# VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM
## CHOICE BASED CREDIT SYSTEM (CBCS)
## SCHEME OF TEACHING AND EXAMINATION 2015-2016
## B.E.: Electronics & Communication Engineering

**V SEMESTER**

| Sl. No | Subject Code | Title | Teaching Hours /Week | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|
| | | | Theory | Practical/ Drawing | Duration | Theory/ Practical Marks | I.A. Marks | Total Marks | |
| 1 | 15XX51 | Management and Entrepreneurship /Project Management & Economics | 04 | | 03 | 80 | 20 | 100 | 4 |
| 2 | 15XX52 | Digital Signal Processing | 04 | | 03 | 80 | 20 | 100 | 4 |
| 3 | 15XX53 | Microcontroller (dealing MSP 430) | 04 | | 03 | 80 | 20 | 100 | 4 |
| 4 | 15XX54 | Information Theory & Coding | 04 | | 03 | 80 | 20 | 100 | 4 |
| 5 | 15XX55X | Professional Elective-1 | 03 | | 03 | 80 | 20 | 100 | 3 |
| 6 | 15XX56X | Open Elective-1 | 03 | | 03 | 80 | 20 | 100 | 3 |
| 7 | 15XXL57 | DSP lab | | 1I+2P | 03 | 80 | 20 | 100 | 2 |
| 8 | 15XXL58 | Microcontroller lab | | 1I+2P | 03 | 80 | 20 | 100 | 2 |
| **TOTAL** | | | **22** | **06** | **24** | **640** | **160** | **800** | **26** |

| **Professional Elective** | | **Open Elective** | |
|---|---|---|---|
| 15XX551 | Microelectronics | 15XX561 | Virtual Instrumentation |
| 15XX552 | Artificial Neural Networks | 15XX562 | Robotics |
| 15XX553 | Computer Organization | 15XX563 | Automotive Electronics |
| 15XX554 | Operating System | 15XX562 | Software Engineering |
| 15XX555 | Engineering Materials | 15XX564 | Programming in C++ |
| | | 15XX565 | Laser Physics and Non-linear Optics |

**1. Professional Elective:** Elective relevant to chosen specialization/ branch

**2. Open Elective**: Electives from other technical and/or emerging subject areas. There could be some more open electives of interdisciplinary nature that would be offered by other branches, which will be notified and list will be finalized later.

**Last date for Feedback is on or before 09th May 2017**

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**VI SEMESTER**

| Sl. No | Subject Code | Title | Teaching Hours /Week | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|
| | | | Theory | Practical/ Drawing | Dura-tion | Theory/ Practical Marks | I.A. Marks | Total Marks | |
| 1 | 15XX61 | Digital Communication | 04 | | 03 | 80 | 20 | 100 | 4 |
| 2 | 15XX62 | Embedded Systems | 04 | | 03 | 80 | 20 | 100 | 4 |
| 3 | 15XX63 | HDL | 04 | | 03 | 80 | 20 | 100 | 4 |
| 4 | 15XX64 | Computer Communication Networks | 03 | | 03 | 80 | 20 | 100 | 4 |
| 5 | 15XX65X | Professional Elective-2 | 03 | | 03 | 80 | 20 | 100 | 3 |
| 6 | 15XX66X | Open Elective-2 | 03 | 1I+2P | 03 | 80 | 20 | 100 | 3 |
| 7 | 15XXL67 | Embedded Systems lab | | 1I+2P | 03 | 80 | 20 | 100 | 2 |
| 8 | 15XXL68 | HDL lab | | 1I+2P | 03 | 80 | 20 | 100 | 2 |
| **TOTAL** | | | **22** | **6** | **24** | **640** | **160** | **800** | **26** |

| **Professional Elective** | | **Open Elective** | |
|---|---|---|---|
| 15XX651 | Medical Electronics | 15XX661 | Mechatronics |
| 15XX652 | Nano Electronics | 15XX662 | Data Structures Using C++ |
| 15XX653 | Image Processing | 15XX663 | Artificial Intelligence |
| 15XX654 | Digital System design using Verilog | 15XX664 | Big Data Analytics |
| 15XX655 | Satellite Communication | 15XX665 | JAVA & CGI programming |
| 15XX656 | Digital Switching Systems | 15XX666 | Management Information Systems |
| | | 15XX667 | Cloud Computing |
| | | 15XX668 | Advanced Physics for Engineers |



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**1. Open Elective**: Electives from other technical and/or emerging subject areas. There could be some more open electives of interdisciplinary nature that would be offered by other branches, which will be notified and list will be finalized later.

## B.E.: Electronics & Communication Engineering

**VII SEMESTER**

| Sl. No | Subject Code | Title | Teaching Hours /Week | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|
| | | | Theory | Practical/ Drawing | Duration | I.A. Marks | Theory/ Practical Marks | Total Marks | |
| 1 | 15XX71 | Antennas and Wave Propagation | 04 | | 03 | 20 | 80 | 100 | 4 |
| 2 | 15XX72 | Microwave & Fiber Communication | 04 | | 03 | 20 | 80 | 100 | 4 |
| 3 | 15XX73 | CMOS VLSI | 04 | | 03 | 20 | 80 | 100 | 4 |
| 4 | 15XX74X | Professional Elective-3 | 03 | | 03 | 20 | 80 | 100 | 3 |
| 5 | 15XX75X | Professional Elective-4 | 03 | | 03 | 20 | 80 | 100 | 3 |
| 6 | 15XXL76 | Advanced Communication Lab | | 1I+2P | 03 | 20 | 80 | 100 | 2 |
| 7 | 15XXL77 | VLSI lab | | 1I+2P | 03 | 20 | 80 | 100 | 2 |
| 8 | 15XXP78 | Project Work Phase – I + Seminar | | - | | 100 | - | 100 | 2 |
| **TOTAL** | | | **18** | **6** | **21** | **240** | **560** | **800** | **24** |

| **Professional Elective-3** | | **Professional Elective-4** | |
|---|---|---|---|
| 15XX741 | Multimedia Communication | 15XX751 | DSP Architecture |
| 15XX742 | Biomedical Signal Processing | 15XX752 | IOT |
| 15XX743 | Cryptography | 15XX753 | Wireless Sensor Networks |
| 15XX744 | Real Time Systems | 15XX754 | Advanced Computer Architecture |
| 15XX745 | Mixed Mode VLSI | 15XX755 | Adaptive Signal Processing |

**1. Project Phase –I + Seminar:** Literature Survey, Problem Identification, objectives and Methodology. Submission of synopsis and seminar.

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**VIII SEMESTER**

| Sl. No | Subject Code | Title | Teaching Hours /Week | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|
| | | | Theory | Practical/ Drawing | Duration | I.A. Marks | Theory/ Practical Marks | Total Marks | |
| 1 | 15XX81 | Wireless Communication | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 2 | 15XX82 | Power Electronics | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 3 | 15XX83X | Professional Elective-5 | 3 | - | 3 | 20 | 80 | 100 | 3 |
| 4 | 15XX84 | Internship/Professional Practice | Industry Oriented | | 3 | 50 | 50 | 100 | 2 |
| 5 | 15XXP85 | Project Work | - | 6 | 3 | 100 | 100 | 200 | 6 |
| 6 | 15XXS86 | Seminar | - | 4 | - | 100 | - | 100 | 1 |
| **TOTAL** | | | **11** | **10** | **15** | **310** | **390** | **700** | **20** |

| **Professional Elective -5** | |
|---|---|
| 15XX831 | MEMS |
| 15XX832 | GPS & Localization |
| 15XX833 | Machine Learning |
| 15XX834 | Network and Cyber Security |
| 15XX835 | Wireline Communication |
| 15XX836 | Satellite Remote Sensing |
| 15XX837 | Low Power VLSI |

**1. Internship / Professional Practice:** To be carried between the 6$^{th}$ and 7$^{th}$ semester vacation or 7$^{th}$ and 8$^{th}$ semester vacation period.



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