE 454 Structural Health Monitoring and Retrofitting	Newly Introduced
Lab-II Elective-II		
CEL 443 Advanced Design of Structures	CEL 443 Advanced Design of Structures	Syllabus Revised
CEL 444 Advanced Geotechnical Engineering	CEL 444 Advanced Geotechnical Engineering	Syllabus Revised
CEL 445 Development Engineering	CEL 445 Development Engineering	Syllabus Revised
CEL 446 Design of Concrete Bridges	CEL 446 Design of Concrete Bridges	Syllabus Revised
CEL 447 Structural Dynamics	CEL 447 Structural Dynamics	Syllabus Revised
----	CEL 448 Advanced Surveying	Newly Introduced
Lab-III Elective-III		
CEL 453 Engineering Optimization	CEL 455 Engineering Optimization	Syllabus Revised
CEL 454 Engineering Economics and Valuation	CEL 456 Engineering Economics and Valuation	Syllabus Revised
CEL 455 Finite Element Method	CEL 457 Finite Element Method	Syllabus Revised
CEL 456 Numerical Methods	CEL 458 Numerical Methods	Syllabus Revised
CEL 457 Remote Sensing and GIS application	CEL 459 Remote Sensing and GIS application	Syllabus Revised
----	CEL 460 Structural Health Monitoring and Retrofitting	Newly Introduced