

## Breakup of Credits

Sl. No.	Category	Credits
1	Humanities & Social Sciences including Management courses	12
2	Basic Science courses	23
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc	28
4	Professional core courses	56
5	Professional Elective courses relevant to chosen specialization/branch	39
6	Open subjects – Electives from other technical and /or emerging subjects	14
7	Project work, seminar and internship in industry or elsewhere	16
8	Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Traditional Knowledge]	2
<b>Total Credits:</b>		<b>190</b>

## Definition of Credit

1 Hr. Lecture (L) Per Week	1 Credit
1 Hr. Tutorial (T) Per Week	1 Credit
1 Hr. Practical (P) Per Week	0.5 Credit
2 Hr. Practical (P) Per Week	1 Credit

## Course Code Definitions

Course code	Definitions
<b>BSC</b>	Basic Science Course
<b>ESC</b>	Engineering Science Course
<b>HSMC</b>	Humanities and Social Sciences including Management Course
<b>MC</b>	Mandatory Course
<b>PCC-ECE</b>	Professional Core Course
<b>PEC-ECE</b>	Professional Electives Course
<b>OEC</b>	Open Electives Course
<b>MOOC'S</b>	Massive Open Online Courses
<b>PDP</b>	Personality Development Program
<b>ECE-P1</b>	Project Stage-I
<b>ECE-P2</b>	Project Stage-II
<b>ECE-P3</b>	Project Stage-III

**CREDITS DISTRIBUTION (SEMESTER-WISE AND COURSE-WISE )**

Semester	HSMC	BSC	ESC	PCC	PEC	OEC	PROJECT	MC	Total Credit Semester-wise
1st	3	9.5	13	0	0	0	0	0	25.5
2nd	3	9.5	8	4	0	0	0	2	26.5
3rd	2	4	5	14	0	0	0	0	25
4th	4	0	0	19	0	0	0	0	23
5th	0	0	0	10	5	9	0	0	24
6th	0	0	2	9	13	0	2	0	26
7th	0	0	0	0	9	5	5	0	19
8th	0	0	0	0	12	0	9	0	21
<b>Total Credit Course-wise</b>	<b>12</b>	<b>23</b>	<b>28</b>	<b>56</b>	<b>39</b>	<b>14</b>	<b>16</b>	<b>2</b>	<b>190</b>
<b>Total Credit</b>									190

**HUMANITIES & SOCIAL SCIENCES INCLUDING MANAGEMENT  
COURSE**

Sl. No.	Course Code	Course Title	Hours per week			Credits	Preferred Semester
			L	T	P		
1	HSMC-101	English	3	0	0	3	I
2	HSMC-102	Technical Communication	2	0	0	2	II
3	HSMC-103	Technical Communication Lab	0	0	2	1	II
4	HSMC-104	Organisational Behaviour	2	0	0	2	IV
5	HSMC-105	French Through Communicative Approach-I	2	0	0	2	III
6	HSMC-106	French Through Communicative Approach-II	2	0	0	2	IV
<b>Total Credit:</b>						<b>12</b>	

## BASIC SCIENCE COURSES

Sl. No.	Course Code	Course Title	Hours Per Week			Credits	Preferred Semester
			L	T	P		
1	BSC-101	Chemistry	3	1	0	4	I
2	BSC-102	Chemistry Lab	0	0	2	1.5	I
3	BSC-103	Physics	3	1	0	4	II
4	BSC-104	Physics Lab	0	0	2	1.5	II
5	BSC-105	Mathematics-I	3	1	0	4	I
6	BSC-106	Mathematics-II	3	1	0	4	II
7	BSC-107	Mathematics-III	3	1	0	4	III
<b>Total Credit:</b>						<b>23</b>	

## ENGINEERING SCIENCE COURSES

Sl. No.	Course Code	Course Title	Hours Per Week			Credits	Preferred Semester
			L	T	P		
1	ESC-101	Basic Electrical & Electronics Engineering	3	1	0	4	I
2	ESC-102	Basic Electrical & Electronics Engineering Lab	0	0	2	1	I
3	ESC-103	Introduction to Unix & C Programming	3	1	0	4	I
4	ESC-104	Introduction to Unix & C Programming Lab	0	0	2	1	I
5	ESC-105	Engineering Graphics & Design	1	0	4	3	I
6	ESC-108	Data Structure	3	1	0	4	II
7	ESC-109	Data Structure Lab	0	0	2	1	II
8	ESC-110	Workshop & Manufacturing Practices	1	0	4	3	II
9	ESC-111	Engineering Mechanics	3	1	0	4	III
10	ESC-112	Programming using MATLAB	0	0	2	1	III
11	ESC-113	Python Programming	1	0	2	2	VI
<b>Total Credit:</b>						<b>28</b>	

## Professional Core Courses(Sem-II)

Branch: Electronics & Communication Engineering (B.Tech)

Sl. No.	Course Code	Course Title	Hrs. /Week L: T: P	Credits	Preferred Semester
1	PCC-ECE-101	Electronic Devices	03:01:00	3	II
2	PCC-ECE-102	Electronic Devices Lab	00:00:02	1	II

Total Credit: 4

## Professional Core Courses(Sem-III & IV)

Branch: Electronics & Communication Engineering (B.Tech)

Sl. No.	Course Code	Course Title	Hrs. /Week L: T: P	Credits	Preferred Semester
1	PCC-ECE-201	Digital Electronics	03:01:00	4	III/IV
2	PCC-ECE-202	Digital Electronics Lab	00:00:02	1	III/IV
3	PCC-ECE-203	Signals & Systems	03:01:00	4	III/IV
4	PCC-ECE-204	Electrical Circuit Analysis	03:01:00	4	III/IV
5	PCC-ECE-205	Electrical Circuit Analysis Lab	00:00:02	1	III/IV
6	PCC-ECE-206	Communication System-I	03:01:00	4	III/IV
7	PCC-ECE-207	Communication System Lab-I	00:00:02	1	III/IV
8	PCC-ECE-208	Analog Electronics	03:01:00	4	III/IV
9	PCC-ECE-209	Analog Electronics Lab	00:00:02	1	III/IV
10	PCC-ECE-210	Object Oriented Program	03:01:00	4	III/IV
11	PCC-ECE-211	Object Oriented Program Lab	00:00:02	1	III/IV
12	PCC-ECE-212	Transmission Lines & Electromagnetic Waves	03:01:00	4	III/IV

Total Credit: 33

## Professional Core Courses(Sem-V & VI)

Branch: Electronics & Communication Engineering (B.Tech)

Sl. No.	Course Code	Course Title	Hrs. /Week L: T: P	Credits	Preferred Semester
1	PCC-ECE-301	Communication System-II	03:01:00	4	V/VI
2	PCC-ECE-302	Communication System Lab-II	00:00:02	1	V/VI
3	PCC-ECE-303	Microprocessors & Microcontroller	03:01:00	4	V/VI
4	PCC-ECE-304	Microprocessors & Microcontroller Lab	00:00:02	1	V/VI
5	PCC-ECE-305	Digital Signal Processing	03:01:00	4	V/VI
6	PCC-ECE-306	Digital Signal Processing Lab	00:00:02	1	V/VI
7	PCC-ECE-307	Control System	03:01:00	4	V/VI

Total Credit: 19

**Professional Elective Courses (Sem V & VI)**  
**Branch: Electronics & Communication Engineering (B.Tech)**

Sl. No.	Course Code	Course Title	Hrs./ Week L: T: P	Credits	Preferred Semester
1	PEC-ECE-301	Fiber Optic Communication	03:01:00	4	V/VI
2	PEC-ECE-302	Fiber Optic Communication Lab	00:00:02	1	V/VI
3	PEC-ECE-303	Semiconductor Memories & FPGA Technologies	03:01:00	4	V/VI
4	PEC-ECE-304	Semiconductor Devices	03:01:00	4	V/VI
5	PEC-ECE-305	Micro Electronics Circuits	03:01:00	4	V/VI
6	PEC-ECE-306	Introduction to MEMS	03:01:00	4	V/VI
7	PEC-ECE-307	VLSI Design	03:01:00	4	V/VI
8	PEC-ECE-308	VLSI Design Lab	00:00:02	1	V/VI

**Professional Elective Courses (Sem VII & VIII)**  
**Branch: Electronics & Communication Engineering (B.Tech)**

Sl. No.	Course Code	Course Title	Hrs./ Week L: T: P	Credits	Preferred Semester
1	PEC-ECE-401	Microwave Engineering	03:01:00	4	VII/VIII
2	PEC-ECE-402	Microwave & Antenna Measurement Lab	00:00:02	1	VII/VIII
3	PEC-ECE-403	Satellite Communication	03:01:00	4	VII/VIII
4	PEC-ECE-404	Embedded Systems	03:01:00	4	VII/VIII
5	PEC-ECE-405	Mobile Communication & Networks	03:01:00	4	VII/VIII
6	PEC-ECE-406	Mixed Signal Design	03:01:00	4	VII/VIII
7	PEC-ECE-407	Wireless Sensor Networks	03:01:00	4	VII/VIII
8	PEC-ECE-408	High Speed Electronics	03:01:00	4	VII/VIII
9	PEC-ECE-409	Wavelets	03:01:00	4	VII/VIII
10	PEC-ECE-410	Adaptive Signal Processing	03:01:00	4	VII/VIII
11	PEC-ECE-411	Digital System Design	03:01:00	4	VII/VIII
12	PEC-ECE-412	Digital System Design Lab	03:01:00	4	VII/VIII
13	PEC-ECE-413	Radar and Navigational Aids	03:01:00	4	VII/VIII



## Open Elective Course

Branch: Electronics & Communication Engineering (B.Tech)

Sl. No.	Course Code	Course Title	Hrs./ Week L: T: P	Credits
1	OEC-CSE-303	Computer Networks	03:01:00	4
2	OEC-CSE-304	Computer Networks Lab	00:00:02	1
3	OEC-CSE-301	Machine Learning for Real-World Applications	03:01:00	4
4	OEC-CSE-412	Digital Image Processing	03:01:00	4
5	OEC-CSE-413	Digital Image Processing Lab	00:00:02	1
6	OEC-101	Economics	03:01:00	4
7	OEC-102	Sanskrit	03:01:00	4

## Project Work

**Branch: Electronics & Communication Engineering (B.Tech)**

Sl. No.	Course Code	Course Title	Hrs. /Week L: T: P	Credits	Preferred Semester
1	ECE-P1	Project Stage-I (Mini Project/ Industrial Training)	00:00:04	2	VI
2	ECE-P2	Project Stage-II (Minor Project) <b>(To be continued in next Semester)</b>	00:00:10	5	VII
3	ECE-P3	Project Stage-III (Major Project Work & Dissertation)	00:00:18	9	VIII
<b>Total Credits:</b>				<b>16</b>	

# Massive Open Online Courses

Branch: Electronics & Communication Engineering (B.Tech)

Sl. No.	Course Code	Course Title	Hrs./ Week L: T: P	Credits
1	MOOCs -101	Artificial Intelligence for Real-World Application	03:01:00	4
2	MOOCs -102	Applications of Deep Learning & Neural Networks	03:01:00	4
3	MOOCs -103	Usability Design of Software Applications	03:01:00	4
4	MOOCs -104	Applied Cloud Computing	03:01:00	4
5	MOOCs -105	Information Security - Practitioner's Perspective	03:01:00	4
6	MOOCs -106	Innovation & Entrepreneurship	03:01:00	4
7	MOOCs -107	Practical Approach to Data Mining & Analytics	03:01:00	4
8	MOOCs -108	IoT & its Applications	03:01:00	4
9	MOOCs -109	Intelligent Game Design & its Applications	03:01:00	4
10	MOOCs -110	Industrial Mechatronic Systems	03:01:00	4
11	MOOCs -111	Solar Energy Technology & its Applications	03:01:00	4

**Note: A student will be eligible to get Under Graduate degree with Honours or additional Minor Engineering, if he/she completes an additional 20 credits. These could be acquired through MOOCs.**

## Mandatory Courses

Sl. No.	Course Code	Course Title	Hours per week			Credits	Preferred Semester
			L	T	P		
1	MC-101	Induction Programme	0	0	0	0	I
2	MC-102	Environmental Science	2	0	0	2	IV
3	MC-103	Values & Ethics	2	0	0	0	IV
4	MC-104	PDP-I	2	0	0	0	I
5	MC-105	PDP-II	2	0	0	0	II
6	MC-106	PDP-III	2	0	0	0	III
7	MC-107	PDP-IV	2	0	0	0	IV
8	MC-108	PDP-V	2	0	0	0	V
9	MC-109	PDP-VI	2	0	0	0	VI
10	MC-110	PDP-VII	2	0	0	0	VII
11	MC-111	PDP-VIII	2	0	0	0	VIII
12	MC-112	PT & Games/NSS/NCC-I	0	0	0	0	I
13	MC-113	PT & Games/NSS/NCC-II	0	0	0	0	II
14	MC-114	Vedic Mathematics-I	2	0	0	0	VI
15	MC-115	Vedic Mathematics-II	2	0	0	0	VII

**Total Credit: 2**

# COURSE STRUCTURE

## SEMESTER-I (1st YEAR)

**Branch: Electronics & Communication Engineering (B.Tech)**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Basic Science Course	BSC-101	Chemistry	3	1	0	4	30	70	100
2	Basic Science Course	BSC-105	Mathematics-I	3	1	0	4	30	70	100
3	Engineering Science Course	ESC-101	Basic Electrical & Electronics Engineering	3	1	0	4	30	70	100
4	Engineering Science Course	ESC-103	Introduction to Unix & C Programming	3	1	0	4	30	70	100
5	Humanities & Social Sciences including Management Course	HSMC-101	English	3	0	0	3	30	70	100
<b>Total(A)</b>							<b>19</b>	<b>150</b>	<b>350</b>	<b>500</b>
<b>Practical/Drawing/Design</b>										
1	Engineering Science Course	ESC-105	Engineering Graphics & Design	1	0	4	3	30	20	50
2	Basic Science Course	BSC-102	Chemistry Lab	0	0	3	1.5	30	20	50
3	Engineering Science Course	ESC-102	Basic Electrical & Electronics Engineering Lab	0	0	2	1	30	20	50
4	Engineering Science Course	ESC-104	Introduction to Unix & C Programming Lab	0	0	2	1	30	20	50
<b>Total(B)</b>							<b>6.5</b>	<b>120</b>	<b>80</b>	<b>200</b>
<b>Mandatory Courses/MOOC'S</b>										
1	Mandatory Course	MC-101	Induction Programme	0	0	0	0	0	0	0
2	Mandatory Course	MC-110	PT & Games/NSS/NCC-I	0	0	2	0	0	0	0
3	Mandatory Course	MC-104	PDP-I	2	0	0	0	0	0	0
<b>Total(C)</b>							<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total (A+B+C)</b>							<b>25.5</b>	<b>270</b>	<b>430</b>	<b>700</b>
<b>L-Lecture, T-Tutorial, P-Practical</b> <b>IA- Internal Assessment, ESE-End Semester Examination</b>										

# COURSE STRUCTURE

## SEMESTER-II (1st YEAR)

**Branch: Electronics & Communication Engineering (B.Tech)**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Basic Science Course	BSC-106	Mathematics-II	3	1	0	4	30	70	100
2	Humanities and Social Sciences including Management Course	HSMC-102	Technical Communication	2	0	0	2	30	70	100
3	Professional Core Courses	PCC-ECE-101	Electronic Devices	3	0	0	3	30	70	100
4	Basic Science Course	BSC-103	Physics	3	1	0	4	30	70	100
5	Engineering Science Course	ESC-108	Data Structures	3	1	0	4	30	70	100
<b>Total(A)</b>							<b>17</b>	<b>150</b>	<b>350</b>	<b>500</b>
<b>Practical/Drawing/Design</b>										
1	Engineering Science Course	ESC-110	Workshop & Manufacturing Practices	1	0	4	3	30	20	50
2	Professional Core Course	PCC-ECE-102	Electronic Devices Lab	0	0	2	1	30	20	50
3	Basic Science Course	BSC-104	Physics Lab	0	0	3	1.5	30	20	50
4	Humanities & Social Sciences including Management Course	HSMC-103	Technical Communication Lab	0	0	2	1	30	20	50
5	Engineering Science Course	ESC-109	Data Structures Lab	0	0	2	1	30	20	50
<b>Total(B)</b>				<b>1</b>	<b>0</b>	<b>13</b>	<b>7.5</b>	<b>150</b>	<b>100</b>	<b>250</b>
<b>Mandatory Courses/MOOC'S</b>										
1	Mandatory Course	MC-102	Environmental Science	2	0	0	2	30	70	100
2	Mandatory Course	MC-111	PT & Games/NSS/NCC-II	0	0	2	0	0	0	0
3	Mandatory Course	MC-105	PDP-II	2	0	0	0	0	0	0
<b>Total(C)</b>							<b>2</b>	<b>30</b>	<b>70</b>	<b>100</b>
<b>Grand Total (A+B+C)</b>							<b>26.5</b>	<b>330</b>	<b>520</b>	<b>850</b>
<b>L-Lecture, T-Tutorial, P-Practical</b> <b>IA- Internal Assessment, ESE-End Semester Examination</b>										

# COURSE STRUCTURE

**SEMESTER-III (2nd YEAR)**

**Branch: Electronics & Communication Engineering (B.Tech)**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Basic Science Course	BSC-107	Mathematics-III	3	1	0	4	30	70	100
2	Engineering Science Course	ESC-111	Engineering Mechanics	3	1	0	4	30	70	100
3	Professional Core Course	PCC-ECE-201	Digital Electronics	3	1	0	4	30	70	100
4	Professional Core Course	PCC-ECE-203	Signals & Systems	3	1	0	4	30	70	100
5	Professional Core Course	PCC-ECE-204	Electrical Circuit Analysis	3	1	0	4	30	70	100
6	Humanities & Social Sciences including Management Course	HSMC-105	French Through Communicative Approach-I	2	0	0	2	30	70	100
<b>Total(A)</b>							<b>22</b>	<b>180</b>	<b>420</b>	<b>600</b>
<b>Practical/Drawing/Design</b>										
1	Professional Core Course	PCC-ECE-202	Digital Electronics Lab	0	0	2	1	30	20	50
2	Engineering Science Course	ESC-112	Programming using MATLAB	0	0	2	1	30	20	50
3	Professional Core Course	PCC-ECE-205	Electrical Circuit Analysis Lab	0	0	2	1	30	20	50
<b>Total(B)</b>							<b>3</b>	<b>90</b>	<b>60</b>	<b>150</b>
<b>Mandatory Courses/MOOC'S</b>										
1	Mandatory Course	MC-103	Values & Ethics	2	0	0	0	0	0	0
2	Mandatory Course	MC-106	PDP-III	2	0	0	0	0	0	0
<b>Total(C)</b>							<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total (A+B+C)</b>							<b>25</b>	<b>270</b>	<b>480</b>	<b>750</b>
<b>L-Lecture, T-Tutorial, P-Practical</b> <b>IA- Internal Assessment, ESE-End Semester Examination</b>										

<b>COURSE STRUCTURE</b>										
<b>SEMESTER-IV (2nd YEAR)</b>										
<b>Branch: Electronics &amp; Communication Engineering (B.Tech)</b>										
Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Professional Core Course	PCC-ECE-206	Communication System-I	3	1	0	4	30	70	100
2	Professional Core Course	PCC-ECE-208	Analog Electronics	3	1	0	4	30	70	100
3	Professional Core Course	PCC-ECE-210	Object Oriented Program	3	1	0	4	30	70	100
4	Professional Core Course	PCC-ECE-212	Transmission Lines & Electromagnetic Waves	3	1	0	4	30	70	100
5	Humanities & Social Sciences including Management Course	HSMC-104	Organisational Behaviour	2	0	0	2	30	70	100
6	Humanities & Social Sciences including Management Course	HSMC-106	French Through Communicative Approach-II	2	0	0	2	30	70	100
<b>Total(A)</b>							<b>20</b>	<b>180</b>	<b>420</b>	<b>600</b>
<b>Practical/Drawing/Design</b>										
1	Professional Core Course	PCC-ECE-209	Analog Electronics Lab	0	0	2	1	30	20	50
2	Professional Core Course	PCC-ECE-207	Communication System Lab-I	0	0	2	1	30	20	50
3	Professional Core Course	PCC-ECE-211	Object Oriented Program Lab	0	0	2	1	30	20	50
<b>Total(B)</b>							<b>3</b>	<b>90</b>	<b>60</b>	<b>150</b>
<b>Mandatory Courses/MOOC'S</b>										
1	Mandatory Course	MC-107	PDP-IV	2	0	0	0	0	0	0
<b>Total(C)</b>							<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total (A+B+C)</b>							<b>23</b>	<b>270</b>	<b>480</b>	<b>750</b>
<b>L-Lecture, T-Tutorial, P-Practical</b>										
<b>IA- Internal Assessment, ESE-End Semester Examination</b>										



# COURSE STRUCTURE

SEMESTER-V (3rd YEAR)

Branch: Electronics & Communication Engineering (B.Tech)

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Professional Core Course	PCC-ECE-301	Communication System-II	3	1	0	4	30	70	100
2	Open Elective Course	OEC-CSE-303	Computer Networks	3	1	0	4	30	70	100
3	Professional Core Course	PCC-ECE-303	Microprocessors & Microcontroller	3	1	0	4	30	70	100
4	Open Elective Course	OEC-CSE-301	Machine Learning for Real World Applications	3	1	0	4	30	70	100
5	Professional Elective Course	PEC-ECE-301	Fiber Optic Communication	3	1	0	4	30	70	100
<b>Total(A)</b>							<b>20</b>	<b>150</b>	<b>350</b>	<b>500</b>
<b>Practical/Drawing/Design</b>										
1	Professional Core Course	PCC-ECE-302	Communication System Lab-II	0	0	2	1	30	20	50
2	Open Elective Course	OEC-CSE-304	Computer Networks Lab	0	0	2	1	30	20	50
3	Professional Elective Course	PEC-ECE-302	Fiber Optic Communication Lab	0	0	2	1	30	20	50
4	Professional Core Course	PCC-ECE-304	Microprocessors & Microcontroller Lab	0	0	2	1	30	20	50
<b>Total(B)</b>							<b>4</b>	<b>120</b>	<b>80</b>	<b>200</b>
<b>Mandatory Courses/MOOC'S</b>										
1	Mandatory Course	MC-108	PDP-V	2	0	0	0	0	0	0
<b>Total(C)</b>							<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total (A+B+C)</b>							<b>24</b>	<b>270</b>	<b>430</b>	<b>700</b>
L-Lecture, T-Tutorial, P-Practical										
IA- Internal Assessment, ESE-End Semester Examination										

# COURSE STRUCTURE

**SEMESTER-VI (3rd YEAR)**

**Branch: Electronics & Communication Engineering (B.Tech)**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Professional Core Course	PCC-ECE-305	Digital Signal Processing	3	1	0	4	30	70	100
2	Professional Elective Course	PEC-ECE-307	VLSI Design	3	1	0	4	30	70	100
3	Professional Elective Course	PEC-ECE-305	Micro Electronics Circuits	3	1	0	4	30	70	100
4	Professional Elective Course	PEC-ECE-303	Semiconductor Memories & FPGA Technologies	3	1	0	4	30	70	100
5	Professional Core Course	PCC-ECE-309	Control System	3	1	0	4	30	70	100
<b>Total(A)</b>							<b>20</b>	<b>150</b>	<b>350</b>	<b>500</b>
<b>Practical/Drawing/Design</b>										
1	Professional Core Course	PCC-ECE-306	Digital Signal Processing Lab	0	0	2	1	30	20	50
2	Professional Elective Course	PEC-ECE-308	VLSI Design Lab	0	0	2	1	30	20	50
3	Engineering Science Course	ESC-113	Python Programming	1	0	2	2	30	20	50
4	Project Work	ECE-P1	Project Stage-I (Mini Project/ Industrial Training)	0	0	4	2	75	25	100
<b>Total(B)</b>							<b>6</b>	<b>165</b>	<b>85</b>	<b>250</b>
<b>Mandatory Courses/MOOC'S</b>										
1	Mandatory Course	MC-112	Vedic Mathematics-I	2	0	0	0	0	0	0
2	Mandatory Course	MC-109	PDP-VI	2	0	0	0	0	0	0
<b>Total(C)</b>							<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total (A+B+C)</b>							<b>26</b>	<b>315</b>	<b>435</b>	<b>750</b>
<b>L-Lecture, T-Tutorial, P-Practical</b> <b>IA- Internal Assessment, ESE-End Semester Examination</b>										

# COURSE STRUCTURE

**SEMESTER-VII (4th YEAR)**

**Branch: Electronics & Communication Engineering (B.Tech)**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Professional Elective Course	PEC-ECE-401	Microwave Engineering	3	1	0	4	30	70	100
2	Professional Elective Course	PEC-ECE-403	Satellite Communication	3	1	0	4	30	70	100
3	Open Elective Course	OEC-CSE-412	Digital Image Processing	3	1	0	4	30	70	100
<b>Total(A)</b>							<b>12</b>	<b>90</b>	<b>210</b>	<b>300</b>
<b>Practical/Drawing/Design</b>										
1	Open Elective Course	OEC-CSE-413	Digital Image Processing Lab	0	0	2	1	30	20	50
2	Professional Elective Course	PEC-ECE-402	Microwave & Antenna Measurement Lab	0	0	2	1	30	20	50
3	Project Work	ECE-P2	Project Stage-II (Minor Project)	0	0	10	5	75	25	100
<b>Total(B)</b>							<b>7</b>	<b>135</b>	<b>65</b>	<b>200</b>
<b>Mandatory Courses/MOOC'S</b>										
1	Mandatory Course	MC-109	PDP-VII	2	0	0	0	0	0	0
2	Mandatory Course	MC-113	Vedic Mathematics-II	2	0	0	0	0	0	0
<b>Total(C)</b>							<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total (A+B+C)</b>							<b>19</b>	<b>225</b>	<b>275</b>	<b>500</b>
<b>L-Lecture, T-Tutorial, P-Practical</b>										
<b>IA- Internal Assessment, ESE-End Semester Examination</b>										

# COURSE STRUCTURE

**SEMESTER-VIII (4th YEAR)**

**Branch: Electronics & Communication Engineering (B.Tech)**

Sl. No.	Category	Course Code	Course Title	Hours			Credit	Marks		
				L	T	P		IA	ESE	Total
<b>Theory</b>										
1	Professional Elective Course	PEC-ECE-404	Embedded Systems	3	1	0	4	30	70	100
2	Professional Elective Course	PEC-ECE-405	Mobile Communication & Networks	3	1	0	4	30	70	100
3	Professional Elective Course	PEC-ECE-413	Radar & Navigational Aids	3	1	0	4	30	70	100
<b>Total(A)</b>							<b>12</b>	<b>90</b>	<b>210</b>	<b>300</b>
<b>Practical/Drawing/Design</b>										
1	Project Work	ECE-P3	Project Stage-III (Major Project Work & Dissertation)	0	0	18	9	75	25	100
<b>Total(B)</b>							<b>9</b>	<b>75</b>	<b>25</b>	<b>100</b>
<b>Mandatory Courses/MOOC'S</b>										
1	Mandatory Course	MC-109	PDP-VIII	2	0	0	0	0	0	0
<b>Total(C)</b>							<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Grand Total (A+B+C)</b>							<b>21</b>	<b>165</b>	<b>235</b>	<b>400</b>
<b>L-Lecture, T-Tutorial, P-Practical</b> <b>IA- Internal Assessment, ESE-End Semester Examination</b>										