# Bachelor of Technology in Electronics and Communication Engineering- (2022-23)

| Sem | Semester Course Code, Course Name (L-T-P) Credits | | | | | | | GP | CS | Hrs. Per week | | | Contact Hrs | Credits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | L | T | P | | |
| 1 | MAL151 Engg Maths-I (3-0-2)4 | CSL106 FOCP-I (2-0-4)4 | CHL150 Engg Chemistry (2-0-2)3 | CLL101 Effective Communication-I (2-1-0)2.5 | MEP110 Engineering Graphics & Drawing (1-0-4)3 | ECL110 Basic of Electrical & Electronics Engineering (2-0-2)3 | | ECR107 GP 1 Credits | ECS 101 CS-I | 12 | 1 | 14 | 27 | 19.5+1 =20.5 |
| 2 | MAL152 Engg Maths-II (3-0-2)4 | CSL108 FOCP-II (2-0-4)4 | PHY150 Engineering Physics (3-0-2)4 | CLL102 Effective Communication-II (2-1-0)2.5 | MEL150 Basic of Mechanical & Civil Engg. (2-0-2)3 | CSL110 Problem Solving and Design Thinking (2-0-2)3 | | ECR108 GP 1 Credits | ECS 102 CS-II (140-Hrs)* 2 Credit | 14 | 1 | 12 | 27 | 20.5+3 =23.5 |
| **Summer** | ECT101 In House Summer Internship | | | | | | | | | | | | | 1 |
| 3 | ECL251 Analog Electronics & Integrated circuits (3-0-2)4 | ECL253 Fields, waves and Antennas (3-0-2)4 | ECL255 DE & CA (3-0-2)4 | CSL225 Programming for data science (2-0-4)4 | SML300 Entrepreneurship (3-0-0)3 | ECL361 Data Structures (3-0-2)4 | | ECR207 GP 1 Credits | ECS 201 CS-III | 14 | | 12 | 26 | 23+1= 24 |
| 4 | ECL256 Embedded System Design (3-0-2)4 | SML*** Liberal arts (3-0-0)3 | ECL254 Analog and Digital Communications (3-0-2)4 | ECL258 Signal processing (3-0-2)4 | Program Elective-1 (2-0-4)4 | Open Elective – 1* (MOOC) (3-0-0)3 | | ECR208 GP 1 Credits | ECS 202 CS-IV (140-Hrs)* 2 Credit | 17 | | 12 | 27 | 23+3= 26 |
| **Summer** | ECT201 Industrial Training/Swachha Bharat internship | | | | | | | | | | | | | 02 |
| 5 | CSL236 Introduction to AI & ML / CSL242 AI for Games (3-0-2)4 | ECL 270 Control systems and power electronics (3-0-2)4 | Program Elective-2 (2-0-4)4 | ECL252 Micro Controllers & Sensors (3-0-2)4 | Open Elective-2 (3-0-0)3 | CLL120 HVPE (2-0-0-)2 | ECV201 Skill Development 1 Credit | ECR307 GP 1 Credits | ECS 301 CS-V | 15 | | 12 | 26 | 22+1= 23 |
| 6 | ECL302 Data comm and networks (3-0-2) 4 | Program Elective-3 (2-0-4)4 | ECL362 Real Time Operating Systems(3-0-2)4 | Program Elective-4 (2-0-4)4 | Open Elective – 3* (MOOC) (3-0-0)3 | CLP300 Campus to Corporate (1-0-0)1 | ECC301 Seminar 1 Credit | CSR308 GP 1 Credits | ECS 302 CS-VI (140-Hrs)* 2 Credit | 14 | | 12 | 26 | 21+3= 24 |
| **Summer** | ECT301 Industrial Training | | | | | | | | | | | | | 03 |
| 7 | SML300 Entrepreneurship (3-0-0)3 | Program Elective-5 (2-0-4)4 | ECD401 Project # 1 4 Credits | Open Elective – 4* (MOOC) (3-0-0)3 | CHL100 EVS (3-0-0)3 | Foreign Language (3-0-0)3 | | | ECS 401 CS-VII | 14 | | 4 | 18 | 17 |
| 8 | Program Elective-6 (2-0-4)4 | Open Elective – 5* (MOOC) (3-0-0)3 | ECD402 Project # 2 /Internship 6 Credits | SEG 400 Self-Study Course GATE Audit | | | | | ECS 402 CS-VIII (140-Hrs) 2 Credits | 12 | | | 12 | 12+2= 14 |
| | **Total** | | | | | | | | | 106 | 2 | 78 | | **178** |

- *Students can utilize summer or winter break period to complete remaining 140 community service hours

## Program Electives for each track

| Tracks | IOT | Embedded System & VLSI Design |
|---|---|---|
| Program Elective-1 | CSL238<br>Intro to cloud computing | ECL261<br>Linux & Scripting |
| Program Elective-2 | CSL253<br>WebFrame Works | ECL262<br>CMOS VLSI Design & Layout |
| Program Elective-3 | ECL316<br>Wireless & Mobile Communication | ECL264<br>RTL Design & Synthesis |
| Program Elective-4 | ECL352<br>Design for IOT 1 | ECL366<br>VLSI Physical Design |
| Program Elective-5 | ECL451<br>Image Processing and Computer Vision I | ECL364<br>Verification Methodologies & Bus Architectures |
| Program Elective-6 | ECL353<br>Design for IoT | ECL461<br>Embedded Systems and VLSI Industry: Employment & Higher Studies Trends |