

### 13. Courses of Study and Scheme of Assessment

#### ME COMMUNICATION SYSTEMS

(2015 REGULATIONS)  
(Minimum No. of credits to be earned: 74)

Course Code	Course Title	Hours/Week			Credits	Maximum Marks			CAT
		Lecture	Tutorial	Practical		CA	FE	Total	
<b>I SEMESTER</b>									
15LC01	Applied Mathematics	2	2	-	3	50	50	100	FC
15LC02	Baseband Communication	3	-	-	3	50	50	100	FC
15LC03	Information Theory and Error Control Coding	3	-	-	3	50	50	100	PC
15LC04	Communication Networks	3	-	-	3	50	50	100	PC
15LC05	RF Passive Circuit Design	3	2	-	4	50	50	100	PC
15LC51	Communication Networks Laboratory	-	-	2	1	100	-	100	PC
15LC61	Industry Visit & Technical Seminar	-	-	4	2	100	-	100	EEC
<b>Total 24 Hrs</b>		<b>14</b>	<b>4</b>	<b>6</b>	<b>19</b>	<b>450</b>	<b>250</b>	<b>700</b>	
<b>II SEMESTER</b>									
15LC06	Advanced Digital Communication Systems	3	-	-	3	50	50	100	PC
15LC07	Advanced Digital Signal Processing	3	2	-	4	50	50	100	PC
15LC08	Radiating Systems	3	-	-	3	50	50	100	PC
15LC09	Wireless Communications	3	-	-	3	50	50	100	PC
15LC10	FPGA Based Communication System Design	3	2	-	4	50	50	100	PC
15LC_	Professional Elective -1	3	-	-	3	50	50	100	PE
15LC52	Advanced Digital Communication Laboratory	-	-	2	1	100	-	100	PC
<b>Total 24 Hrs</b>		<b>18</b>	<b>4</b>	<b>2</b>	<b>21</b>	<b>400</b>	<b>300</b>	<b>700</b>	
<b>III SEMESTER</b>									
15LC_	Professional Elective -2	3	2	-	4	50	50	100	PE
15LC_	Professional Elective -3	3	-	-	3	50	50	100	PE
15LC_	Professional Elective -4	3	-	-	3	50	50	100	PE
15LC_	Professional Elective -5	3	-	-	3	50	50	100	PE
15LC_	Professional Elective -6	3	-	-	3	50	50	100	PE
15LC53	Communication System Design Laboratory	-	-	2	1	100	-	100	PC
15LC71	Project Work I	-	-	6	3	100	-	100	EEC
<b>Total 23 Hrs</b>		<b>15</b>	<b>2</b>	<b>8</b>	<b>20</b>	<b>450</b>	<b>250</b>	<b>700</b>	
<b>IV SEMESTER</b>									
15LC72	Project Work II	-	-	28	14	50	50	100	EEC
<b>ELECTIVE THEORY COURSES(Six to be opted)</b>									
15LC21	RF Active Circuit Design	3	-	-	3	50	50	100	PE
15LC22	Modeling and Simulation of Communication Systems	3	-	-	3	50	50	100	PE
15LC23	Cooperative Communication and Cognitive Radio	3	-	-	3	50	50	100	PE
15LC24	RF MEMS	3	-	-	3	50	50	100	PE
15LC25	VLSI Signal Processing	3	-	-	3	50	50	100	PE
15LC26	Radar Communication	3	-	-	3	50	50	100	PE
15LC27	Computer Vision	3	-	-	3	50	50	100	PE
15LC28	Advanced Wireless Communication	3	-	-	3	50	50	100	PE
15LC29	Detection and Estimation	3	-	-	3	50	50	100	PE
15LC30	Multi User Detection	3	-	-	3	50	50	100	PE
15LC31	Data Compression	3	-	-	3	50	50	100	PE
15LC32	Wavelets and Subband Coding	3	-	-	3	50	50	100	PE
15LC33	Optical Networks	3	-	-	3	50	50	100	PE
15LC34	Smart Antennas	3	-	-	3	50	50	100	PE
15LC35	Adaptive Signal Processing	3	-	-	3	50	50	100	PE
15LC36	Software Radio Architecture	3	-	-	3	50	50	100	PE

15LC37	Speech Signal Processing	3	-	-	3	50	50	100	PE
15LC38	Wireless Sensor Networks	2	2	-	3	50	50	100	PE
15LC39	Radio Frequency Integrated Circuit Design	3	-	-	3	50	50	100	PE
15LC40	Wireless AD HOC Networks	3	-	-	3	50	50	100	PE
15LC41	Wireless security	3	-	-	3	50	50	100	PE
15LC42	Computational Electromagnetics	3	-	-	3	50	50	100	PE
15LC43	Pattern Classification	3	-	-	3	50	50	100	PE
15LC44	Evolutionary Computation	3	-	-	3	50	50	100	PE
15LC45	Embedded Systems	3	-	-	3	50	50	100	PE
15LC81	Internet of Things	3	-	-	3	50	50	100	PE
15LC82	Object Based Image Analysis for Remote Sensing	3	-	-	3	50	50	100	PE
15LC83	Green Communication	3	-	-	3	50	50	100	PE
<b>LIST OF COURSES FOR ELECTIVE - 2</b>									
15LC46	RF Circuits and measurements	3	2	-	4	50	50	100	PE
15LC47	Wireless Technologies and Measuring Tools	3	2	-	4	50	50	100	PE
15LC48	Embedded System Design	3	2	-	4	50	50	100	PE
15LC49	FPGA Based Implementation of Signal Processing Systems	3	2	-	4	50	50	100	PE
15LC50	Data Structures and Algorithms	2	2	-	3	50	50	100	PE

\* Indicated is the minimum number of credits to be earned by a student.

**CAT – Category; FC – Foundation Course; PC – Professional Core; PE - Professional Elective  
EEC – Employability Enhancement Course**

### ONE CREDIT COURSES

15LK01	Hardware Software Co-design
15LK02	Scripting Languages
15LK03	Reconfigurable Computing
15LK04	RTOS and its Applications
15LK05	Digital Signal / Image Processing Applications
15LK06	LTE and the Evolution to 4G Wireless Communications
15LK07	Advanced Aircraft Mission and Communication Systems

### SCIENCE ELECTIVES

15ID01	Micro Electro Mechanical Systems (MEMS)
15ID02	Sensors for Engineering Applications
15ID03	Laser Processing of Materials
15ID04	Plasma Technology
15ID05	Nanosensor and its Applications
15ID06	Nano Magnetism and Spintronics
15ID07	Corrosion Science and Engineering
15ID08	Instrumental Methods of Chemical Analysis
15ID09	Polymer Science and Technology
15ID10	Nanomaterials and Nanotechnology
15ID11	Thin Film Technology

## **HUMANITIES AND LANGUAGES ONE CREDIT COURSES**

15OK01	Research Writing in Engineering Sciences
15OK02	Indian Ethos and Human Values
15OK03	Personality Development
15OK04	Financial Accounting and Cost Accounting