# BHARATHIAR UNIVERSITY: : COIMBATORE 641 046

**B. Sc. Electronics Curriculum (University Affiliated Colleges)**

*(For the students admitted during the academic year 2021 – 22 onwards)*

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** | **Title of the Course** | **Credits** | **Hours** | | **Maximum Marks** | | |
| **Theory** | **Practical** | **CIA** | **ESE** | **TOTAL** |
|  | | | | | | | |
| **FIRST SEMESTER** | | | | | | | |
| 11T | Language –I | 4 | 6 | - | 50 | 50 | 100 |
| 12E | English – I | 4 | 6 | - | 50 | 50 | 100 |
| 13A | **Core Paper I :**  Basic Electronics | 4 | 5 | - | 50 | 50 | 100 |
| -- | **Core Practical I:** Basic Electronics Lab | - | - | 3 | - | - | - |
| -- | **Core Practical II** : Semiconductor Devices Lab | - | - | 3 | - | - | - |
| 1AA | **AlliedI**  Mathematics–I | 4 | 5 | - | 50 | 50 | 100 |
| 1FA | Environmental Studies # | 2 | 2 | - | - | 50 | 50 |
| **Total** | | 18 | - | - | 200 | 250 | 450 |
|  | | | | | | | |
| **SECOND SEMESTER** | | | | | | | |
| 21T | Language – II | 4 | 6 | - | 50 | 50 | 100 |
| 22E | English – II | 4 | 6 | - | 50 | 50 | 100 |
| 23A | **Core Paper II :**  Semiconductor Devices | 4 | 5 | - | 50 | 50 | 100 |
| 23P | **Core Practical I:** Basic Electronics Lab | 4 | - | 3 | 50 | 50 | 100 |
| 23Q | **Core Practical II:** Semiconductor Devices Lab | 4 | - | 3 | 50 | 50 | 100 |
| 2AA | **Allied : II**  Mathematics–II | 4 | 5 | - | 50 | 50 | 100 |
| 2FB | Value Education – Human Rights # | 2 | 2 | - | - | 50 | 50 |
|  | Swatch Bharat- Summer internship \*\* | - | - | - | - | - | - |
| **Total** | | 26 | - | - | 300 | 350 | 650 |

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| **THIRD SEMESTER** | | | | | | | |
| 33A | **Core Paper III** : Principles of Communication Systems | 4 | 4 | - | 50 | 50 | 100 |
| 33B | **Core Paper IV:** Digital Principles and Applications | 4 | 4 | - | 50 | 50 | 100 |
| 33C | **Core Paper V:**  Electronic Circuits | 4 | 4 | - | 50 | 50 | 100 |
| -- | **Core Practical III:** Electronic Circuits & Communication Lab | - | - | 3 | - | - | - |
| -- | **Core Practical IV:** Digital Electronics and Microprocessor Lab | - | - | 3 | - | - | - |
| 3AD | **Allied : III**  Programming in C | 3 | 4 | - | 30 | 45 | 75 |
| -- | **Core Practical V:** Computer Programming Lab | - | - | 3 | - | - | - |
| 3ZA | **Skill based Subject I :** Computer Oriented Office Automation | 3 | 3 | - | 30 | 45 | 75 |
| 3FB/  3FC | Tamil @ / Advanced Tamil#(OR)  Non-major elective - I (Yoga for Human excellence # Womens Rights#) | 2 | 2 | - | - | 50 | 50 |
| **Total** | | 20 | - | - | 210 | 290 | 500 |
| **FOURTH SEMESTER** | | | | | | | |
| 43A | **Core Paper VI :** 8085 Microprocessor  Interfacing and its Applications | 4 | 4 | - | 50 | 50 | 100 |
| 43B | **Core Paper VII** : IC’s and Instrumentation | 4 | 5 | - | 50 | 50 | 100 |
| 43C | **Core Paper VIII :** Biomedical Instrumentation | 4 | 4 | - | 50 | 50 | 100 |
| 43P | **Core Practical III** Electronic Circuits and Communication Lab | 4 | - | 3 | 50 | 50 | 100 |
| 43Q | **Core Practical IV:** Digital Electronics and Microprocessor Lab | 4 | - | 3 | 50 | 50 | 100 |

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| 4AD | **Allied: IV**  Object Oriented Programming using C++ | 4 | 4 | - | 50 | 50 | 100 |
| 43R | **Core Practical V :**  Computer Programming Lab | 2 | - | 3 | 25 | 25 | 50 |
| 4NM | **Skill based Subject II: NAAN MUDHALVAN**  Course Generic Name: Digital skills for Employability Course Name: Office Fundamentals | 2 | 2 | - | 25 | 25 | 50\*\* |
| 4FB/  4FE | Tamil @ /Advanced Tamil # (OR)  Non-major elective -II (General Awareness #) | 2 | 2 | - | - | 50 | 50 |
| **Total** | | 30 |  |  | 375 | 375 | 750 |
| **FIFTH SEMESTER** | | | | | | | |
| 53A | **Core Paper IX** : 8051 Microcontroller and its Applications | 4 | 6 | - | 50 | 50 | 100 |
| 5EA/  5EB/  5EC/  5ED | **Elective I** | 4 | 6 | - | 50 | 50 | 100 |
| 5EE/  5EF/  5EG/  5EH | **Elective II** | 4 | 6 | - | 50 | 50 | 100 |
| -- | **Core Practical VI:** IC,TV and Medical Electronics Lab | - | - | 3 | - | - | - |
| -- | **Core Practical VII:** Industrial and Power Electronics Lab | - | - | 3 | - | - | - |
| -- | **Core Practical VIII** : Microcontroller Lab | - | - | 3 | - | - | - |
| *5NM* | **NAAN MUTHALVAN**  **Generic Name**: Technical skills for Employability  Course Name: Data Analytics with Tableau | 2 |  |  | 25 | 75 | 100 |
| 5ZC | **Skill based subject – III**  VisualProgramming | 3 | 3 | - | 30 | 45 | 75 |
| **Total** | | 17 | - | - | 205 | 270 | 475 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **SIXTH SEMESTER** | | | | | | | |
| 63A | **Core Paper X** : Design with  PIC Microcontroller | 4 | 5 |  | 50 | 50 | 100 |
| 6EI/  6EJ/  6EK/  6EL | **Elective III** | 4 | 5 |  | 50 | 50 | 100 |
| 63P | **Core PracticalVI**: IC,TV and Medical Electronics Lab | 4 |  | 3 | 50 | 50 | 100 |
| 63Q | **Core Practical VII:** Industrial and Power Electronics Lab | 4 |  | 3 | 50 | 50 | 100 |
| 63R | **Core PracticalVIII**  :MicrocontrollerLab | 4 |  | 3 | 50 | 50 | 100 |
| 67V | **PROJECT** | 4 | 4 | - | 50 | 50 | 100 |
| 6ZP | **Skill based Subject – IV** Practical Visual Programming | 3 |  | 3 | 30 | 45 | 75 |
| 67A | Extension Activities @ | 2 | - | 2 | 50 | - | 50 |
| 6NM | **NAAN MUDHALVAN**  Generic Name: Emerging Technology for Employability-III Course Name: Project based learning | *2* | *2* | *-* | *25* | *25* | *50\*\** |
| **Total** | | 31 |  |  | 430 | 345 | 775 |
| **Grand Total** | | **142** |  |  |  |  | **3600** |

@No University Examinations. Only Continuous Internal Assessment (CIA)

# No Continuous Internal Assessment (CIA). Only University Examinations.

\*For Project report 50 marks and viva-voce 50 marks

 \* English II- University semester examination will be conducted for 50 marks (As per existing pattern of Examination) and it will be converted for 25 marks.

 \*\* Naan Mudhalvan – Skill courses- external 25 marks will be assessed by Industry and

internal will be offered by respective course teacher.

**\*\* Swatch Bharat Summer internship- extra 2 credits would be given. It is mandatory**

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| **List of Elective papers (Colleges can choose any one of the paper as electives)** | | |
| **Elective – I** | **A** | PCB Design and Fabrication |
| **B** | Advanced Communication Systems |
| **C** | Internet Of Things |
| **D** | Advanced Computer Architecture |
| **Elective – II** | **E** | Modern Television Engineering |
| **F** | Microwave and Fiber Optic Communication |
| **G** | Automotive Electronics |
| **H** | Satellite Communications |
| **Elective – III** | **I** | Industrial and Power Electronics |
| **J** | Robotics |
| **K** | Programmable Logic Controllers |
| **L** | VLSI Design |

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| **Government of Tamil Nadu “ NAAN MUDHALVAN SCHEME”**  **www. naanmudhalvan.tn.gov.in**  **List of Course for each semester** | |
| **Semester** | Name of The Generic Name |
| **II** | **Effective English** |
| **IV** | **Digital Skills For Employability** |
| **V** | **Technical skills for Employability** |
| **VI** | **Emerging Technology For Employability III** |

**NAAN MUDHALVAN SCHEME SYLLABUS**

<http://kb.naanmudhalvan.in/Bharathiar_University_(BU)>