

PROGRAM STRUCTURE

I SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
1	172SE1T01	Advanced Mathematics		✓		Students are able to demonstrate problem solving skills in linear and Non linear solution of any type of the civil engineering structures.
2	172SE1T02	Theory of Elasticity	✓			Students are able to acquire skills related to designing of beam to support load enabling them to be employed for constructional sector. Example , Roof & bridges.
3	172SE1T03	Matrix Analysis of Structures		✓		Students are able to demonstrate analytical skills to solve practical problems of trusses, beams & frames during designing of various constructional elements.
4	172SE1T04	Structural Dynamics	✓			Students are able to acquire analyzing skills related to the behaviour of structure subjected to dynamic loading enabling them to be employed as civil engineers.
5	172SE1E01	Experimental Stress Analysis	✓			Students are able to acquire skills related to various aspects of convenient and accurate methods of analysis enabling them to be employed in constructional industry .
6	172SE1E02	Sub Structure Design	✓			Students are able to acquire skills related to various aspects of transfer of loads from the superstructure to the underlying soil.
7	172SE1E03	Structural Optimization	✓			Students are able to demonstrate analytical skills that enables designers to achieve a careful balance between strength and affordability

8	172SE1E04	Repair and Rehabilitation of Structures	✓			Students are able to acquire skills related to deterioration of concrete structures and rehabilitation of these using advanced technologies, like preservation of monuments and other deteriorated structures enabling them to be employed as engineers in related field.
9	172SE1E05	Analysis and Design of Tall Building	✓			Students are able to acquire skills related to new technologies for vertical transportation and high socio economic levels of urban growth have made way to tall building enabling them to be employed in design and construction of tall buildings. .
10	172SE1E06	Plastic Analysis and Design	✓			Students are able to acquire skills related to production of lighter and more slender structural members enabling them to be employed in constructional industry.
11	172SE1L01	Advanced Structural Engineering Laboratory		✓		Students are able to demonstrate technical skill of testing advanced composite materials, light weight structures and engineering optimization.

II SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
12	172SE2T05	Finite Element Method		✓		Students are able to demonstrate problem solving skills to analyze structural related problems and developing software development programs
13	172SE2T06	Earthquake Resistant Design	✓			Students are able to acquire skills related to properties of structural members when subjected to seismic loads and designing earthquake resistant structures enabling them to be employed in civil industry.
14	172SE2T07	Stability of Structures	✓			Students are able to acquire skills related to various aspects of soil mechanics, to ensure the safety of structures against collapse enabling them to be employed as designers of various constructional elements.
15	172SE2T08	Theory of Plates & Shells	✓			Students are able to acquire skills related to structural action against in stronger, thinner & lighter in structural members enabling them to be employed as civil engineers.
16	172SE2E07	Prestressed Concrete	✓			Students are able to acquire skills related to bridge designing and metro constructions enabling them to be employed in structural field of constructional activities.
17	172SE2E08	Mechanics of Composite Materials	✓			Students are able to acquire skills related to various aspects of high strength, low cost, high chemical resistance and good insulating property materials. enabling them to be employed as structural engineers.

18	172SE2E09	Fracture Mechanics				
19	172SE2E10	Industrial Structures	✓			Students are able to acquire skills related to structural members mainly for steel ,To identify the strength parameter like durability and flexibility enabling them to be employed in constructional field.
20	172SE2E11	Bridge Engineering				
21	172SE2E12	Earth Retaining Structures				
22	172SE2L02	CAD Laboratory		✓		Students are able to demonstrate technical skill of reducing manual drawing and related problems in designing and planning of constructional activities.


III SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
23	J87 12	Comprehensive Viva-Voce				
24	J8713	Seminar-I				
25	J8714	Project Work Part-I				

IV SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
26	J8715	Seminar -II				
27	J8716	Project Work Part -II	✓			Students will be able to demonstrate problem identification, analysis, design solutions or applications in structural engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs.
TOTAL		27	15	5		


 Program Coordinator


 Head of the Department
 Head of the Department
 Dept. of Civil Engineering
 ADITYA ENGINEERING COLLEGE (A9)