

**Programme: B.Tech.(ECE.)**  
**Duration: Four-Years**  
**Academic Curriculum (2018 – 19 onwards)**

**First Year**  
*First (I) Semester*

	S. No.	Course Code	Course Title	Contact Hours per Week			Credits	Total Hours
				L	T	P		
<b>Autumn Semester</b>	1	AHL-110-18	Environmental Studies	2	0	0	2	2
	2	AHL-101-18	Applied Physics	3	1	0	4	4
	3	AHL-103-18	Applied Mathematics-I	3	1	0	4	4
	4	ECL-100-18/ /CSL-100-18	Principles of Electrical and Electronics Engineering/Basic of C Programming	3	1	0	4	4
	5	EEL-100-18	Joy of Engineering	3	0	0	3	3
	6	AHP-101-18	Applied Physics Lab	0	0	2	1	2
	7	AHP-110-18	Environmental Studies Lab	0	0	2	1	2
	8	ECP-100-18/ CSP-100-18	Principles of Electrical and Electronics Engineering Lab/ Basic of C Programming Lab	0	0	2	1	2
	9	MEP-110-18 /MEP-120-18	Auto CAD & Engineering Graphics/ Workshop Technology	0	0	3	2	3
	10	SDP -101-18	Workplace Competencies-1	0	0	2	1	2
		<b>Sub Total</b>			<b>14</b>	<b>3</b>	<b>11</b>	<b>23</b>

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**First Year**  
*Second (II) Semester*

	S. No.	Course Code	Course Title	Contact Hours per Week			Credits	Total Hours
				L	T	P		
<b>Spring Semester</b>	1	ECL-100-18 /CSL-100-18	Principles of Electrical and Electronics Engineering /Basic of C Programming	3	1	0	4	4
	2	AHL-104-18	Applied Mathematics-II	3	1	0	4	4
	3	MEL-100-18	Applied Mechanics	3	1	0	4	4
	4	AHL-106-18	Technical English	2	0	0	2	2
	5		Open Elective***	3	0	0	3	3
	6	ECP-100-18/ CSP-100-18	Principles of Electrical and Electronics Engineering Lab/ Basic of C Programming Lab	0	0	2	1	2
	7	MEP-120-18 /MEP-110-18	Workshop Technology / Auto CAD & Engineering Graphics	0	0	3	2	3
	8	SDP -102-18	Workplace Competencies-2	0	0	2	1	2
		<b>Sub Total</b>			<b>14</b>	<b>3</b>	<b>7</b>	<b>21</b>

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**Second Year**  
*Third (III) Semester*

	S. No.	Course Code	Course Title	Contact Hours per Week			Credits	Total Hours
				L	T	P		
<b>Autumn Semester</b>	1	CSL-213-18	Object oriented programming with JAVA	4	0	0	4	4
	2	ECL -201-18	Electronic Devices and Circuits	3	0	0	3	3
	3	ECL- 203-18	Digital Electronics	3	1	0	4	4
	4	ECL-205-18	Analog and Digital Communication	3	1	0	4	4
	5	ECL-207-18	Sensors-I	3	0	0	3	3
	6	ECP-207-18	Sensors-I Lab	0	0	2	1	2
	7	ECP -203-18	Digital Electronics Lab	0	0	2	1	2
	8	ECP-205-18	Analog Communication Lab	0	0	2	1	2
	9	SDP-201-18	Workplace Competencies-3	0	0	2	1	2
	10	SDP-261-18	Aptitude -1	0	0	2	1	2
		<b>Sub Total</b>			<b>16</b>	<b>2</b>	<b>10</b>	<b>23</b>

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**Second Year**  
*Fourth (IV) Semester*

	S. No.	Course Code	Course Title	Contact Hours per Week			Credits	Total Hours
				L	T	P		
<b>Spring Semester</b>	1	EEL-201-18	Network Analysis and Synthesis	3	1	0	4	4
	2	ECL-206-18	Basics of Electro Magnetic Field Theory and Antenna	3	1	0	4	4
	3	ECL-208-18	Sensors-II	3	0	0	3	3
	4	CSL-310-18	Computer Network	4	0	0	4	4
	5	ECL-210-18	System modeling and simulation	3	0	0	3	3
	6	ECP-208-18	Sensors-II Lab	0	0	2	1	2
	7	EEP-201-18	Network Analysis and Synthesis Lab	0	0	2	1	2
	8	ECP-210-18	Computer Communication lab	0	0	2	1	2
	9	SDP-202-18	Workplace Competencies-4	0	0	2	1	2
	10	SDP-262-18	Aptitude-2	0	0	2	1	2
		<b>Sub Total</b>			<b>16</b>	<b>2</b>	<b>10</b>	<b>23</b>

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**Third Year**  
*Fifth (V) Semester*

	S. No.	Course Code	Course Title	Contact Hours per Week			Credits	Total Hours
				L	T	P		
<b>Autumn Semester</b>	1	ECL-317-18	Linear Control System	3	0	0	3	3
	2	ECL-319-18	Systems and Signal Processing	3	1	0	4	4
	3	ECL-321-18	Introduction to IOT	3	0	0	3	3
	4	ECL-323-18	Wireless Communication	3	1	0	4	4
	5	MSL-309-18	Engineering Economics	3	0	0	3	3
	6		Core Elective – I**	4	0	0	4	4
	7	ECT-317-18	Practical Training –I*	0	0	2	1	2
	8	ECP-321-18	IOT Lab	0	0	2	1	2
	9	ECP-319-18	Systems and Signal Processing Lab	0	0	2	1	2
	10	SDP-301-18	Workplace Competencies-5	0	0	2	1	2
	11	SDP-361-18	Aptitude Skill -3	0	0	2	1	2
			<b>Sub Total</b>	<b>19</b>	<b>2</b>	<b>10</b>	<b>26</b>	<b>31</b>

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**Third Year**  
*Sixth (VI) Semester*

	S. No.	Course Code	Course Title	Contact Hours per Week			Credits	Total Hours
				L	T	P		
<b>Spring Semester</b>	1	ECL-312-18	Digital System Design	3	0	0	3	3
	2	ECL-320-18	IOT Communication Technology	3	1	0	4	4
	3	ECL-322-18	IOT System Architecture	3	0	0	3	3
	4	ECL-324-18	Wireless Sensor Networks and IOT	3	1	0	4	4
	5	MSL-314-18	Principle of Management	3	0	0	3	3
	6		Core Elective-II**	4	0	0	4	4
	7	ECP-312-18	Digital System Design Lab	0	0	2	1	2
	8	ECP-324-18	Wireless Sensor Networks and IOT Lab	0	0	2	1	2
	9	ECP-320-18	IOT Communication Technology Lab	0	0	2	1	2
	10	SDP-302-18	Workplace Competencies-6	0	0	2	1	2
	11	SDP-362-18	Aptitude-3	0	0	2	1	2
		<b>Sub Total</b>	<b>19</b>	<b>2</b>	<b>10</b>	<b>26</b>	<b>31</b>	

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**Fourth Year**  
*Seventh (VII) Semester*

	S. No.	Course Code	Course Title	Contact Hours per Week			Credits	Total Hours
				L	T	P		
<b>Autumn Semester</b>	1	ECL-441-18	Mobile App Development for IOT	3	1	0	4	4
	2		Core Elective-III**	4	0	0	4	4
	3	ECD-423-18	Project- I***	0	0	16	8	16
	4	ECT-425-18	Practical Training –II*	0	0	2	1	2
	5	ECC-426-18	Independent Seminar-I#	0	0	2	1	2
	6	ECP-441-18	Mobile App Development for IOT Lab	0	0	2	1	2
	7	SDP-401-18	Workplace Competencies-7	0	0	2	1	2
		<b>Sub Total</b>			<b>7</b>	<b>1</b>	<b>24</b>	<b>20</b>

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**Fourth Year**  
*Eight (VIII) Semester*

	S. No.	Course Code	Course Title	Contact Hours per Week			Credits	Total Hours
				L	T	P		
<b>Spring Semester</b>	1	ECL-446-18	Artificial intelligence	4	0	0	4	4
	2		Open Elective-II***	4	0	0	4	4
	3	ECC-426-18	Independent Seminar-II#	0	0	2	1	2
	4	ECD-428-18	Project II****	0	0	16	8	16
		<b>Sub Total</b>			<b>8</b>	<b>0</b>	<b>18</b>	<b>17</b>



### #Independent Seminar I and II:

Each student would be required to give a presentation on any contemporary area of relevance related to the broad subjects of study in the particular semester at the end of the semester. The presentation(s) will be evaluated by the University appointed examiners in VII and VIII Semester End Term Examinations respectively.

### \* Practical Training-I and II:

Each student would be required to undergo internship training after IV and VI Semester University examinations for duration of 4-6 weeks and write a report based on the internship carried out. The report will be evaluated by the University appointed examiners in III and V Semester End Term Examinations respectively.

### \*\*Core Electives – I, II and III:

A student will be required to select one Departmental Elective paper (from Core Elective Group I) in V Semester and one Departmental Elective paper (from Core Elective Group II) in VI Semester. Likewise, each student will be required to select one Departmental Elective paper (from Core Elective Group III) in VII Semester.

The Department will announce in the beginning of the respective semester, the list of electives which will be offered during the semester depending upon the available resources and the demand of electives from students.

Course Code	Core Electives – I	Course Code	Core Electives – II
ECL-325-18	Robotics & IOT	ECL-326-18	M2M Communication
ECL-327-18	IOT Network Challenges	ECL-328-18	IOT and cloud

Course Code	Core Electives – III
ECL-443-18	IOT Edge Nodes and its Applications
ECL-445-18	RFID and Flexible Sensor

### \*\*\*Open Electives – I and II:

A student will be required to select any one Open Elective paper in II Semester and VIII Semester (from the common approved pool of open electives floated by University from different Schools).The Department will announce in the beginning of the respective semester, the list of electives which will be offered during the semester depending upon the availability of resources and the demand of electives.

### \*\*\*\*Project-I:

Each student would be required to write a minor project report based on their field of interest. The student will write a project report under the supervision of a faculty member assigned by the Department. The Project Report will be evaluated both internally and externally by the University appointed examiners.

### \*\*\*\*\*Project-II:

Each student would be required to write a major project report based on knowledge they have acquired during their study in course. The student will write a project report under the supervision of a faculty

member assigned by the Department. The Project Report will be evaluated both internally and externally by the University appointed examiners.

### **B.Tech. (ECE.) Programme Total Credits and Total Hours**

Semester		Credits	Total Hours
Autumn Semester	I	23	28
Spring Semester	II	21	24
Autumn Semester	III	23	28
Spring Semester	IV	23	28
Autumn Semester	V	26	31
Spring Semester	VI	26	31
Autumn Semester	VII	20	32
Spring Semester	VIII	17	26
<b>Total</b>		<b>179</b>	<b>228</b>

**N.B.** The curricular structure is subject to revision from time to time, which will be duly notified.