Course Type	Course Code	Name of Course	L	T	P	Credit
DP	NCEC543	Computational Laboratory in Structural Engineering - I	0	0	3	1.5

Course Objective
The course aims at imparting knowledge of the basic computational aspect of Structural Engineering.
Learning Outcomes
Upon successful completion of this course, the students should be able to: • Learn the computational aspect of Structural Engineering

Unit No.	Topics to be Covered	Contact Hours	Learning Outcome
1	Introduction to software	6	Learn the basics of software used for structural analysis.
2	Analysis of 2D portal frame	3	Perform analysis of 2D portal frame using software.
3	Analysis of 2D and 3D trusses	6	Perform analysis of 2D and 3D trusses using software.
4	Gravity analysis of building frame	6	Perform gravity analysis of building frames using software.
5	Lateral load analysis of building frame	6	Perform lateral load analysis of building frame using software.
6	Direct stiffness method using MATLAB®	9	Learn direct stiffness method by writing code in MATLAB®.
7	Revision	6	Revision of previous classes.
	Total Contact Hours	**42**	

Text Books:

1. Srinath, L.S. (2003). Advanced Mechanics of Solids. McGraw-Hill Education (India) Pvt Limited

Reference Books:

1. Respective Indian Standard/ International Standard Codes of Practices.