

Department of Electronics

BSc(General) Major Electronics

| Level      | Sem | Disciplinary Major Mandatory  | DSE Electives | Minor  |                                  |  |                               | OE   | VC/SEC   | AEC, VEC, IKS  | OJT, FP, CEP, CC, RP | Total | Exit Credit | Final Total Credits |
|------------|-----|---|---------------|--|----------------------------------|--|-------------------------------|--|--|--|----------------------|-------|-------------|---------------------|
|            |     |   |               | Physics  | Chemistry                        | Statistics   | Mathematics                   |  |  |  |                      |       |             |                     |
| 4.5        | I   | 2 Cr T Basic Circuit Theory and Network Analysis 2 Cr T Electronic Devices and Circuits<br>2 Cr P Electronics LAB- I          | —             |  |                                  |  |                               | 2 Cr Pr Safety with electronic devices 2 Cr Pr Fun with Electronics using Basic components | 2 Cr Pr Circuit assembly techniques 2 Cr Pr Fun with electronic Hobby projects using Components and Circuits | 2 Cr T:English Oral and written communication 2 Cr T :EVS 2 Cr T : IKS | CC 2 Cr              | 22    |             | 22                  |
| 4.5        | II  | 2 Cr T Fundamentals of Digital Electronics<br>2 Cr T Applications of Analog and Digital Devices<br>2 Cr T Electronics LAB- II | —             | 2Cr-T: Calibration Techniques/ Instrumentation for agriculture | 2 Cr-T: Fundamental Biochemistry | 2Cr-T:Learning Basics of Data Science using MS Excel | 2Cr-T:Basic Course in Algebra | 2 Cr Pr Electronic appliance selection<br>2 Cr Pr Awareness and mgmt. of Ewaste            | 2 Cr Pr Modelling and Simulation using MATLAB<br>2 Cr Pr Photo voltaic System installation 2 Cr Pr Robotics  | 2 Cr T: Spoken English   | CC 2 Cr              | 22    |             | 22                  |
| Cumulative |     | 12  |               | 2  |                                  |  |                               | 8  | 8  | 10   | 4                    | 44    | 4           | 48                  |

Certificate on Exit + 4 credit Bridge Course

Department of Electronics  
BSc(General) Major Electronics

| Level  | Sem | Disciplinary Major Mandatory  | DSE Electives | Minor   |                                 |   |  | OE  | VC/SEC  | AEC, VEC, IKS | OJT, FP, CEP, CC, RP | Total | Exit Credit | Final Total Credits |
|--|-----|---|---------------|---|---------------------------------|---|--|---|---|---------------|----------------------|-------|-------------|---------------------|
|  |     |   |               | Physics   | Chemistry                       | Statistics  | Mathematics  |   |   |               |                      |       |             |                     |
| 5  | III | 2 Cr T Electronic Circuits<br>2 Cr T .Digital System design<br>2 Cr Pr Electronics LAB- III A<br>2 Cr Pr Electronics LAB-III B                                      | —             | 2Cr-T: Basic Telecommu-<br>nication 2Cr-<br>P:Fun with<br>Mechanics | 4Cr-T:Chemistry<br>of life      | 2Cr-<br>T:Introduction<br>to R software<br>and learning of<br>exploratory<br>data Analysis<br>2Cr-P:Use of R<br>software to<br>explore the data | 2Cr-T:Basic<br>Course in<br>Calculus 2Cr-<br>P:Practical<br>Course<br>based on<br>Minor Paper<br>- 2 | 2 Cr Pr Know<br>your computer<br>Hardware &<br>Assembly 2 Cr<br>Pr<br>Entpreneuers<br>hip LED<br>displays and<br>decoration | 2 Cr Pr<br>Hardware<br>Discription<br>languages and<br>digital system<br>Design<br>2 Cr Pr Mobile<br>Application<br>Development | AEC 2 Cr      | CC 2<br>Cr           | 22    |             | 22                  |
| 5  | IV  | 2 Cr T perational<br>Amplifiers and<br>Applications<br>2 Cr T .C<br>programming(2T)<br>2 Cr Pr Electronics<br>LAB-IV A (2P)<br>2 Cr Pr Electronics<br>LAB-IV B (2P) | —             | 2Cr-T:Fiber<br>Optic<br>Communicat<br>ion 2Cr-<br>P:Basic<br>Optics | 4Cr-T:Chemistry<br>of Materials | 2Cr-T:Fittiting<br>of mathematical<br>models for<br>predicative data<br>Analysis 2Cr-<br>P:Use of R<br>software for<br>fitting of model         | 2Cr-T:<br>Matrix<br>Theory 2Cr-<br>P:Practical<br>Course<br>based on<br>Minor Paper<br>- 4           | 2 Cr Pr<br>Entpreneuers<br>hip : Solar<br>Systems and<br>Installation   | 2 Cr Pr<br>Electronic<br>Product design<br>& Tools<br>2 Cr Pr Solar<br>systems<br>Installation and<br>entrepreneurshi<br>p      | AEC 2 Cr      | CC 2<br>Cr           | 22    |             | 22                  |
| Cumul<br>ative                                     |     | 28  |               | 10  |                                 |   |  | 12  | 12  | 14            | 12                   | 88    | 4           | 92                  |
| Diploma on Exit + 4 credits of NSQF and Internship |     |   |               |   |                                 |   |  |   |   |               |                      |       |             |                     |

Department of Electronics  
**BSc(General) Major Electronics**

| Level | Sem | Disciplinary Major Mandatory  | DSE Electives  | Minor  |   |   |   | OE | VC/SEC                               | AEC, VEC, IKS | OJT, FP, CEP, CC, RP | Total | Exit Credit | Final Total Credits |
|-------|-----|---|--|--|---|---|---|----|--------------------------------------|---------------|----------------------|-------|-------------|---------------------|
|       |     |   |  | Physics  | Chemistry   | Statistics  | Mathematics   |    |                                      |               |                      |       |             |                     |
| 5.5   | V   | 2 Cr TElectronic Instrumentation<br>2 Cr TMicrocontroller Architecture and Programming s<br>2 Cr Pr Electronics LAB-V A<br>2 Cr Pr Electronics LAB-V B<br>2 Cr Pr Electronics LAB-V C | Signals and systems (2T)<br>2. Hardware for Artificial Intelligence(AI) & Machine Learning (ML) (2T) | 2Cr-T:Lasers and its Applications<br>2Cr-P: Optoelectronics/ Photonics | 2Cr-P:Laboratory Safety<br>2Cr-T:IPR and Chemoinformatics | 2Cr-T:Statistical Quality control<br>2Cr-P:Practical based on Statistical Quality control | 2Cr-T:Differentia l and Integral Calculus<br>2Cr-P: Practical Course based on Minor Paper - 6 |    | 4Cr Pr Design and Fabrication of PCB |               |                      | 22    |             | 22                  |

Department of Electronics

BSc(General) Major Electronics

| Level                  | Sem | Disciplinary Major Mandatory   | DSE Electives   | Minor                                      |   |  |  | OE | VC/SEC | AEC, VEC, IKS | OJT, FP, CEP, CC, RP | Total | Exit Credit | Final Total Credits |
|------------------------|-----|--|---|--|---|--|--|----|--------|---------------|----------------------|-------|-------------|---------------------|
|                        |     |  |   | Physics                                    | Chemistry   | Statistics   | Mathematics  |    |        |               |                      |       |             |                     |
| 5.5                    | VI  | 2 Cr T Communication Systems<br>2 Cr T Embedded Systems<br>2 Cr Pr Electronics LAB-VI A<br>2 Cr Pr .Electronics LAB-VI B<br>2 Cr Pr Electronics LAB-VI C | Advanced Embedded Systems and Applications of Internet of Things (2T)<br>2. Digital Signal Processing and MATLAB (2T) | 2Cr-T:Acoustics<br>2Cr-P:Radiation Physics | 2Cr-T:Instrumental methods of analysis<br>2Cr-P:Analytical Chemistry Practical Course | 2Cr-T:Introduction to Pythan for handling large data<br>2Cr-P:Introduction to Data Analytics | 2Cr-T:Applied Mathematics<br>2Cr-P:Practical Course based on Minor Paper - 8 |    |        |               | OJT 4 Cr             | 22    |             | 22                  |
| <b>Cumulative</b>      |     | 48   | 8   | 18   |   |  |  | 12 | 14     | 14            | 18                   | 132   |             | 136                 |
| <b>Award of Degree</b> |     |  |   |  |   |  |  |    |        |               |                      |       |             |                     |