

Program Structure for B.Tech.(ECE)-Batch2025

Semester I

| Course Type | Course Code | Course Title | L | T | P/S | Credits |
|-------------|-------------|---|---|---|-----|-----------|
| BSC1 | MTLBS101 | Engineering Mathematics-I | 3 | 1 | 0 | 4 |
| BSC2 | BTLBS101 | Applied Chemistry | 3 | 0 | 0 | 3 |
| BSC2 | BTPBS101 | Applied Chemistry Lab | 0 | 0 | 2 | 1 |
| ESC1 | CSLES101 | Introduction to C Programming | 3 | 0 | 0 | 3 |
| ESC1 | CSPE101 | C Programming Lab | 0 | 0 | 2 | 1 |
| ESC2 | EELES101 | Fundamental of Electrical Engineering | 3 | 0 | 0 | 3 |
| ESC2 | EEPE101 | Fundamental of Electrical Engineering Lab | 0 | 0 | 2 | 1 |
| SEC1 | MEMSE101 | Engineering Workshop | 1 | 0 | 2 | 2 |
| AEC1/VAC 1 | | Ability Enhancement/Value Added Course | | | | 2 |
| | | Total Credits | | | | 20 |

Semester II

| Course Type | Course Code | Course Title | L | T | P/S | Credits |
|-------------|-------------|-------------------------------|---|---|-----|-----------|
| BSC3 | MTLBS102 | Engineering Mathematics-II | 3 | 1 | 0 | 4 |
| BSC4 | PHLBS102 | Engineering Physics | 3 | 0 | 0 | 3 |
| BSC4 | PHP BS102 | Engineering Physics Lab | 0 | 0 | 2 | 1 |
| DCC1 | ECLDC106 | Solid State Devices | 3 | 0 | 0 | 3 |
| DCC1 | ECPDC106 | Solid State Devices Lab | 0 | 0 | 2 | 1 |
| DCC2 | ECLDC104 | Network Analysis & Synthesis | 3 | 1 | 0 | 4 |
| SEC2 | MEMSE102 | Engineering Graphics with CAD | 1 | 0 | 2 | 2 |
| AEC2 | | Ability Enhancement Course | | | | 2 |
| VAC2 | | Value Added Course | | | | 2 |
| MAC1 | PCN MA102 | Universal Human Values-II | 2 | 0 | 0 | 0 |
| | | Total Credits | | | | 22 |

Semester III

| Course Type | Course Code | Course Title | L | T | P/S | Credits |
|-------------|-------------|---------------------------------------|---|---|-----|-----------|
| BSC5 | BTLBS201 | Introduction to Biology for Engineers | 3 | 0 | 0 | 3 |
| ESC3 | ECLES201 | Numerical Methods | 3 | 0 | 0 | 3 |
| ESC3 | ECPE201 | Numerical Methods Lab | 0 | 0 | 2 | 1 |
| DCC3 | ECLDC203 | Digital Electronics | 3 | 0 | 0 | 3 |
| DCC3 | ECPDC203 | Digital Electronics Lab. | 0 | 0 | 2 | 1 |
| DCC4 | ECLDC205 | Electronics Devices and Circuits | 3 | 0 | 0 | 3 |
| DCC4 | ECPDC205 | Electronic Device and Circuits Lab | 0 | 0 | 2 | 1 |
| DCC5 | ECLDC210 | Signals & Systems | 3 | 1 | 0 | 4 |
| SEC3 | ECMSE201 | MATLAB Programming | 1 | 0 | 2 | 2 |
| PR | ECIPR201 | Summer Internship-I | | | | 1 |
| VAC3 | | Value Added Course | | | | 2 |
| | | Total Credits | | | | 24 |

Semester IV

| Course Type | Course Code | Course Title | L | T | P/S | Credits |
|-------------|-------------|---|---|---|-----|-----------|
| DCC6 | ECLDC202 | Linear Integrated Circuits Applications | 3 | 0 | 0 | 3 |
| DCC6 | ECPDC202 | Linear Integrated Circuits Applications Lab | 0 | 0 | 2 | 1 |
| DCC7 | ECLDC204 | Analog Communication | 3 | 0 | 0 | 3 |
| DCC7 | ECPDC204 | Analog Communication Lab | 0 | 0 | 2 | 1 |
| DCC8 | ECLDC206 | Microprocessor and Interfacing | 3 | 0 | 0 | 3 |
| DCC8 | ECPDC206 | Microprocessor and Interfacing lab | 0 | 0 | 2 | 1 |
| DCC9 | ECLDC208 | Control Systems | 3 | 0 | 0 | 3 |
| DCC9 | ECPDC208 | Control Systems Lab | 0 | 0 | 2 | 1 |
| DCC10 | ECLDC207 | Electromagnetic Field Theory | 3 | 1 | 0 | 4 |
| VAC4 | BTLVA202 | Environmental Science& Education | 2 | 0 | 0 | 2 |
| | | Total Credits | | | | 22 |

Semester V

| Course Type | Course Code | Course Title | L | T | P/S | Credits |
|-------------|-------------|---------------------------------------|---|-----|-----|-----------|
| DCC11 | ECLDC301 | Digital Communication Engineering | 3 | 0 | 0 | 3 |
| DCC11 | ECPDC301 | Digital Communication Lab | 0 | 0 | 2 | 1 |
| DCC12 | ECLDC303 | Digital Signal Processing | 3 | 0 | 0 | 3 |
| DCC12 | ECPDC303 | Digital Signal Processing Lab | 0 | 0 | 2 | 1 |
| DCC13 | ECLDC305 | VLSI Design | 3 | 0 | 0 | 3 |
| DCC13 | ECPDC305 | VLSI Lab | 0 | 0 | 2 | 1 |
| DEC1 | | School Elective-I | 3 | 1/0 | 0/2 | 4 |
| DEC2/GEC1 | | School Elective-II/Generic Elective-I | 3 | 1/0 | 0/2 | 4 |
| PR | ECIPR301 | Summer Internship-II | | | | 1 |
| DCC | ECDPR301 | ProjectWork-1 | | | | 2 |
| | | Total Credits | | | | 23 |

Semester VI

| Course Type | Course Code | Course Title | L | T | P/S | Credits |
|---------------|-----------------------|--|---|-----|-----|-----------|
| DCC14 | ECLDC302 | Microwave Engineering | 3 | 0 | 0 | 3 |
| DCC14 | ECPDC302 | Microwave Engineering Lab | 0 | 0 | 2 | 1 |
| DCC15 | ECLDC304 | AI&ML in Electronics Engineering | 3 | 0 | 0 | 3 |
| DCC15 | ECPDC304 | AI&ML Lab | 0 | 0 | 2 | 1 |
| DEC3 | ECXDXXX | School Elective-III | 3 | 1/0 | 0/2 | 4 |
| DEC4/ GEC2 | ECXDXXX/ ECX GEXXX | School Elective-IV/Generic Elective-II | 3 | 1/0 | 0/2 | 4 |
| AEC | | Management/ Entrepreneurship/Economy | 3 | 0 | 0 | 3 |
| DCC | ECDPR302 | Project Work-II | | | | 2 |
| MAC2 | PCN MA302 | Indian Knowledge System | 2 | 0 | 0 | NC |
| | | Total Credits | | | | 21 |

Semester VII

| Course Type | Course Code | Course Title | L | T | P/S | Credits |
|-----------------------|------------------------|---|----------|----------|------------|----------------|
| DCC16 | ECLDC401 | Mobile Communication | 3 | 1 | 0 | 4 |
| DEC5 | ECXDEXXX | School Elective–V | 3 | 1/0 | 0/2 | 4 |
| DEC6/ GEC3 | ECXDEXXX/ ECX GEXXX | School Elective–VI/Generic Elective–III | 3 | 1/0 | 0/2 | 4 |
| PR | ECIPR401 | Summer Internship– III | | | | 2 |
| DCC/PR | ECDPR401 | Project Work –III | | | | 4 |
| | | Total Credits | | | | 18 |

Semester VIII

| Course Type | Course Code | Course Title | L | T | P/S | Credits |
|--------------------|-----------------------|--|----------|----------|------------|----------------|
| DCC/PR | ECDPR402/ ECIPR402 | Major Project/Internship(Industrial or In-house Project) | | | | 10 |
| | | Total Credits | | | | 10 |

Major Specialization to be offered by SoECE

Basket1: VLSI Design

Basket2: Microwave and Millimeter Wave Technology

Basket 3: Multimedia Technology

Basket 4: Embedded Systems & Networks

Minor Specialization

Basket1: VLSI Design (Only for EE, M.Sc. Physics, B.Sc. Physics 4 Year UG)

Basket2: Minor Specialization:-Multimedia Technologies (for Sciences/Maths/MBA/ Econ/BBA students)

Basket3: Embedded Systems & Networks

Basket4: Microwave and Millimeter Wave Technology