Curriculum Structure of B.Tech in Civil Engineering, 2019-23

Semester I

Sl. No.	Course Code	Course Title	L	T	P	C	Revision
1	BMA101	Mathematics-I (Multivariable Calculus)	3	1	0	3	1.08
2	BPH101	Engineering Physics	3	0	0	3	1.08
3	FENG1005	Functional English	2	0	0	2	1.08
4	BCS101	Fundamentals of Computer Programing	3	0	0	3	1.08
5	BME101	Elements of Mechanical Engineering	3	0	0	3	1.08
6	BMA151	Exploration with CAS - I	0	0	2	1	1.08
7	BPH151	Engineering Physics Lab	0	0	2	1	1.08
8	BCS151	Fundamentals of Computer Programing Lab - I	0	0	2	1	1.08
9	BME151	Workshop Practice	0	0	2	1	1.08
		Total Credit				18	

Semester II

Sl. No.	Course Code	Course Title	L	T	P	C	Revision
1	BMA201	Linear Algebra and Differential Equations	3	2	0	3	1.08
2	BCH101/ BCH102	Engineering Chemistry/Engineering Sciences	3	0	0	3	1.08
3	BLE101	Psychology and Sociology	2	0	0	2	1.08
4	BEC101	Basic Electrical and Electronics Engineering	3	0	0	3	1.08
5	BMA251	Exploration with CAS - II	0	0	2	1	1.08
6	BCH152 / BCH153	Engineering Chemistry Lab/Engineering Sciences Lab	0	0	2	1	1.08
7	BHS251	Professional Communication Lab	0	0	2	1	1.08
8	BCS251	Application of Programing using Python	0	0	2	1	1.08
9	BEC151	Basic Electrical and Electronics Engineering Lab	0	0	2	1	1.08
10	BME152	Engineering Graphics	0	0	4	2	1.08
11	BOC253	Design and Innovation	0	0	2	1	1.08
12	BCS901	Disruptive Technologies	3	0	0	3	1.08
		Total Credit				22	

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Semester III

Sl. No.	Course Code	Course Title	L	T	P	C	Revision
1	MATH2001	Functions of Complex Variables and Transforms	3	0	0	3	1.08
2	BTME2001	Engineering Mechanics	3	0	0	3	1.08
3	BTCE2001	Fluid Mechanics	3	0	0	3	1.08
4	BTCE2002	Surveying	3	0	0	3	1.08
5	BTCE2003	Construction Engineering	3	0	0	3	1.08
6	BTCE2004	Fluid Mechanics Lab	0	0	2	1	1.08
7	BTCE2005	Surveying Practices	0	0	2	1	1.08
8	BTCE2006	Construction Engineering Lab	0	0	2	1	1.08
9	BTCE2007	Embedded PBL-1	0	0	2	1	1.08
10	SLBT2021	English Proficiency and Aptitude Building - 3	0	0	4	2	1.08
		Total Credit				21	

Semester IV

Sl. No.	Course Code	Course Title	L	T	P	C	Revision
1	MATH2003	Probability and Statistics	3	0	0	3	1.08
2	BTCE9001	Disruptive Technologies	3	0	0	3	1.08
3	BTCE2008	Mechanics of Materials	3	0	0	3	1.08
4	BTCE2009	Hydrology & Hydraulic Systems	3	0	0	3	1.08
5	BTCE2010	Water Supply & Treatment Systems	3	0	0	3	1.08
6	BTCE3003	Geotechnical Engineering	3	0	0	3	1.08
7	BTCE2011	Mechanics of Materials Lab	0	0	2	1	1.08
8	BTCE2012	Water Quality Analysis Lab	0	0	2	1	1.08
9	BTCE3006	Geotechnical Engineering Lab	0	0	2	1	1.08
10	BTCE2014	PBL-2 (Project Management)	0	0	2	1	1.08
11	SLBT2022	English Proficiency and Aptitude Building - 4	0	0	4	2	1.08
		Total Credit				24	1.08

Semester V

Sl. No.	Course Code	Course Title	L	T	P	C	Revision
1	MATH3010	Numerical Methods	2	0	0	2	1.08
2	BTCE3001	Structural Analysis	3	0	0	3	1.08
3	BTCE3002	Design of Reinforced Concrete Structures	3	0	0	3	1.08
4	BTCE3010	Transportation Engineering	3	0	0	3	1.08
5	BTCE3004	Waste Water Treatment & Disposal	3	0	0	3	1.08
6	MATH252	Numerical Methods Lab	0	0	2	1	1.08
7	BTCE3005	Structural Analysis Lab	0	0	2	1	1.08
8	BTCE3011	Transportation Engineering Lab	0	0	2	1	1.08
9	BTCE3007	PBL-3	0	0	2	1	1.08
10	SLBT3001	English Proficiency and Aptitude Building - 4 (Soft Skill-5)	0	0	4	2	1.08
11	BTCE3041	Industrial Internship - I	0	0	0	1	1.08
12	BTCE3008	CAD LAB - I (AUTOCAD) (Skill Course- 1)	0	0	4	2	1.08
		Total Credit				23	

Semester VI

Sl. No.	Course Code	Course Title	L	T	P	C	Revision
1	BTMG3002	Organisational Behaviour	3	0	0	3	1.08
2	BTCE3009	Design of Steel Structures	3	0	0	3	1.08
3	SLBT3002	Campus to Corporate (Soft Skill - 6)	0	0	4	2	1.08
4	BTCE3040	PBL-4 (PRIMAVERA)	0	0	2	1	1.08
5	BTCE3013	CAD Lab - II (STAAD PRO) (Skill Course- 1)	0	0	4	2	1.08
6	BTCE3014	Advanced Structural Analysis	3	0	0	3	1.08
7		Program Elective (from basket) - 1	3	0	0	3	1.08
8		Program Elective (from basket) - 2	3	0	0	3	1.08
9		Open Elective - I	3	0	0	3	1.08
10	BTCE3042	Design and Innovation	0	0	2	1	1.08
		Total Credit				24	

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Semester VII

Sl. No.	Course Code	Course Title	L	T	P	C	Revision
1	UC23	Management Course (From Basket)	3	0	0	3	1.08
2		Program Elective (from basket) - 3	3	0	0	3	1.08
3		Program Elective (from basket) - 4	3	0	0	3	1.08
4		Program Elective (from basket) - 5	3	0	0	3	1.08
5	BTCE4002	Industrial Internship - II	0	0	0	1	1.08
6	BTCE9998	Project Work -1	0	0	6	3	1.08
7		Open Elective - II	3	0	0	3	1.08
		Total Credit				19	

Semester VIII

Sl. No.	Course Code	Course Title	L	T	P	C	Revision
1	BTCE9999	Project Work -2	0	0	18	9	1.08
		Total Credit				9	

List of Programme Elective (Engineering Courses)

S. No	Course Code	Course Name	L	T	P	C	Category	Prerequisite	Version
1	BTCE3015	Advanced Concrete Design	3	0	0	3	Engineering	BTCE3002	1.08
2	BTCE3016	Quantity Surveying & Estimating	3	0	0	3	Engineering	BTCE2003	1.08
3	BTCE3017	Bridge Engineering	3	0	0	3	Engineering	BTCE3002	1.08
4	BTCE3018	Applications of Matrix Methods in Structural Analysis	3	0	0	3	Engineering	BTCE3001	1.08
5	BTCE3019	Expansive Soil and Ground Improvement Techniques	3	0	0	3	Engineering	BTCE3003	1.08
6	BTCE3020	Adavanced Geotechnical Engineering	3	0	0	3	Engineering	BTCE3003	1.08
7	BTCE3021	Highway Pavement Design	3	0	0	3	Engineering	BTCE3010	1.08
8	BTCE3022	Traffic Engineering	3	0	0	3	Engineering	BTCE3010	1.08
9	BTCE3023	Advanced Transportation Engineering	3	0	0	3	Engineering	BTCE3010	1.08
10	BTCE3024	Ground Water Engineering	3	0	0	3	Engineering	BTCE2009	1.08
11	BTCE3025	Advanced Hydrology	3	0	0	3	Engineering	BTCE2009	1.08
12	BTCE3026	Pollution Control and Monitoring	3	0	0	3	Engineering	BTCE3004	1.08
13	BTCE3027	Industrial Waste Treatment and Disposal	3	0	0	3	Engineering	BTCE3004	1.08
14	BTCE3028	Air and Noise Pollution	3	0	0	3	Engineering		1.08

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Session	: 2019-23	Semester	: II
Programme	: Undergraduate	Subject Code	: BHS251
Branch	:	Subject Name	: Professional Communication Lab
Group	:	Room No.	:

Name of Faculty Lab In-charge	:	credit	
Name of Lab Instructor	:	1	

The following activities will be conducted in lab classes:

- Spin-a-yarn
- Drafting Catchphrases
- Picture Interpretation (Denotation and Connotation)
- Active Listening
- Reading between the lines
- Brief Biography of Female Personalities
- Rhythm and Intonation
- Public Speaking
- Mock Lecture
- Dialogue Writing
- Enacting scene(s) from critically appreciated movies

Guidelines for the conduct of Activities:

Prior to the conduction of any lab activity, the concerned teacher will announce the type of activity to be conducted in the next lab day and also give a brief introduction about the same. All students are required to perform each lab activity with zeal. Their performance will be evaluated by the lab teacher on the basis of their participation and contribution. A detailed account of each student's performance will be recorded by the evaluator in the performance sheet.

Evaluation Process:

Total	100 Marks	
Continuous Internal Evaluation	**50 Marks**	
• With Internal Examiner	30 Marks for activities through continuous assessment	20 marks for internal viva-voce
End Semester Exam	**50 Marks**	

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	With External Examiner	20 marks for written exam	20 marks for viva-voce	10 marks for lab file

Weekly Schedule of Lab Activities:

Week	Activity Name	Concept Note (Plan of Action)
1	Spin-a-yarn	This will be an ice breaking session. The students will be given the beginning lines of an imaginary story and will be asked to carry on the same by adding two-three sentences at a time one by one to reach a meaningful end of the story.
2	Drafting Catchphrases	Each student will be individually called and given a random topic regarding any advertisement. They will be asked to draft catchphrases for the same within a short time period (1-2 min.).
3	Picture Interpretation	Students will be asked to review a random picture with the help of denotative meanings and their connotative implications.
4	Active Listening	An audio clip (BBC News) will be played by the teacher in the class. Students will be given an incomplete written draft of the same. They will be asked to carefully listen to the audio clip and fill the blanks.
5	Reading between the lines	A Media Discourse (Public speech by a politician) will be presented to the students. Students will be asked to excavate the hidden messages and prepare a list of what the speech explores.
6	Brief Biography of Female Personalities	Students will be asked to write a brief biography of any female personality highlighting her achievements and notable moments of her life.
7	Word Accent, Rhythm and Intonation	With the help of the software Clear pronunciation, students will be able to overcome Mother Tongue Influence (MTI) by learning various Rhythm patterns and Intonation at sentence level.
8	Public Speaking	To enhance their confidence, students will be given a chance to prepare a topic of their choice and speak in front of the class.

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10	Mock Lecture	Students will be asked to Prepare a Mock Lecture so as to make them through with the concepts and ready to face the professional world.
11	Dialogue Writing	The teacher will assign one scene to each group. Students then will be asked to use their imagination to write dialogues.
12	Enacting Scene(s) from Critically appreciated Movie (English)	It will be a group activity and the students will choose a scene from a movie given by the teacher and enact the same.
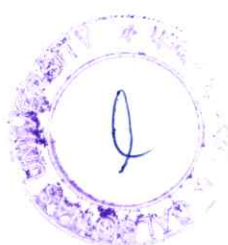
BOC253	Design and Innovation	L	T	P	C
Version1.08	Date of Approval:	0	0	2	1
Pre-requisites					
Co-requisites	--				

Course Objectives

1. To teach the students to understand the details of STAAD – PRO software package.
2. To enable the students to know the behaviour of RCC structures.
3. To enable the students to design different components of structures

Course Outcomes

On completion of this course, the students will be able to

1. Understand the details of STAAD – PRO software package.
2. Know the behavior of RCC structures.
3. Know the bending moment diagram drawn in tension face and shear force diagram.
4. Design RCC beams and columns.
5. Analyze and design RCC portal frames.

Suggested Reading

1. V. N. Vazirani & M. M. Ratwani, (1998), Analysis of Structures, Khanna Publishers.

2. R. L. Jindal, (1996), Indeterminate Structures, Tata McGraw Hill Publishing House.

3. G. S. Pandit & Gupta S. P., (1998), Structural Analysis (A matrix approach), Tata McGraw Hill Publishing Ltd.

4. Wang C. K., (1996), Matrix Method of Structural Analysis, Jon Wiley publications.

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List of Experiments

1. Design of (G+2) masonry building.
2. Design of staircase.
3. Design of (G+3) RCC building.
4. Design of (G+4) RCC building.

Mode of Evaluation: The subject understanding of students will be evaluated through lab report, lab performance and viva-voce.

Components	Laboratory		Laboratory
	Internal	SEE	
Marks	50	50	
Total Marks	100		

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