SETHU INSTITUTE OF TECHNOLOGY

(***An Autonomous Institution***)

Pulloor, Kariapatti – 626 115

DEPARTMENT OF CIVIL ENGINEERING

REGULATIONS 2014

M.E. Structural Engineering
(Full Time & Part Time)

Curriculum & Syllabus

SETHU INSTITUTE OF TECHNOLOGY

Pulloor, Kariapatti – 626 115

(***An Autonomous Institution***)

M.E. Degree Programme (Full Time)

CURRICULUM

Regulations 2014

Master of Engineering in Structural Engineering

OVERALL COURSE STRUCTURE

Category	Total No. of Courses	Credits	Percentage
Science & Humanities	**1**	**4**	**6**
Basic Engineering	**-**	**-**	**-**
Professional Subjects – CORE	**12**	**48**	**69**
Professional Subjects – ELECTIVE	**6**	**18**	**26**
TOTAL	**19**	**70**	**100**

COURSE CREDITS – SEMESTER WISE

Branch	I	II	III	IV	TOTAL
Structural Engineering	**20**	**22**	**16**	**12**	**70**

SEMESTER I

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	14PMA125	Applied Mathematics for Structural Engineering	3	1	0	4
2.	14PSE101	Structural Dynamics	3	1	0	4
3.	14PSE102	Concrete Structures	3	0	0	3
4.	14PSE103	Theory of Elasticity and Plasticity	3	0	0	3
5.	14PSE104	Advanced Concrete Technology	3	0	0	3
6.		Elective I	3	0	0	3
		TOTAL	**18**	**2**	**0**	**20**

SEMESTER II

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	14PSE201	Finite Element Analysis	3	1	0	4
2.	14PSE202	Steel Structures	3	1	0	4
3.	14PSE203	Experimental Techniques and Instrumentation	3	0	0	3
4.	14PSE204	Earthquake Analysis and Design of structures	3	0	0	3
5.		Elective II	3	0	0	3
6.		Elective III	3	0	0	3
PRACTICAL						
7.	14PSE207	Advanced Structural Engineering Laboratory	0	0	4	2
		TOTAL	**18**	**2**	**4**	**22**

SEMESTER III

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.		Elective IV	3	0	0	3
2.		Elective V	3	0	0	3
3.		Elective VI	3	0	0	3
PRACTICAL						
4.	14PSE301	Practical Training (4 weeks)	0	0	0	1
5.	14PSE302	Project Work (Phase I)	0	0	12	6
		TOTAL	**9**	**0**	**12**	**16**

SEMESTER IV

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
PRACTICAL						
1.	14PSE401	Project Work (Phase – II)	0	0	24	12
		TOTAL	**0**	**0**	**24**	**12**

TOTAL CREDITS TO BE EARNED FOR THE AWARD OF THE DEGREE: 70

LIST OF ELECTIVES

SL. No	COURSE CODE	COURSE TITLE	L	T	P	C
1.	14PSE501	Analysis and Design of Tall Buildings	3	0	0	3
2.	14PSE502	Maintenance and Rehabilitation of Structures	3	0	0	3
3.	14PSE503	Offshore Structures	3	0	0	3
4.	14PSE504	Optimization of Structures	3	0	0	3
5.	14PSE505	Design of Bridges	3	0	0	3
6.	14PSE506	Mechanics of Composite Materials	3	0	0	3
7.	14PSE507	Design of Prestressed Concrete Structures	3	0	0	3
8.	14PSE508	Wind and Cyclone Effects on Structures	3	0	0	3
9.	14PSE509	Design of Sub Structures	3	0	0	3
10.	14PSE510	Computer Aided Analysis and Design	3	0	0	3
11.	14PSE511	Design of Shell and Spatial Structures	3	0	0	3
12.	14PSE512	Design of Steel Concrete Composite Structures	3	0	0	3
13.	14PSE513	Design of Industrial Structures	3	0	0	3
14.	14PSE514	Nonlinear Analysis of Structures	3	0	0	3
15.	14PSE515	Precast and Prefabricated Structures	3	0	0	3
16.	14PSE516	Theory of Plates and Shells	3	0	0	3
17.	14PSE517	Stability of Structures	3	0	0	3
18.	14PSE518	Advanced Construction Technology	3	0	0	3
19.	14PSE519	Matrix Methods for Structural Analysis	3	0	0	3
20.	14PSE520	Design of Storage Structures	3	0	0	3
21.	14PSE521	Remote Sensing Techniques and GIS	3	0	0	3

M.E. Degree Programme (Part- Time)

CURRICULUM

Regulations 2014

Master of Engineering in Structural Engineering

OVERALL COURSE STRUCTURE

Category	Total No. of Courses	Credits	Percentage
Science & Humanities	**1**	**4**	**6**
Basic Engineering	**-**	**-**	**-**
Professional Subjects – CORE	**12**	**48**	**68**
Professional Subjects – ELECTIVE	**6**	**18**	**26**
TOTAL	**20**	**70**	**100**

COURSE CREDITS – SEMESTER WISE

Branch	I	II	III	IV	V	VI	TOTAL
Structural Engineering	**11**	**13**	**9**	**9**	**16**	**12**	**70**

SEMESTER I

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	14PMA125	Applied Mathematics for Structural Engineering	3	1	0	4
2.	14PSE101	Structural Dynamics	3	1	0	4
3.	14PSE102	Concrete Structures	3	0	0	3
		TOTAL	**9**	**2**	**0**	**11**

SEMESTER II

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	14PSE201	Finite Element Analysis	3	1	0	4
2.	14PSE202	Steel Structures	3	1	0	4
3.	14PSE203	Experimental Techniques and Instrumentation	3	0	0	3
PRACTICAL						
7.	14PSE207	Advanced Structural Engineering Laboratory	0	0	4	2
		TOTAL	**9**	**2**	**4**	**13**

SEMESTER III

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	14PSE103	Theory of Elasticity and Plasticity	3	0	0	3
2.	14PSE104	Advanced Concrete Technology	3	0	0	3
3.		Elective I	3	0	0	3
		TOTAL	**9**	**2**	**0**	**9**

SEMESTER IV

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.	14PSE204	Earthquake Analysis and Design of structures	3	0	0	3
2.		Elective II	3	0	0	3
3.		Elective III	3	0	0	3
		TOTAL	**9**	**0**	**0**	**9**

SEMESTER V

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1.		Elective IV	3	0	0	3
2.		Elective V	3	0	0	3
3.		Elective VI	3	0	0	3
PRACTICAL						
	14PSE301	Practical Training (4 weeks)	0	0	0	1
	14PSE302	Project Work (Phase I)	0	0	12	6
		TOTAL	**9**	**0**	**12**	**16**

SEMESTER VI

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
PRACTICAL						
1.	14PSE401	Project Work (Phase – II)	0	0	24	12
		TOTAL	**0**	**0**	**24**	**12**

LIST OF ELECTIVES

SL. No	COURSE CODE	COURSE TITLE	L	T	P	C
1.	14PSE501	Analysis and Design of Tall Buildings	3	0	0	3
2.	14PSE502	Maintenance and Rehabilitation of Structures	3	0	0	3
3.	14PSE503	Offshore Structures	3	0	0	3
4.	14PSE504	Optimization of Structures	3	0	0	3
5.	14PSE505	Design of Bridges	3	0	0	3
6.	14PSE506	Mechanics of Composite Materials	3	0	0	3
7.	14PSE507	Design Prestressed Concrete Structures	3	0	0	3
8.	14PSE508	Wind and Cyclone Effects on Structures	3	0	0	3
9.	14PSE509	Design of Sub Structures	3	0	0	3
10.	14PSE510	Computer Aided Analysis and Design	3	0	0	3
11.	14PSE511	Design of Shell and Spatial Structures	3	0	0	3
12.	14PSE512	Design of Steel Concrete Composite Structures	3	0	0	3
13.	14PSE513	Design of Industrial Structures	3	0	0	3
14.	14PSE514	Nonlinear Analysis of Structures	3	0	0	3
15.	14PSE515	Precast and Prefabricated Structures	3	0	0	3
16.	14PSE516	Theory of Plates and Shells	3	0	0	3
17.	14PSE517	Stability of Structures	3	0	0	3
18.	14PSE518	Advanced Construction Technology	3	0	0	3
19.	14PSE519	Matrix Methods for Structural Analysis	3	0	0	3
20.	14PSE520	Design of Storage Structures	3	0	0	3
21.	14PSE521	Remote Sensing and GIS	3	0	0	3