



# **Sree Narayana Guru College of Engineering & Technology**

CHALAKKODE P.O., KOROM, PAYYANUR, KANNUR-670 307



## **CURRICULUM OF MTECH 2022 SCHEME**

APJ ABDUL KALAM  
TECHNOLOGICAL  
UNIVERSITY

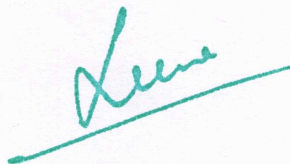
**MTECH 2022**

**Discipline :**

Civil Engineering

**Stream :**

CE4 (Structural Engineering,  
Computer Aided Structural  
Engineering)



Dr. LEENA A. V.  
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1



B. MARY SONI GEORGE  
ASSOCIATE PROFESSOR & HOD  
DEPARTMENT OF CIVIL ENGINEERING  
SNGCET, PAYYANNUR



# **SEMESTER I**

SLOT	COURSE CODE	COURSE NAME	MARKS		L-T-P	HOURS	CREDIT
			CIA	ESE			
A	221TCE100	PROBABILITY AND STATISTICS	40	60	3-0-0	3	3
B	221TCE007	THEORY OF ELASTICITY	40	60	3-0-0	3	3
C	221TCE008	STRUCTURAL DYNAMICS	40	60	3-0-0	3	3
D	221ECEXXX	PROGRAM ELECTIVE 1	40	60	3-0-0	3	3
E	221ECEXXX	PROGRAM ELECTIVE 2	40	60	3-0-0	3	3
S	221RGE100	RESEARCH METHODOLOGY AND IPR	40	60	2-0-0	2	2
T	221LCE003	ADVANCED STRUCTURAL ENGINEERING LAB	100	--	0-0-2	2	1
<b>Total</b>			<b>340</b>	<b>360</b>		<b>19</b>	<b>18</b>

Teaching Assistance: 6 hours

*Mary*

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**PROGRAM ELECTIVE 1**

<b>PROGRAM ELECTIVE 1</b>						
<b>SLOT</b>	<b>SL NO</b>	<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>L-T-P</b>	<b>HOURS</b>	<b>CREDIT</b>
<b>D</b>	1	221ECE036	ADVANCED THEORY AND DESIGN OF CONCRETE STRUCTURES	3-0-0	3	3
	2	221ECE037	HIGH RISE BUILDINGS	3-0-0	3	3
	3	221ECE038	EXPERIMENTAL METHODS IN STRUCTURAL ENGINEERING	3-0-0	3	3
	4	221ECE039	STRUCTURAL OPTIMIZATION AND RELIABILITY OF STRUCTURES	3-0-0	3	3

**PROGRAM ELECTIVE 2**

<b>PROGRAM ELECTIVE 2</b>						
<b>SLOT</b>	<b>SL NO</b>	<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>L-T-P</b>	<b>HOURS</b>	<b>CREDIT</b>
<b>E</b>	1	221ECE042	ADVANCED DESIGN OF STEEL STRUCTURES	3-0-0	3	3
	2	221ECE043	FORENSIC ENGINEERING AND REHABILITATION OF STRUCTURES	3-0-0	3	3
	3	221ECE044	DESIGN OF OFFSHORE STRUCTURES	3-0-0	3	3
	4	221ECE045	ANALYSIS AND DESIGN OF SUBSTRUCTURES	3-0-0	3	3

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## SEMESTER II

SLOT	COURSE CODE	COURSE NAME	MARKS		L-T-P	HOURS	CREDIT
			CIA	ESE			
A	222TCE100	ADVANCED NUMERICAL METHODS	40	60	3-0-0	3	3
B	222TCE103	FINITE ELEMENT METHOD	40	60	3-0-0	3	3
C	222ECEXXX	PROGRAM ELECTIVE 3	40	60	3-0-0	3	3
D	222ECEXXX	PROGRAM ELECTIVE 4	40	60	3-0-0	3	3
E	222EEXXXX/ 222ECEXXX	INDUSTRY/ INTERDISCIPLINARY ELECTIVE	40	60	3-0-0	3	3
S	222PCE100	MINI PROJECT	100	--	0-0-4	4	2
T	222LCE003	COMPUTATIONAL LAB	100	--	0-0-2	2	1
<b>Total</b>			<b>400</b>	<b>300</b>		<b>21</b>	<b>18</b>

Teaching Assistance: 6 hours

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### PROGRAM ELECTIVE 3

PROGRAM ELECTIVE 3						
SLOT	SL NO	COURSE CODE	COURSE NAME	L-T-P	HOURS	CREDIT
C	1	222ECE036	STRUCTURAL HEALTH MONITORING	3-0-0	3	3
	2	222ECE037	DESIGN OF BRIDGES	3-0-0	3	3
	3	222ECE038	STABILITY OF STRUCTURES	3-0-0	3	3
	4	222ECE039	THEORY OF PLATES AND SHELLS	3-0-0	3	3

### PROGRAM ELECTIVE 4


PROGRAM ELECTIVE 4						
SLOT	SL NO	COURSE CODE	COURSE NAME	L-T-P	HOURS	CREDIT
D	1	222ECE042	ADVANCED COMPOSITE STRUCTURES	3-0-0	3	3
	2	222ECE043	DESIGN OF EARTHQUAKE RESISTANT STRUCTURES	3-0-0	3	3
	3	222ECE044	THEORY OF PLASTICITY	3-0-0	3	3
	4	222ECE045	ENGINEERING FRACTURE MECHANICS	3-0-0	3	3

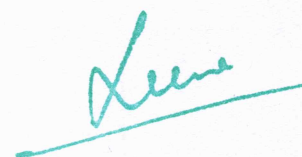


**INTERDISCIPLINARY ELECTIVE**

INTERDISCIPLINARY ELECTIVE						
SLOT	SL NO	COURSE CODE	COURSE NAME	L-T-P	HOURS	CREDIT
<b>E</b>	1	222ECE096	NATURAL HAZARDS AND IMPACT MANAGEMENT	3-0-0	3	1
	2	222ECE097	MECHANICS OF COMPOSITE MATERIALS	3-0-0	3	2
	3	222ECE098	PROJECT EVALUATION AND MANAGEMENT	3-0-0	3	3

**INDUSTRY ELECTIVE**

  
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### SEMESTER III

SLOT	COURSE CODE	COURSE NAME	MARKS		L-T-P	HOURS	CREDIT
			CIA	ESE			
TRACK 1							
A*	223MCEXXX	MOOC	To be completed successfully		--	--	2
B	223AGEXXX	AUDIT COURSE	40	60	3-0-0	3	-
C	223ICE100	INTERNSHIP	50	50	--	--	3
D	223PCE100	DISSERTATION PHASE 1	100	--	0-0-17	17	11
TRACK 2							
A*	223MCEXXX	MOOC	To be completed successfully		--	--	2
B	223AGEXXX	AUDIT COURSE	40	60	3-0-0	3	-
C	223ICE100	INTERNSHIP	50	50	---	--	3
D	223PCE001	RESEARCH PROJECT PHASE 1	100	--	0-0-17	17	11
Total			190	110		20	16

Teaching Assistance: 6 hours

\*MOOC Course to be successfully completed before the commencement of fourth semester (starting from semester 1).

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# **AUDIT COURSE**

<b>AUDIT COURSE</b>						
<b>SLOT</b>	<b>SL NO</b>	<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>L-T-P</b>	<b>HOURS</b>	<b>CREDIT</b>
<b>B</b>	1	223AGE100	ACADEMIC WRITING	3-0-0	3	-
	2	223AGE001	ADVANCED ENGINEERING MATERIALS	3-0-0	3	-
	3	223AGE002	FORENSIC ENGINEERING	3-0-0	3	-
	4	223AGE003	DATA SCIENCE FOR ENGINEERS	3-0-0	3	-
	5	223AGE004	DESIGN THINKING	3-0-0	3	-
	6	223AGE005	FUNCTIONAL PROGRAMMING IN HASKELL	3-0-0	3	-
	7	223AGE006	FRENCH LANGUAGE (A1 LEVEL)	3-0-0	3	-
	8	223AGE007	GERMAN LANGUAGE (A1 LEVEL)	3-0-0	3	-
	9	223AGE008	JAPANESE LANGUAGE (N5 LEVEL)	3-0-0	3	-
	10	223AGE009	PRINCIPLES OF AUTOMATION	3-0-0	3	-
	11	223AGE010	REUSE AND RECYCLE TECHNOLOGY	3-0-0	3	-
	12	223AGE011	SYSTEM MODELING	3-0-0	3	-
	13	223AGE012	EXPERT SYSTEMS	3-0-0	3	-

*May 14*

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# **SEMESTER IV**

SLOT	COURSE CODE	COURSE NAME	MARKS		L-T-P	HOURS	CREDIT
			CIA	ESE			
TRACK 1							
A	224PCE100	DISSERTATION PHASE II	100	100	0-0-24	24	16
TRACK 2							
A	224PCE001	RESEARCH PROJECT PHASE II	100	100	0-0-24	24	16
Total			100	100		24	16

Teaching Assistance: 5 hours

*May 14*

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