

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

#### ME WIRELESS COMMUNICATION

(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>									
15LW01	Applied Mathematics	2	2	0	3	50	50	100	FC
15LW02	Baseband Digital Communications	3	0	0	3	50	50	100	FC
15LW03	Wireless Networking	3	0	0	3	50	50	100	PC
15LW04	Wireless Communication Systems	3	0	0	3	50	50	100	PC
15LW05	RF Passive Circuit Design	3	2	0	4	50	50	100	PC
15LW51	Wireless Technology Laboratory	0	0	2	1	100	-	100	PC
15LW61	Industry Visit & Technical Seminar	0	0	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>									
15LW06	Advanced Digital Signal Processing	3	2	0	4	50	50	100	PC
15LW07	RF Active Circuit Design	3	0	0	3	50	50	100	PC
15LW08	Radiating Systems	3	0	0	3	50	50	100	PC
15LW09	Wireless Sensor Networks	3	2	0	4	50	50	100	PC
15LW10	Space Time Wireless Communication	3	0	0	3	50	50	100	PC
15LW_	Professional Elective -1	3	0	0	3	50	50	100	PE
15LW52	RF System Design using EDA Tools Laboratory	0	0	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>									
15LW_	Professional Elective -2	3	2	0	4	50	50	100	PE
15LW_	Professional Elective -3	3	0	0	3	50	50	100	PE
15LW_	Professional Elective -4	3	0	0	3	50	50	100	PE
15LW_	Professional Elective -5	3	0	0	3	50	50	100	PE
15LW_	Professional Elective -6	3	0	0	3	50	50	100	PE
15LW53	Wireless System Design Laboratory	0	0	2	1	100	-	100	PC
15LW71	Project Work I	0	0	6	3	100	-	100	EEC
<b>Total 25 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>									
15LW72	Project Work II	<b>0</b>	<b>0</b>	<b>28</b>	<b>14</b>	<b>50</b>	<b>50</b>	<b>100</b>	<b>EEC</b>
<b>PROFESSIONAL ELECTIVE THEORY COURSES (Six to be opted)</b>									
15LW21	FPGA Based Wireless System Design	3	0	0	3	50	50	100	PE
15LW22	Software Radio Architecture	3	0	0	3	50	50	100	PE
15LW23	Wavelets and Sub-band Coding	3	0	0	3	50	50	100	PE
15LW24	Wireless Security	3	0	0	3	50	50	100	PE
15LW25	Cooperative Communication and Cognitive Radio	3	0	0	3	50	50	100	PE
15LW26	Embedded Systems	3	0	0	3	50	50	100	PE
15LW27	Advanced Processor Architecture	3	0	0	3	50	50	100	PE
15LW28	Optical Networks	3	0	0	3	50	50	100	PE
15LW29	Wireless Multimedia Communication	3	0	0	3	50	50	100	PE
15LW30	Radar Communication	3	0	0	3	50	50	100	PE
15LW31	Free Space Optics	3	0	0	3	50	50	100	PE
15LW32	Radio Frequency Integrated Circuit Design	3	0	0	3	50	50	100	PE
15LW33	RF MEMS	3	0	0	3	50	50	100	PE
15LW34	Multiuser Detection	3	0	0	3	50	50	100	PE
15LW35	Detection and Estimation	3	0	0	3	50	50	100	PE

15LW36	Smart Antennas	3	0	0	3	50	50	100	PE
15LW37	Adaptive Signal Processing	3	0	0	3	50	50	100	PE
15LW38	3G and 4G Wireless Communications	3	0	0	3	50	50	100	PE
15LW39	Long Term Evolution Design	3	0	0	3	50	50	100	PE
15LW40	Spread Spectrum Communication	3	0	0	3	50	50	100	PE
15LW41	Wireless Ad Hoc Networks	3	0	0	3	50	50	100	PE
15LW42	Computational Electromagnetics	3	0	0	3	50	50	100	PE
15LW43	Data Compression	3	0	0	3	50	50	100	PE
15LW44	Data structures & Algorithms	2	2	0	3	50	50	100	PE
15LW49	Internet of Things	3	0	0	3	50	50	100	PE
15LW50	Object Based Image Analysis for Remote Sensing	3	0	0	3	50	50	100	PE
15LW81	Green Communication	3	0	0	3	50	50	100	PE
<b>LIST OF COURSES FOR ELECTIVE - 2</b>									
15LW45	Wireless Technologies and Measuring Tools	3	2	0	4	50	50	100	PE
15LW46	RF Circuits and Measurements	3	2	0	4	50	50	100	PE
15LW47	Embedded System Design	3	2	0	4	50	50	100	PE
15LW48	FPGA Based Implementation of Signal Processing Systems	3	2	0	4	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