

# **B.TECH. 4 YEAR PROGRAMME**

## **ELECTRONICS AND COMMUNICATION ENGINEERING**

**SCHEME 2019-20**  
**(1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> & 6<sup>th</sup> Semester)**

## Detailed Scheme for B.Tech. ECE

### B.Tech. – ECE (First Semester)

| CourseNo.                               | Subject                                  | Scheme of Studies<br>Periods per Week |   |    | Credits   |
|---|--|---------------------------------------|---|----|-----------|
|   |  | L                                     | T | P  |           |
| MTH 101                                 | Engineering Mathematics I                | 3                                     | 1 | -  | 4         |
| PHY 101                                 | Engineering Physics I                    | 3                                     | 1 |    | 4         |
| CS 101                                  | Fundamentals of Computer Programming     | 2                                     | 1 | 2  | 4         |
| EE 101                                  | Fundamentals of Electrical & Electronics | 2                                     | 1 | 2  | 4         |
| HUM 101                                 | Effective Communication and soft skills  | 2                                     | 1 | 2* | 4         |
| IT 101                                  | Engineering Workshop                     | -                                     |   | 4  | 2         |
| *Language Lab<br>Total L=12, T=5, P =10 |  | Total Credit                          |   |    | <b>22</b> |

### B.Tech. – ECE (Second Semester)

| CourseNo.              | Subject                        | Scheme of Studies<br>Periods per week |   |   | Credits   |
|------------------------|--------------------------------|---------------------------------------|---|---|-----------|
|                        |                                | L                                     | T | P |           |
| MTH 102                | Engineering Mathematics-II     | 3                                     | 1 | - | 4         |
| PHY 102                | Engineering Physics-II         | 2                                     | 1 | 2 | 4         |
| EG 101                 | Engineering Graphics           | 2                                     | 1 | 2 | 4         |
| CS 102                 | Data Structures and Algorithms | 2                                     | 1 | 2 | 4         |
| HUM 102                | Culture & Human Values         | 2                                     | 1 | 2 | 4         |
| IT 102                 | Programming Lab                | -                                     | - | 4 | 2         |
| Total L=11, T=5, P =12 |                                | Total Credit                          |   |   | <b>22</b> |

### B.Tech. - ECE (Third Semester)

| CourseNo.              | Subject                         | Scheme of Studies<br>Periods per Week |   |   | Credits   |
|------------------------|---------------------------------|---------------------------------------|---|---|-----------|
|                        |                                 | L                                     | T | P |           |
| MTH 211                | Mathematics III                 | 3                                     | 1 | - | 4         |
| EC 211                 | Electronic Devices and Circuits | 2                                     | 1 | 2 | 4         |
| EC 212                 | Digital Logic and Design        | 2                                     | 1 | 2 | 4         |
| EC 213                 | Network Analysis                | 2                                     | 1 | 2 | 4         |
| EC 214                 | Signals and Systems             | 3                                     | 1 | - | 4         |
| EC 216                 | Electronic Workshop             | -                                     | - | 4 | 2         |
| Total L=12, T=5, P =10 |                                 | Total Credit                          |   |   | <b>22</b> |

### B.Tech. - ECE (Fourth Semester)

| CourseNo.              | Subject                                  | Scheme of Studies<br>Periods per week |   |   | Credits   |
|------------------------|--|---------------------------------------|---|---|-----------|
|                        |  | L                                     | T | P |           |
| EC 221                 | Linear Integrated Circuits               | 3                                     | 1 | - | 4         |
| EC 222                 | Microprocessors and<br>Microcontrollers  | 2                                     | 1 | 2 | 4         |
| EC 223                 | Analog and Digital Communication         | 2                                     | 1 | 2 | 4         |
| EC 224                 | Database Management System               | 2                                     | 1 | 2 | 4         |
| EC 225                 | Probability Theory and Random<br>Process | 3                                     | 1 | - | 4         |
| EC 226                 | Entrepreneurship Development             |                                       |   | 4 | 2         |
| EC 227                 | Community Services*                      | -                                     | - | - | S/NS      |
| Total L=12, T=5, P =10 |  | Total Credit                          |   |   | <b>22</b> |

Community Services\*: 15 days (100 Hrs) community services such as Swach bhara Abhiyan etc. to get Satisfactory (S) or Not Satisfactory (NS) Grade.

### B.Tech. – ECE (Fifth Semester)

| Course No.          | Subject                   | Scheme of Studies |   |   | Credits   |
|---------------------|---------------------------|-------------------|---|---|-----------|
|                     |                           | Periods per week  |   |   |           |
|                     |                           | L                 | T | P |           |
| EC 311              | Computer Networks         | 2                 | 1 | 2 | 4         |
| EC 312              | Digital Signal Processing | 2                 | 1 | 2 | 4         |
| EC 313              | EM Fields                 | 3                 | 1 | - | 4         |
| EC 314              | Control Systems           | 2                 | 1 | 2 | 4         |
| EC 315              | Operating System          | 3                 | 1 |   | 4         |
| Total L=12, T=5,P=6 |                           | Total Credit      |   |   | <b>20</b> |

### B.Tech.- ECE (Sixth Semester)

| Course No.           | Subject                | Scheme of Studies |   |   | Credits   |
|----------------------|------------------------|-------------------|---|---|-----------|
|                      |                        | Periods per week  |   |   |           |
|                      |                        | L                 | T | P |           |
| EC 321               | Introduction to VLSI   | 2                 | 1 | 2 | 4         |
| EC 322               | Optical Communication  | 2                 | 1 | 2 | 4         |
| EC 323               | Microwave Engineering  | 2                 | 1 | 2 | 4         |
| EC 324               | Wireless Communication | 3                 | - | - | 3         |
| L-1                  | EC Elective 1          | 3                 | - | - | 3         |
| EC 325               | Minor Project          | -                 | - | 4 | 2         |
| Total L=12, T=3,P=10 |                        | Total Credit      |   |   | <b>20</b> |

### List of Electives Level -1 (Any one Subject for VI Semester)

| Signal Processing Stream |                          | Communication Stream |                            | VLSI & Embedded System Stream |                       | Robotics Stream |                   |
|--------------------------|--------------------------|----------------------|----------------------------|-------------------------------|-----------------------|-----------------|-------------------|
| EC 501                   | Digital Image Processing | EC 502               | Artificial Neural Networks | EC 503                        | Digital System Design | EC 504          | Power Electronics |