# Sharnbasva University, Kalaburagi Scheme of Teaching and Examination 2023-24 As per NEP, Outcome Based Education(OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023-24)

I SEMSTER M.Tech : Structural Engineering

Sl.	Sl. No		Course Title		Teaching Hours/week				Credits			
110				Teaching Dept. & F	L	Т	P	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	HCC-I	23SEC11	Advanced Design of RC Structures	CIV	3	1	0	3	50	50	100	04
2	HCC-II	23SEC12	Computational Structural Mechanics	CIV	3	1	0	3	50	50	100	04
3	CEC-I	23XXX13X	Core Elective Course-I	CIV	3	0	0	3	50	50	100	03
4	CEC-II	23XXX14X	Core Elective Course-II	CIV	3	0	0	3	50	50	100	03
5	HSM-I	23RM15	Research Methodology and Ethics	CIV	3	0	0	3	50	50	100	03
6	LAB-I	23SECL16	Advance Concrete Testing Laboratory	CIV	0	0	2	3	50	50	100	01
7	LAB-II	23SECL17	Structural Analysis and Design Laboratory-I	CIV	0	0	2	3	50	50	100	01
8	PW-I	23SEC18	Project-I	CIV	0	0	4	3	50	50	100	02
	Total					2	8	24	400	400	800	21

NOTE: Every regular student admitted to the 2 years post-graduation programme must select 3 online courses of 3 credit each from MOOCs[Swayam/NPTEL] shall clear all online courses spread through all semesters[1<sup>st</sup> to 4<sup>th</sup>].

Core Elective Course-I						
23SEC131	Structural Dynamics					
23SEC132	Design of Precast & Composite					
	Structures					
23SEC133	Design Concepts of Substructures					

Core Elective Course-II							
23SEC141 Design of Masonry Structures							
23SEC142	Special Concrete						
23SEC143	Advanced Design of Pre-Stressed Concrete						
	Structures						

#### Sharnbasva University, Kalaburagi

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#### **II SEMSTER M.Tech: Structural Engineering**

Sl.	Co	ourse Code	Course Title	ning Dept. & Paper Setting Board	Teaching	Hours/week		Examination				Credits	
110				Teaching Dept. Setting Bo	L	Т	P	Duration in hours	CIE Marks	SEE Marks	Total Marks	Marks	
1	HCC-III	23SEC21	Advanced Design of Steel Structures.	CIV	3	1	0	3	50	50	100	04	
2	HCC-IV	23SEC22	Earthquake Resistance Structures	CIV	3	1	0	3	50	50	100	04	
3	CEC-III	23XXX23X	Core Elective Course -III	CIV	3	0	0	3	50	50	100	03	
4	CEC-IV	23XXX24X	Core Elective Course -IV	CIV	3	0	0	3	50	50	100	03	
5	OEC-I	23OC25	Open Elective- I	ONLINE				ation pro online cou			100	03*	
6	LAB-III	23SECL26	Advanced Civil Engineering Workshop	CIV	0	0	2	3	50	50	100	01	
7	LAB-IV	23SECL27	Structural Analysis and Design Laboratory-II	CIV	0	0	2	3	50	50	100	01	
8	PW-II	23SEC28	Project-II	CIV	0	0	4	3	50	50	100	02	
	Total				12	2	8	21	350	350	800	21	

NOTE: Every regular student admitted to the 2 years post-graduation programme must select 3 online courses of 3 credit each from MOOCs[Swayam/NPTEL] shall clear all online courses spread through all semesters[ $1^{st}$  to  $4^{th}$ ].

Semester Project: The project work shall be carried out individually. This may be hands-on practice, survey report, data collection and analysis, coding, mobile app development, field visit and report preparation, modelling of system, simulation, analyzing and authenticating, case studies, etc. CIE marks shall be awarded by a Guide/co-guide; Students can present the presentation based on the completed project. Participation in the presentation by all postgraduate students of the program shall be mandatory. The CIE marks awarded for Project work, shall be based on the evaluation of Project work and Report, Presentation skill and performance in Question-and-Answer session. Project work shall be considered as a head of passing for the award of degree. Those, who do not take-up/complete the Project shall be declared as fail in that course and have to complete the same during the subsequent semester when it is offered.

Core Elective Course -III							
23SEC231	Stability of structure						
23SEC232	Repair & Rehabilitation of Structures.						
23SEC233	Finite Elements Method of Analysis						

Core Elective Course -IV						
23SEC241	Design concept of substructures					
23SEC242	Design of Tall structures					
23SEC243	Optimization Techniques					

Course opted by students having credits 3 or above will be considered as credit 3 only.

## Sharnbasva University, Kalaburagi

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#### **III SEMSTER M.Tech: Structural Engineering**

				Dept. & ng Board	Teachin g Hours/ week			Examination				ts
Sl. No	Со	urse Code	Course Title	Teaching Dept. & Paper Setting Board	L	Т	P	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
1	OEC-V	23XXX31X	Core Elective Course -V	CIV	3	0	0	3	50	50	100	03
2	OEC-II	23OC32	Open Elective-II	ONLI NE			olicy		procedu nline co		100	03*
3	OEC-III	23OC33	Open Elective-III	ONLI NE	Classes & evaluation procedure as per the policy of the online courses provider.				100	03*		
4	HSM-II	23HSM34	Fundamental of Management	CIV	3	0	0	3	50	50	100	03
5	PW-III	23SEC35	Project-III	CIV	0	0	4	3	50	50	100	02
6	PW-IV	23SEC36	Research Project Phase-1	CIV	0	0	8	3	100	50	100	04
	Total				12	0	12	18	250	150	600	18

NOTE: Every regular student admitted to the 2 years post-graduation programme must select 3 online courses of 3 credit each from MOOCs[Swayam/NPTEL] shall clear all online courses spread through all semesters[1<sup>st</sup> to 4<sup>th</sup>].

Research Project Work Phase-1:The project work shall be carried out individually. However, in case a disciplinary or interdisciplinary project requires more participants, then a group consisting of not more than three shall be permitted. Students in consultation with the guide/co-guide (if any) in disciplinary project or guides/co-guides (if any) of all departments in case of multidisciplinary projects, shall pursue a Literature Survey / Visit to industries / R & D to finalize the project topicand the preliminary requirements of the selected Project work. Each student shall prepare a relevant introductory project document and present a seminar. CIE marks shall be awarded by a guides/co-guide (if any). The CIE marks awarded for project work phase -1, shall be based on the evaluation of Project Report, Project Presentation skill, and performance in the Question-and-Answer session.

Core Elective Course -V						
23SEC311 Design of Concrete Bridges						
23SEC312	Industrial Safety					
23SEC313	Reliability Analysis of Structures					

Course opted by students having credits 3 or above will be considered as credit 3 only.

### Sharnbasva University, Kalaburagi

#### Scheme of Teaching and Examination 2023-24

# As per NEP, Outcome Based Education(OBE) and Choice Based Credit System (CBCS) Effective from the academic year 2023-24)

IV SEMSTER	M.Tech:	Structural	Engineering

Sl. No	Co	urse Code	Course Title	Dept. & Paper ing Board		Teaching	Hours/week	Examination				Credits
				Teaching De	L	Т	P	Duration in hours	CIE Marks	SEE Marks	Total Marks	Cre
1	PW-V	23SEC41	Research Project -II (Final Desertion and Publication)	CIV	0	0	24	3	100	200	300	12
2	INT	23SEC42	Research Internship	RELAV ENT	0	0	16	3	50	50	100	08
	Total				0	0	40	06	150	250	400	20

NOTE: Every regular student admitted to the 2 years post-graduation programme must select 3 online courses of 3 credit each from MOOCs[Swayam/NPTEL] shall clear all online courses spread through all semesters[1<sup>st</sup> to 4<sup>th</sup>].

Research Project Work Phase-2: Students in consultation with the guide/co-guide (if any) in disciplinary project or guides/co-guides (if any) of all departments in case of multidisciplinary projects, shall continue to work of Project Work phase -1 to complete the Project work. Each student / batch of students shall prepare project document and present a seminar. The CIE marks awarded for project work phase -2, shall be based on the Design, Testing and Results Analysis Presentation, Thesis Writing, and performance in the Question-and-Answer session. SEE shall be at the end of IV semester. Project work evaluation and Viv Voce examination (SEE) is as follows:

- a) Internal examiner shall carry out the evaluation for 100 marks.
- b) External examiner shall carry out evaluation for 100 marks.
- c) The average of marks allotted by the internal and external examiners shall be the final marks of the project evaluation.
- d) Viva-voce examination of the project work shall be conducted jointly by internal and external examiners for 100 marks.

**Research Internship:** All the students shall undergo mandatory internship of 8-12 weeks. Those, who have not pursued /completed the internship, shall be declared as fail in the internship course and have to complete the same during subsequent University examinations after satisfying the internship requirements. The CIE and SEE components of the internship is as follows:

- 1. Presentation on Internship (after 4-6 weeks from the date of commencement) (CIE) for 25 marks.
- 2. Evaluation of Internship Report (CIE) for 25 marks.
- 3. Viva-voce on Internship (SEE) for 50 marks.