

SETHU INSTITUTE OF TECHNOLOGY

Pulloor, Kariapatti – 626 115.

(An Autonomous Institution)

DEPARTMENT OF CIVIL ENGINEERING



M.E. STRUCTURAL ENGINEERING

REGULATIONS 2019 – CHOICE BASED CREDIT SYSTEM

CURRICULUM & SYLLABUS

Approved in the

Academic Council Meeting on 21.09.2019

A handwritten signature in brown ink, appearing to read 'L. Lakshmi'.

Chairperson/BOS

A handwritten signature in blue ink, appearing to read 'S. Kumar'.

Chairman

Academic Council

SETHU INSTITUTE OF TECHNOLOGY

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M.E. Degree Programme

CURRICULUM

Regulations 2019

Master of Engineering in Structural Engineering

OVERALL COURSE STRUCTURE

Category	Total No. of Courses	Credits	Percentage
Programme Core	8	20	29
Programme Elective	5	15	21
Open Elective	1	3	4
Mandatory Credit Course	1	3	4
Audit Course	2	-	-
Project work	3	29	42
TOTAL	20	70	100

COURSE CREDITS – SEMESTER WISE

Branch	I	II	III	IV	TOTAL
Structural Engineering	16	16	22	16	70

Employability Courses

Skill Development Courses

Entrepreneurship Development Courses

Any two or all of the above

LIST OF WINTER COURSES

S.No	Subject Code	Subject Name	L	T	P	C	Category
1.	19PSE101	Design of Advanced Concrete Structures	3	0	0	3	PC
2.	19PSE102	Theory of Elasticity and Plasticity	3	0	0	3	PC
3.	19PGM701	Research Methodology and IPR	3	0	0	3	BS
4.	19PGM801	Pedagogy Studies	2	0	0	0	BS
5.	19PSE103	Computing in Structures	0	0	4	2	PC
6.	19PSE104	Advanced Concrete Laboratory	0	0	4	2	PC
7.	19PSE301	Dissertation Phase I	0	0	20	10	PW

LIST OF SUMMER COURSES

S.No	Subject Code	Subject Name	L	T	P	C	Category
1.	19PSE201	Finite Element Analysis for Structural Engineering	3	0	0	3	PC
2.	19PSE202	Structural Dynamics	3	0	0	3	PC
3.	19PGM802	English for Research Paper Writing	2	0	0	0	BS
4.	19PSE203	Structural Design Laboratory	0	0	4	2	PC
5.	19PSE204	Structural Testing Laboratory	0	0	4	2	PC
6.	19PSE205	Mini Project with Seminar	0	0	4	3	PW
7.	19PSE401	Dissertation Phase II	0	0	32	16	PW

LIST OF PROGRAMME ELECTIVES

S.No	COURSE CODE	COURSE TITLE	L	T	P	C
1.	19PSE501	Analysis and Design of Tall Buildings	3	0	0	3
2.	19PSE502	Offshore Structures	3	0	0	3
3.	19PSE503	Optimization of Structures	3	0	0	3
4.	19PSE504	Design of Bridges	3	0	0	3
5.	19PSE505	Mechanics of Composite Materials	3	0	0	3
6.	19PSE506	Advanced Concrete Technology	3	0	0	3
7.	19PSE507	Design of Sub Structures	3	0	0	3
8.	19PSE508	Design of Industrial Structures	3	0	0	3
9.	19PSE509	Nonlinear Analysis of Structures	3	0	0	3
10.	19PSE510	Precast and Prefabricated Structures	3	0	0	3
11.	19PSE511	Theory of Plates and Shells	3	0	0	3
12.	19PSE512	Earthquake Analysis and Design of structures	3	0	0	3
13.	19PSE513	Matrix Methods for Structural Analysis	3	0	0	3
14.	19PSE514	Design of Storage Structures	3	0	0	3
15.	19PSE515	Engineering Fracture Mechanics	3	0	0	3
16.	19PSE516	Constitutive Models and modes of failure	3	0	0	3
17.	19PSE517	Smart Materials and Smart Structures	3	0	0	3
18.	19PSE518	Design of Steel Concrete Composite Structures	3	0	0	3
19.	19PSE519	Stability of Structures	3	0	0	3
20.	19PSE520	Advanced Steel Design	3	0	0	3
21.	19PSE521	Design of Prestressed Concrete Structures	3	0	0	3
22.	19PSE522	Experimental Techniques and Instrumentation	3	0	0	3
23.	19PSE523	Theory and Applications of Cement Composites	3	0	0	3
24.	19PSE524	Structural Health Monitoring	3	0	0	3
25.	19PSE525	Design of Formwork	3	0	0	3

LIST OF OPEN ELECTIVES

S.No	COURSE CODE	COURSE TITLE	L	T	P	C
1.	19PCD601	Industrial Safety	3	0	0	3
2.	19PCS602	Business Analytics	3	0	0	3
3.	19PCM603	IOT for Smart Applications	3	0	0	3
4.	19PPE604	Bio Energy from Waste	3	0	0	3
5.	19PSE605	Smart City Technologies	3	0	0	3

LIST OF MANDATORY CREDIT COURSE

S.No	COURSE CODE	COURSE TITLE	L	T	P	C
1.	19PGM701	Research Methodology and IPR	3	0	0	3

LIST OF AUDIT COURSE

S.No	COURSE CODE	COURSE TITLE	L	T	P	C
1.	19PGM801	Pedagogy Studies	2	0	0	0
2.	19PGM802	English for Research Paper Writing	2	0	0	0

SEMESTER I

Course Code	Course Title	L	T	P	C
THEORY					
19PSE101	Design of Advanced Concrete Structures	3	0	0	3
19PSE102	Theory of Elasticity and Plasticity	3	0	0	3
	Professional Elective I	3	0	0	3
19PGM701	Research Methodology and IPR (Mandatory Credit Course)	3	0	0	3
19PGM801	Pedagogy Studies (Audit Course – I)	2	0	0	0
PRACTICAL					
19PSE103	Computing in Structures	0	0	4	2
19PSE104	Advanced Concrete Laboratory	0	0	4	2
TOTAL		14	0	8	16
Total No. of Credits – 16					

SEMESTER II

Course Code	Course Title	L	T	P	C
THEORY					
19PSE201	Finite Element Analysis for Structural Engineering	3	0	0	3
19PSE202	Structural Dynamics	3	0	0	3
	Professional Elective II	3	0	0	3
19PGM802	English for Research Paper Writing (Audit Course – II)	2	0	0	0
PRACTICAL					
19PSE203	Structural Design Laboratory	0	0	4	2
19PSE204	Structural Testing Laboratory	0	0	4	2
19PSE205	Mini Project with Seminar	0	0	4	3
TOTAL		11	0	12	16
Total No. of Credits – 16					