**Bachelor of Technology in Electronics and Communication Engineering- (2019-20)**

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| **Sem** | **Semester Course Code, Course Name****(L-T-P) Credits** | **GP** | **CS** | **Hrs.****Per week** | **Contact Hrs**  | **Credits** |
| **L** | **T** | **P** |
| 1 | MAL151Engg Maths-I(3-0-2)4 | CSL106FOCP-I(2-0-4)4 | CHL150Engg Chemistry(2-0-2)3 | CLL101EffectiveCommunication-I(2-1-0)2.5 | MEP110Engineering Graphics &Drawing(1-0-4)3 | ECL110Basic of Electrical &ElectronicsEngineering(2-0-2)3 | CLL120 HVPE (2-0-0-)2 | ECR107GP1 Credits |  | 12 | 1 | 14 | 405 | 21.5+1=22.5 |
| 2 | MAL152Engg Maths-II(3-0-2)4 | CSL108FOCP-II(2-0-4)4 | PHY150EngineeringPhysics(3-0-2)4 | CLL102EffectiveCommunication-II(2-1-0)2.5 | MEL150Basic of Mechanical & Civil Engg.(2-0-2)3 | CSL110Problem Solvingand DesignThinking(2-0-2)3 |  | ECR108GP1 Credits |  | 14 | 1 | 12 | 405 | 20.5+1=21.5 |
| **Summer**  ECT101 In House Summer Internship  |  |  |  |  | 01 |
| 3 | ECL251Analog Electronics & Integrated circuits (3-0-2)4 | ECL253Fields, waves and Antennas (3-0-2)4 | ECL255DE & CA(3-0-2)4 | CSL225Programming for data science(2-0-4)4 | SML300Entrepreneurship(3-0-0)3 | SML\*\*\* Liberal arts(3-0-0)3 |  | ECR207GP1 Credits | ECS 201 CS2 #1(35-Hrs)S/NS Course | 17 |  | 10 | 405 | 22+1=23 |
| 4 | ECL256Embedded System Design(3-0-2)4 | ECL252Micro Controllers & Sensors (3-0-2)4 | ECL254Analog and Digital Communications (3-0-2)4 | ECL258Signal processing(3-0-2)4 | Program Elective-1(2-0-4)4 |  |  | ECR208GP1 Credits | ECS 202 CS2 #2 (35-Hrs)1 Credit | 14 |  | 12 | 390 | 20+2=22 |
| **Summer**  ECT201 Industrial Training/Swachha Bharat internship including 7 days community service |  |  |  |  | 02 |
| 5 | CSL236Introduction toAI & 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 | Program Elective-3(2-0-4)4 | OpenElective – 1\*(MOOC)(3-0-0)3 |  | ECV201 Skill Development 1 Credit | ECR307GP1 Credits | ECS 301 CS3#1(35-Hrs)S/NS Course | 15 |  | 12 | 405 | 20+1=21 |
| 6 | ECL302  Data comm and networks (3-0-2) 4 | Program Elective-4(2-0-4)4 | Program Elective-5(2-0-4)4 | Program Elective-6(2-0-4)4 | OpenElective-2(3-0-0)3 | CLP300Campus to Corporate(1-0-0)1 | ECC301Seminar1 Credit | CSR308GP1 Credits | ECS 302 CS3 #2(35-Hrs)1 Credit | 13 |  | 14 | 405 | 21+2=23 |
| **Summer** ECT301 Industrial Trainingincluding 7 days community service |  |  |  |  | 03 |
| 7 | Program Elective-7(2-0-4)4 | Program Elective-8(2-0-4)4 | ECD401Project # 14 Credits | OpenElective – 3\*(MOOC)(3-0-0)3 | CHL100EVS(3-0-0)3 | Foreign Language(3-0-0)3 |  |  | ECS 401 CS4 #1 (70-Hrs)S/NS  | 13 |  | 8 | 315 | 21 |
| 8 | OpenElective – 4\*(MOOC)(3-0-0)3 | OpenElective – 5\*(MOOC)(3-0-0)3 | ECD402Project # 2 /Internship6 Credits | SEG 400Self-Study Course GATE Audit |  |  |  |  | ECS 402 CS4 #2(70-Hrs)2 Credits | 6 |  |  | 90 | 12+2=14 |
|  | **Total** |  |  | 104 | 2 | 82 |  | **164+6+4=****174** |

**Program Electives for each track**

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| Tracks | IOT | Embedded System & VLSI Design |
| Program Elective-1  | CSL253Web frameworks | ECL261Linux & Scripting |
| Program Elective-2  | ECL451Image Processing and Computer Vision I | ECL262Digital CMOS VLSI Design & Layout |
| Program Elective-3  | CSL234Data Engineering | ECL361Data Structures & OOPs |
| Program Elective-4  | ECL316Wireless & Mobile Communication | ECL264RTL Design & Synthesis |
| Program Elective-5  | CSL361Security in IoT | ECL365Analog CMOS VLSI Design & Layouts |
| Program Elective-6 |  CSL362 Big Data | ECL362Real Time Operating Systems |
| Program Elective-7  | CSL364Cloud & Fog Computing | ECL364Verification Methodologies & Bus Architectures |
| Program Elective-8  | ECL352Design for IoT | ECL366VLSI Physical Design |