

## Program Structure M.TECH. Communication Engineering

### SEMESTER 1

S.NO	Course Code	Course Title	L	T	P	C	Type
1	MCEN5018	Advanced Digital Signal Processing	3	0	0	3	Core
2	MCEN5002	Information Theory and Coding	3	0	0	3	Core
3	MCEN5022	Program Elective 1(Mobile Computing Applications)	3	0	0	3	Elective
4	MCEN6001	Program Elective 2(Advanced Digital Image Processing)	3	0	0	3	Elective
5	MCEN5014	Advanced Satellite Communication	3	0	0	3	Core
6	MCEN5005	Advanced Digital Signal Processing Lab	0	0	2	1	Core
7	MCEN5006	Information Theory and Coding Lab	0	0	2	1	Core
					<b>Total =</b>	<b>17</b>	

### SEMESTER 2

S.NO	Course Code	Course Title	L	T	P	C	Type
1	CENG5001	Professional and Communication skills	0	0	4	2	Core
2	MCEN5020	Optical Communication	3	0	0	3	Core
3	MCEN5019	Program Elective 3(wireless Sensors Network)	3	0	0	3	Elective
4	MCEN5009	Program Elective 4(Mobile ad hoc Network)	3	0	0	3	Elective
5	MCEN5021	Mobile and Wireless Communication	3	0	0	3	Core
6	MCEN5011	Digital Communication System Design	3	0	0	3	Core
7	MCEN5012	Digital Communication System Design Lab	0	0	2	1	Core
8	MCEN5015	Research Paper Review	0	0	2	1	Core
					<b>Total =</b>	<b>19</b>	

### SEMESTER 3

S.NO	Course Code	Course Title	L	T	P	C	Type
1	MCEN6009	Data Communication Networks	3	0	0	3	Core
2	MCEN6010	Program Elective 4 (INTERNET TECHNOLOGY AND APPLICATION)	3	0	0	3	Elective
3	MCEN6011	Program Elective 6(SOFT COMPUTING AND ITS APPLICATION)	3	0	0	3	Elective
4	MCEN9997	Research Seminar	0	0	4	2	Core
5	MCEN9998	Capstone Design-1	0	0	12	6	Core
					<b>Total =</b>	<b>17</b>	

### SEMESTER 4

S.NO	Course Code	Course Title	L	T	P	C	Type
1	MCEN9999	Capstone Design-2	0	0	30	15	Core

**Elective Baskets**

<b>Elective 1 - IoT</b>	<b>Elective 2- Biomedical Engineering and Healthcare</b>
Introduction to IoT and its Applications	Medical Imaging
Automation and Robotics	Bio-signal processing
Deep Learning Algorithms	Medical Image Processing
Object Oriented Programming	Biomedical Sensors and Measurement Devices
Virtual Reality	Biomaterials and Artificial Organs
Raspberry Pi and its applications	Assist Devices
Introduction to Arduino programming and its applications	Soft Computing
Cloud Computing	Hospital Engineering and Informatics Systems
Python Programming	Bio-Chemistry

<b>Elective 3 - VLSI</b>	<b>Elective 4 Communication and Networking</b>
ASIC Design	Satellite Communication
CAD Algorithms for VLSI Physical Design	Principles of Secure Communication
Digital VLSI Design	Microwave Theory and Techniques
Digital System Design using VHDL	Mobile Ad Hoc Networks
SoC Design	Mobile Computing
System Verilog	Microwave Engineering
Low Power VLSI Design	Information Theory and Coding
VLSI Technology	Radar Guidance and Navigation
VLSI Testing	Optical Communication
MEMS	Wireless Sensor Networks
Memory Design and Testing	Opto Electronics

MOS Transistor Theory	
<b>Elective 5 – Signal Processing</b>	
Image and Video Signal Processing	
Multimedia Signal Processing and Networking	
Speech and Audio Processing	
Machine learning	
Image Processing using MATLAB	
Introduction to Scilab and its applications	
Human Computer Interface	
Advanced Digital Signal Processing	
Mixed Signal Circuit Design	
Neural Networks and Fuzzy Control	