St. Peter's University

Chennai – 600 054.

M.E. (STRUCTURAL ENGINEERING) PROGRAMME

Regulations and Syllabi

(Effective from 2008 – 2009)

1. **Eligibility:** Candidates who passed B.E. / B.Tech. (Civil Engineering) / B.E. (Structural Engineering) of the University or A.M.I.E. in the concerned subject or any other equivalent examination thereto are eligible for admission to Two Year M.E. (Structural Engineering) Programme.

2. **Duration:** Two Years Comprising 4 Semesters. Each semester has a minimum 90 working days with a minimum of 5 hours a day.

3. **Medium:** English is the medium of instruction and examination.

4. **Weightage for Continuous and End Assessment:** The weightage for Continuous Assessment (CA) and End Assessment (EA) be 25:75 unless the ratio is specifically mentioned in the scheme of Examinations.

5. **Credit System:** Credit system be followed with 18 credits for each semester and each credit is equivalent to 25-30 hours of effective study provided in the Time Table.

6. Scheme of Examinations (for I to IV Semesters)

I Semester

COURSE CODE	COURSE TITLE	CREDIT	MARKS		
THEORY			**CA**	**EA**	**TOTAL**
108SEPT01	Applied Mathematics	3	25	75	100
108SEPT02	Experimental Methods and Model Analysis	3	25	75	100
108SEPT03	Structural Dynamics	3	25	75	100
108SEPT04	Constitutive Models and Models of Failure	3	25	75	100
ELECTIVES					
108SEPE01	Soil Structure Interaction	3	25	75	100
108SEPE12	Prestressed Concrete	3	25	75	100
	TOTAL	**18**	**150**	**450**	**600**

II Semester

COURSE CODE	COURSE TITLE	CREDIT	MARKS		
THEORY			**CA**	**EA**	**TOTAL**
208SEPT01	Concrete Structures	3	25	75	100
208SEPT02	Design of Substructures	2	25	75	100
208SEPT03	Steel Structures	2	25	75	100
208SEPT04	Computational Methods	3	25	75	100
ELECTIVES					
208SEPE10	Maintenance and Rehabilitation of Structures	3	25	75	100
208SEPE13	Stability of Structures	3	25	75	100
PRACTICAL					
208SEPP01	Structural Engineering Laboratory	2	25	75	100
	TOTAL	**18**	**200**	**600**	**800**

III Semester

COURSE CODE	COURSE TITLE	CREDIT	MARKS		
ELECTIVES			**CA**	**EA**	**TOTAL**
308SEPE02	Aseismic Design of Structures	3	25	75	100
308SEPE05	Design of Plates, Shells and Spatial Structures	3	25	75	100
308SEPE09	Industrial Structures	3	25	75	100
PROJECT					
308SEPP01	Project Work – Phase – I	9	25	75	100
	TOTAL	**18**	**100**	**300**	**400**

IV Semester

COURSE CODE	COURSE TITLE	CREDIT	MARKS		
PROJECT			**CA**	**EA**	**TOTAL**
408SEPP01	Project Work (Phase – II)	18	25	75	100
	TOTAL	**18**	**25**	**75**	**100**

List of Electives for I to IV Semesters:

S.No.	Electives
1.	Soil Structure Interaction
2.	Aseismic Design of Structures
3.	CAAD for Structures
4.	Design of Bridges
5.	Design of Plates, Shells and Spatial Structures
6.	Design of Steel Concrete Composite Structures
7.	Design of Structures for Dynamic Loads
8.	Design of Tall Buildings
9.	Industrial Structures
10.	Maintenance and Rehabilitation of Structures
11.	Optimization in Structural Design
12.	Prestressed Concrete
13.	Stability of Structures
14.	Wind and Cyclone Effects on Structures

7. Passing Requirements: The minimum pass mark (raw score) be 50% in End Assessment (EA) and 50% in Continuous Assessment (CA) and End Assessment (EA) put together. No minimum mark (raw score) in Continuous Assessment (CA) be prescribed unless it specifically mentioned in the scheme of Examination.

8. Grading System: Grading System on a 10 Point Scale be followed with 1 mark = 0.1 Grade point to successful candidates as given below.

(a) Overall weighted Average Marks $= \frac{\text{Sum of Weighted Marks}}{\text{Total Credits}}$

$= \frac{\Sigma (CA+EA)C}{\Sigma C}$

Where Weighted Marks in each course = Total Marks (CA and EA) multiplied by number of Credit

$= (CA+EA)C$

(b) Overall Grade Point Average (OGPA) $= \frac{\text{Sum of Weighted Grade Points}}{\text{Total Credits}}$

$= \frac{\Sigma (CA+EA)C}{\Sigma C}$

Where Weighted Grade Points in each course = Grade Points (CA and EA) multiplied by Credits

$= (CA+EA)C$

The Overall Grade: The Overall Grade and Classification of all successful candidates be arrived at from the Overall Grade Point Average as stipulated in the following conversion Table.

(1 mark = 0.1 Grade Point on a 10 Point Scale)

Grade	Over all Grade Point Average(OGPA)	Over all weighted Average marks	Classification
0	9.00 to 10.00	90.00 to 100	First Class
A	8.00 to 8.99	80.00 to 89.99	First Class
B	7.00 to 7.99	70.00 to 79.99	First Class
C	6.00 to 6.99	60.00 to 69.99	First Class
D	5.00 to 5.99	50.00 to 59.99	Second Class
F	0.00 to 4.99	0.00 to 49.99	**Fail**

The Grade Sheets of successful candidates provide particulars such as (1) Overall weighted Average Marks, (2) Overall Grade Point Average, (3) Overall Grade and (4) Overall classification.

9. Pattern of the Question Paper: The question paper for End Assessment will be set for three hours and for the maximum of 100 marks with following divisions and details.

Part A: 10 questions (with equal distribution to all units in the syllabus). Each question carries 2 marks.

Part B: 5 question with either or type (with equal distribution to all units in the syllabus). Each question carries 16 marks.

The total marks scored by the candidates will be reduced to the maximum prescribed in the Regulations.

10. Syllabus

Registrar