## Electronics and Communication Engineering

Electronics and Communication Engineering department is offering **"Honours"** and **"Additional Minor Engineering"** degree under the following rules and eligibility criteria.

Students, who have taken admission on or after 2018-19 academic year, will be eligible to get Under Graduate Degree with **"Honours"** or **"Additional Minor Engineering",** if he/she completes an additional 20 credits through MOOCs/NPTEL/Coursera/ any other on-line courses apart from 160 academic credits.

**INSTRUCTIONS FOR MINOR OR HONOURS DEGREE:**

1. For **Additional Minor Engineering,** a student has to earn at least twenty (20) Additional credits from professional courses.
2. A Student can choose the courses which were not studied earlier in the previous semester. Further the courses should not be present in the curriculum of the forthcoming semesters.
3. For "Additional Minor Engineering", a student has to earn additional credits from their discipline.
4. Credits for 4 weeks course is 1, for 8 weeks course is 2, for 12 weeks courseis 3.
5. A student must ensure that he/she shall earn these additional credits before the completion of the regular course.
6. It is the student's responsibility for registering the courses through ONLINE and the required registration fee shall be borne by the respective student.
7. Students have to register for the courses with the approval of Head of theDepartment.
8. A student is eligible to opt either for **"Honours"** or **"Additional MinorEngineering", not eligible for the both**.

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY(A)**
**Department of Electronics and Communication Engineering**

**NPTEL EQUIVALENT COURSES FOR MINOR DEGREE 2021-2022 (July – December)**

**Date: 17-05-2021**

## Honors Degree

The Tentative list of courses for Honors Degree approved by Electronics and communication Engineering Department BoS members are as follows:

**NPTEL/ COURSERA EQUIVALENT COURSES**

| Sno | Course Code | Course Name | Institute | Credits | Duration | Start date | Exam date | Nptel/Coursera links |
|---|---|---|---|---|---|---|---|---|
| 1 | noc21-ee82 | Applied Electromagnetics For Engineers | IITK | 3 | 12 Weeks | July 26, 2021 | October 15, 2021 | https://nptel.ac.in/courses/108/104/108104099/ |
| 2 | noc21-ee108 | Principles and Techniques of Modern Radar Systems | IITKGP | 3 | 12 Weeks | July 26, 2021 | October 15, 2021 | https://nptel.ac.in/courses/108/105/108105154/ |
| 3 | noc21-ee111 | Advanced Microwave Guided-Structures and Analysis | IITKGP | 3 | 12 Weeks | July 26, 2021 | October 15, 2021 | https://onlinecourses.nptel.ac.in/noc21_ee111/preview |
| 4 | CN | Fundamentals of Network Communication | University of Colorado | 1.25 | 5 Weeks | Considered from registered Date | | https://www.coursera.org/learn/fundamentals-network-communications |
| 5 | CN | Peer-to-Peer Protocols and Local Area Networks | University of Colorado | 1.25 | 5 Weeks | Considered from registered Date | | https://www.coursera.org/learn/peer-to-peer-protocols-local-area-networks |

| Sno | Course Code | Course Name | Institute | Credits | Duration | Start date | Exam date | Nptel/Coursera links |
|---|---|---|---|---|---|---|---|---|
| 6 | CN | Packet | Univers | 1.25 | 5 Weeks | Considered from | | https://www.coursera.org/learn/packet-switching-networks- |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Switching Networks and Algorithms | ity of Colorado | | | registered Date | | algorithms |
| `7 | 20CSMCS21 | Introduction to Industry 4.0 and Industrial Internet of Things | IITKGP | 3 | 12 Weeks | July 26, 2021 | October 23, 2021 | https://onlinecourses.nptel.ac.in/noc21_cs66/preview |
| 8 | 20CSMIOT18 | Introduction and programming with IoT Boards | Korea university | 1.25 | 5 Weeks | - | - | https://www.coursera.org/learn/introduction-iot-boards |
| 9 | ECEA 5317 | Real-Time Mission-Critical Systems Design | University of Colorado Boulder | 1 | 4 Weeks | | | https://www.coursera.org/learn/real-time-mission-critical-systems-design?specialization=real-time-embedded-systems |
| 10 | ECEA 5318 | Real-Time Project for Embedded Systems | University of Colorado Boulder | 1 | 4 Weeks | | | https://www.coursera.org/learn/real-time-project-embedded-systems?specialization=real-time-embedded-systems |
| 11 | IOT | The Arduino Platform and C Programming | University of California | 1 | 4 Weeks | | | https://www.coursera.org/learn/arduino-platform?specialization=iot |
| 12 | IOT | Interfacing with the Arduino | University of California | 1 | 4 Weeks | | | https://www.coursera.org/learn/interface-with-arduino |

| Sno | Course Code | Course Name | Institute | Credits | Duration | Start date | Exam date | Nptel/Coursera links |
|---|---|---|---|---|---|---|---|---|
| 13 | CC | Cloud Computing Concepts, Part 1 | University of Illinois at Urbana-Champaign | 1.25 | 5 Weeks | | | https://www.coursera.org/learn/cloud-computing?specialization=cloud-computing |
| 14 | CC | Cloud Computing Concepts, Part 2 | University of Illinois at Urbana-Champaign | 1.25 | 5 Weeks | | | https://www.coursera.org/learn/cloud-computing-2?specialization=cloud-computing |
| 15 | noc21-ee102 | Signal Processing for mm Wave communication for 5G and beyond | IITKGP | 3 | 12 Weeks | July 26, 2021 | October 15, 2021 | https://onlinecourses.nptel.ac.in/noc21_ee102/preview |
| 16 | noc21-ee76 | Millimeter Wave Technology | IITKGP | 2 | 8 Weeks | September 17, 2021 | September 26, 2021 | https://nptel.ac.in/courses/117/105/117105139/ |
| 17 | noc21-ee90 | Enclosure design of electronics equipment | IISc | 3 | 12 Weeks | October 15, 2021 | October 24, 2021 | https://nptel.ac.in/courses/117108140/ |
| 18 | noc21-ee97 | System Design Through VERILOG | IITG | 2 | 8 Weeks | September 17, 2021 | September 26, 2021 | https://onlinecourses.nptel.ac.in/noc21_ee97/preview |
| 19 | noc21-ee98 | Integrated Photonics Devices and Circuits | IITM | 3 | 12 weeks | October 15, 2021 | October 24, 2021 | https://onlinecourses.nptel.ac.in/noc21_ee97/preview |
| 20 | ECEA 5362 | FPGA Softcore Processors and IP Acquisition | University of Colorado Boulder | 1 | 4 weeks | Considered from registered Date | | https://www.coursera.org/learn/fpga-softcore-proccessors-ip |
| 21 | ECEA 5361 | Hardware Description Languages for FPGA Design | University of Colorado Boulder | 1 | 4 weeks | Considered from registered Date | | https://www.coursera.org/learn/fpga-hardware-description-languages?specialization=fpga-design |
| 22 | ECEA 5363 | FPGA Capstone: Building FPGA Projects | University of Colorado Boulder | 1 | 4 weeks | Considered from registered Date | | https://www.coursera.org/learn/capstone-fpga-design |