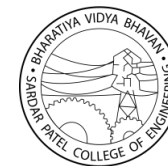




Bhartiya Vidya Bhavan's  
Sardar Patel College of Engineering  
2025-26



**B. Tech.**  
**(Civil Engineering)**  
**Sem. VII & VIII**  
**Course Credit System Regulation 2022**



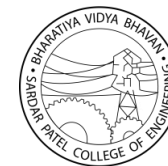
**Scheme for Final Year B.Tech In Civil Engineering, (Semester-VII) R22 Academic Year 2025-26**

Sr. No.	Course Name	Code	Course Plan per Week (Hrs.)			SL/ Sem.	Credits	In semester Evaluation			End Semester Evaluation		End semester weightage %	Term work/ Practical	Total Points
			L	P	T			Mid Sem Exam (Points)	Mid Sem Time (Hrs)	IE (note 3)	Points	Time (Hrs.)			
Core Courses															
1	Design of Concrete Structures	PC-BTC701	3	0	1	64	4	30	1.5	10	100	3	60%	25	125
2	Engineering Economics, Estimation, and Costing	PC-BTC702	3	0	1	64	4	30	1.5	10	100	3	60%	25	125
3	#Professional Elective III	PE-BTCxxx	3	0	0	48	3	30	1.5	10	100	3	60%	0	100
4	#Professional Elective IV	PE-BTCxxx	3	0	0	48	3	30	1.5	10	100	3	60%	0	100
5	#Open Elective II	OE-BTCxxx	3	0	0	48	3	30	1.5	10	100	3	60%	0	100
6	Project-Stage II	PR-BTC701	2+10 <sup>s</sup>				4	One In Sem Evaluation. and one End Sem. Evaluation (Ref Academic Rules)							200
Online Courses (Note 4)															
7	#Online Course	OL-BTCxxx	3	0	0	0		0	0		0	0	0	0	0
Value Added Courses (Notes 6 and 7)															
8	#Value Added Technical/ Non-Technical Courses	VA-BTCxxx	3	0	0	0		0	0		0	0	0	0	0
	TOTAL		17		2		21								625

IE: Internal Evaluation

#List of courses to be announced at start of the year

\$ Number of hrs students need to work



**Professional Elective III**

Specialization	Sr. No.	Code	Elective
Structures	1	PE-BTC721	Advanced Structural Analysis
	2	PE-BTC722	Finite Element Analysis
	3	PE-BTC723	Advanced Design of Steel Structures
Water Resources	4	PE-BTC731	Surface Hydrology
Environmental Engg.	5	PE-BTC741	Water and Air Quality Modelling
Construction Management	6	PE-BTC751	Valuation and Value Engineering
	7	PE-BTC752	Contracts Management
Transportation	8	PE-BTC761	Pavement Design & Construction
Geotechnical Engineering	9	PE-BTC771	Advanced Foundation Engineering
	10	PE-BTC772	Rock Mechanics

**Professional Elective IV**

Specialization	Sr. No.	Code	Elective
Structures	1	PE-BTC724	Prestressed Concrete
	2	PE-BTC725	Earthquake Engineering
Water Resources	3	PE-BTC732	Hydraulic Modelling
Environmental Engg.	4	PE-BTC742	Sustainable Engineering and technology
	5	PE-BTC743	Industrial Wastewater treatment
Construction Management	6	PE-BTC753	Engineering risk and uncertainty
	7	PE-BTC754	Infrastructure Planning and Management
	8	PE_BTC755	Risk and Value management
Geotechnical Engineering	9	PE-BTC773	Ground Improvement Techniques



**Open Elective-II**

Sr. No.	Code	Elective Course
1	OE-BTC711	Economic Policies of India
2	OE-BTC712	Entrepreneurship, Innovation and Design Thinking
3	OE-BTC713	Disaster Management and Preparedness
4	OE-BTC714	Engineering System and Development
5	OE-BTE701	Computer network
6	OE-BTE702	Engineering economics
7	OE-BTE703	Embedded system
8	OE-BTE704	Internet of things
9	OE-BTM714	Introduction to Micro-Electro-Mechanical Systems (MEMS)
10	OE-BTM715	Solar and Wind Technology
11	OE-BTM717	Introduction to Augmented Reality
12	OE-BTM718	Fundamental of Artificial Intelligence (AI) and Machine Learning

**\*For OE BTC712 Entrepreneurship, Innovation and Design Thinking : End Semester would be 50 marks of presentation and report (conducted before hand) and 50 marks for the final written end semester paper (as per ICC and BoS)**



BHARTIYA VIDYA BHAVAN'S  
SARDAR PATEL COLLEGE OF ENGINEERING  
Munshi Nagar Andheri (W)



**Scheme for Final Year B.Tech In Civil Engineering, (Semester-VIII) R22 Academic Year 2025-26**

Sr. No.	Course Name	Course Code	Course Plan per Week(Hrs.)			SL/ Sem	Credits	In semester Evaluation			End Semester Evaluation		End semester weightage (%)	Total Points
			L	P	T			Mid Sem Exam (Points)	Mid Sem Time (Hrs)	IE (note 3)	Points	Time (Hrs.)		
	Open Elective –III													
1	Open Elective III Offered in online mode through SWAYAM/ NPTEL # or Institute	OE-BTX8xx	3	0	0	48	3	30	1.5	10	100	3	60	100
	Internship													
2	External / Internal Internship	IN-BTC801	3 hrs equivalent for 1 credit				9	100 points			200 points		100	300
	TOTAL		3		0		12							400

# Refer Academic rules for detail

**Open Elective-III (Offered by Institute)**

Sr. No.	Code	Elective
1	OE-BTC812	Human Resource Development & Organizational Behaviour
2	OE-BTC815	Environmental Impact Assessment
3	OE-BTE801	Robotics
4	OE-BTE802	Power Plant Engineering
5	OE-BTE803	Electrical engineering materials
6	OE-BTE804	Medical Electronics
7	OE-BTE805	Image processing
8	OE-BTM712	Introduction to Research Methodology
9	OE-BTM719	Value Engineering



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NOTES:

1. **The Evaluation of any course shall be such that all Course Outcomes are uniformly mapped and as per the scheme.**
2. Assessment criteria for laboratory/Tutorial work. i.e., weightage for assessment shall be as follows: i) Attendance in Laboratory/Tutorial = 20%, (ii) Journal= 40%, (iii) Practical Examination (and/or) Mini project (and/or) Quiz (and/or) Seminar (and/or) Oral (and/or) Industry visit report=40%.
3. Internal Evaluation (IE) will be carried out by the course instructor for 10 points. It is the continuous evaluation throughout the semester. The evaluation will be based on minimum three of the following activities decided by course instructor. The maximum points that can be assigned to one activity will be 04. The course instructor needs to inform the students and head of the department about the activities those will be considered for IE and the points assigned to them in first week of semester. The course instructor will submit the internal evaluation points (out of 10 with activity wise break up) to examination section before the beginning of End Semester examination. List of Activities: 1. Class Involvement 2. Assignments 3. Problem Solving 4. Mini project 5. Quizzes 6. Presentation 7. Oral.
4. Student can opt for an online course available on <https://swayam.gov.in/> or <https://onlinecourses.nptel.ac.in/> subject to approval from the department. After successful completion of the course, the course title can appear on the grade card of student.
5. The Mandatory courses are with Pass (P) and No Pass (NP) grades.
6. Department will offer Value Added courses in a semester, subject to availability of resources and enrolment of minimum 20 students opting for the course. Upon completion of the Value Added course, the course title shall appear in the grade card of the student.
7. Students can optionally opt for Non-Technical Value Added courses offered by Center for Continuing Education (CCE-SPCE). Upon successful completion of the course, the course title shall appear on the grade card of the student.
8. The contents of core courses are aligned with the latest GATE syllabus. The mapping between GATE syllabus topics and core courses is given in Table GATE-MAP.
9. For Open Elective course II, students with C.P.I. higher than 8.5, can opt for an online course (approved by the department) offered through SWAYAM or NPTEL portal instead of elective courses offered by department/institute. Upon successful completion of the course, the score given on certificate issued by SWAYAM/NPTEL will be converted to letter grade as per applicable examination regulation.
10. For Project Course: Contact hours =2 and self-learning hours will be as per student's choice; It will have in-semester evaluation which shall include one or more in-semester presentations. 10 points for report and 10 points for presentation and viva voce examined by supervisor and one internal examiner.
11. Internship Evaluation shall be as per Academic Rules.

**Note: Refer Academic and Examination rules and regulations for further details.**