**BHARATHIAR UNIVERSITY:: COIMBATORE 641046**

**B.Sc PHYSICS Curriculum (Affiliated Colleges)**

*(For the students admitted during the academic year 2022– 23)*

Revised Scheme of Examination

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Part | **Course Code** | **Title of the Course** | **Credits** |  **Hours/week** |  **Maximum Marks** |
| **Theory** | **Practical** | **CIA** | **CEE** | **Total** |
|   |  **FIRST SEMESTER** |
| I | 11T | Language-I | 4 | 6 | - | 50 | 50 | 100 |
| II | 12E | English-I | 4 | 6 | - | 50 | 50 | 100 |
| III | 13A | Core I – Mechanics, Properties of Matter and sound | 4 | 6 | - | 50 | 50 | 100 |
| III | - | Core Practical I | - | - | 3 | - | - | - |
| III | 1AA1AH | Allied Mathematics I \* (or)Allied Chemistry I \*\* | 43 | 74 | -- | 5030 | 5045 | 10075 |
| III | - | Allied Chemistry Practical \*\* | - | - | 3 | - | - | - |
| IV | 1FA | Environmental Studies # | 2 | 2 | - | - | 50 | 50 |
|   |  **Total** | **18** |  |  |  |  | **450** |
|   |  **SECOND SEMESTER** |
| I | 21T | Language-II | 4 | 6 | - | 50 | 50 | 100 |
| II | 22E | English-II | 2 | 4 | - | 25 | 25 | 50 |
| II | 2NM | Effective English: Language Proficiency for Employability ##http://kb.naanmudhalvan.in/Bharathiar\_University\_(BU) | 2 | 2 | - | 25 | 25 | 50 |
| III | 23A | Core II - Heat and Thermodynamics | 4 | 6 |  | 50 | 50 | 100 |
| III | 23P | Core Practical I | 4 | - | 3 | 50 | 50 | 100 |
| IIIIII | 2AA2AH | Allied Mathematics II \* (or)Allied Chemistry II \*\* | 43 | 74 | -- | 5030 | 5045 | 10075 |
| III | 2PH | Allied Chemistry Practical \*\* | 2 | - | 3 | 25 | 25 | 50 |
| IV | 2FB | Value Education - Human Rights # | 2 | 2 | - | - | 50 | 50 |
|   |  **Total** | **22** |  |  |  |  | **550** |
|   |  **THIRD SEMESTER** |
| I | 31T | Language-III | 4 | 6 | - | 50 | 50 | 100 |
| II | 32E | English-III | 4 | 6 | - | 50 | 50 | 100 |
| III | 33A | Core III – Optics | 4 | 4 | - | 50 | 50 | 100 |
| III | - | Core Practical II | - | - | 2 | - | - | - |
| IIIIII | 3AA3AH | Allied Mathematics I \* (or)Allied Chemistry I \*\* | 43 | 74 | -- | 5030 | 5045 | 10075 |
| III | - | Allied Chemistry Practical \*\* | - | - | 3 | - | - | - |
| IV | 3ZA | Skill Based Subject – Instrumentation I | 3 | 3 | - | 30 | 45 | 75 |
| IV | 3NM | Microsoft Office Essentials: Digital Skills for Employability ##[http://kb.naanmudhalvan.in/Bharathiar\_University(BU)](http://kb.naanmudhalvan.in/Bharathiar_University%28BU%29) | 2 | 2 | - | 25 | 25 | 50 |
| IV | 3FC | Tamil @ / Advanced Tamil # (OR)Non-major elective - I (Yoga for Human Excellence) # / Women's Rights # | 2 | 2 | - | - | 50 | 50 |
|   |  **Total** | **20+2** |  |  |  |  | **550** |
|   |  **FOURTH SEMESTER** |
| I | 41T | Language-IV | 4 | 6 | - | 50 | 50 | 100 |
| II | 42E | English-IV | 4 | 6 | - | 50 | 50 | 100 |
| III | 43A | Core IV – Atomic Physicsand Spectroscopy | 4 | 4 | - | 50 | 50 | 100 |
| III | 43P | Core Practical II | 3 | - | 2 | 30 | 45 | 75 |
| III | 4AA or4AH | Allied Mathematics II \* (or)Allied Chemistry II \*\* | 43 | 74 |  | 5030 | 5045 | 10075 |
| III | 4PH | Allied Chemistry Practical \*\* | 2 | - | 3 | 25 | 25 | 50 |
| IV | 4ZB | Skill Based Subject – Instrumentation II | 2 | 3 | - | 25 | 25 | 50 |
| IV | 4NM | Office Fundamentals: Digital Skills for Employability ##[http://kb.naanmudhalvan.in/Bharathiar\_University\_(BU)](http://kb.naanmudhalvan.in/Bharathiar_University_%28BU%29) | 2 | 2 | - | 25 | 25 | 50 |
| IV | 4FE | Tamil @ /Advanced Tamil # (or)Non-Major Elective -II (General Awareness #) | 2 | 2 | - | - | 50 | 50 |
|   |  **Total** | **26** |  |  |  |  | **650** |
|  **FIFTH SEMESTER** |
| III | 53A | Core V – Mathematical Physics | 4 | 4 | - | 50 | 50 | 100 |
| III | 53B | Core VI – Electronics | 4 | 4 | - | 50 | 50 | 100 |
| III | 53C | Core VII – Solid State Physics | 4 | 4 | - | 50 | 50 | 100 |
| III | 53D | Core VIII – Electricity and Magnetism | 4 | 4 | - | 50 | 50 | 100 |
| III | - | Core Practical III - Electronics | - | - | 2 | - | - | - |
| III | - | Core Practical IV - Digital and Microprocessor | - | - | 2 | - | - | - |
| III | 5EA | Elective – I | 4 | 4 | - | 50 | 50 | 100 |
| III | - | Practical V - C and C++ | - | - | 3 | - | - | - |
| IV | 5NM | Technical Skills for Employability ##[http://kb.naanmudhalvan.in/Bharathiar\_University(BU)](http://kb.naanmudhalvan.in/Bharathiar_University%28BU%29) | 2 | 2 | - | 25 | 25 | 50 |
| IV | 5ZC | Skill based Subject - Instrumentation III | 3 | 3 | - | 30 | 45 | 75 |
|   |  **Total** | **23+2** |  |  |  |  | **625** |
| **SIXTH SEMESTER** |
| III | 63A | Core IX – Quantum Mechanics and Relativity | 4 | 6 | - | 50 | 50 | 100 |
| III | 63B | Core X - Nuclear Physics | 4 | 6 | - | 50 | 50 | 100 |
| III | 63P | Core Practical III - Electronics | 3 | - | 2 | 30 | 45 | 75 |
| III | 63Q | Core Practical IV - Digital and Microprocessor | 3 | - | 2 | 30 | 45 | 75 |
| III | 6EA | Elective – II | 4 | 4 | - | 50 | 50 | 100 |
| III | 6EB | Elective – III | 4 | 4 | - | 50 | 50 | 100 |
| III | 63R | Practical V - C and C++ | 3 | - | 2 | 30 | 45 | 75 |
| IV | 6ZP | Skill based SubjectPractical – Instrumentation | 2 | - | 2 | 25 | 25 | 50 |
| IV | 6NM | Project Based Learning - Advanced Platform Technology ## - (Physics, Electronics, Mathematics, Statistics, Data Science) - Govt(auto) & Govt (Non-Auto) Data Analytics with Advanced Tools ## - (Physics, Electronics, Mathematics, Statistics, Data Science) - Aided (Non-auto) & SF (Non-Auto) [http://kb.naanmudhalvan.in/Bharathiar\_University\_(BU)](http://kb.naanmudhalvan.in/Bharathiar_University_%28BU%29) | 2 | - | 2 | 25 | 25 | 50 |
| V | 67A | Extension Activities @ | 2 | - | - | - | - | 50 |
|   |  **Total** | **31** |  |  |  |  | **775** |
|   |  **Grand Total** | **140+4** |  |  |  |  | **3600** |

\*For subjects without practical

\*\* For subjects with practical

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

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

## For Naan Mudhalvan Courses

|  |
| --- |
| **LIST OF ELECTIVE PAPERS****(Colleges can choose any one of the papers from each section as electives)** |
| Elective – I | **A** | Principles of Programming Concepts and C Programming |
| **B** | Energy Physics |
| **C** | Agricultural Physics |
| Elective – II | **A** | Digital and Microprocessor |
| **B** | Optical Fibers and Fiber Optic Communication Systems |
| **C** | Bio-Physics |
| Elective - III | **A** | Object Oriented Programming with C++ |
|  | **B** | Geo Physics |
| **C** | Industry Automation & Its Applications **(Industry 4.0)** |

# LIST OF VALUE-ADDED COURSES (OPTIONAL)

**(Only Internal and no external exam – 100 Marks)**

* OPTOELECTRONICS
* NON–DESTRUCTIVE TESTING
* BIOMEDICAL INSTRUMENTATION
* MODERN DISPLAY DEVICES AND STORAGE MATERIALS