|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Part** | **Title of the Course** | **Credits** | **Hours** | | **Maximum marks** | | |
|  |  |  | **Theory** | **Practical** | **CIA** | **ESE** | **Total** |
| **FIRST SEMESTER** | | | | | | | |
| I | Language – I | 4 | 6 |  | 50 | 50 | 100 |
| II | English – I | 4 | 6 |  | 50 | 50 | 100 |
| III | Core1:Programming in C | 4 | 4 |  | 50 | 50 | 100 |
| III | Core Lab 1: Programming Lab –  C | 4 |  | 3 | 50 | 50 | 100 |
| III | Core 2:Data structures | 4 | 4 |  | 50 | 50 | 100 |
| III | Allied 1: Discrete Mathematics | 4 | 5 |  | 50 | 50 | 100 |
| IV | Environmental Studies \* | 2 | 2 |  |  | 50 | 50 |
|  | **Total** | **26** | **27** | **3** | **300** | **350** | **650** |
| **SECOND SEMESTER** | | | | | | | |
| I | Language – II | 4 | 6 |  | 50 | 50 | 100 |
| II | English – II | 4 | 6 |  | 50 | 50 | 100 |
| III | Core3: Programming in C++ | 4 | 5 |  | 50 | 50 | 100 |
| III | Core Lab2: Programming Lab –  C++ | 4 |  | 4 | 50 | 50 | 100 |
| III | Core Lab3: Internet Basics Lab | 2 |  | 2 | 25 | 25 | 50 |
| III | Allied 2: Introduction to Statistics | 4 | 5 |  | 50 | 50 | 100 |
| IV | Value Education – Human Rights\* | 2 | 2 |  |  | 50 | 50 |
|  | **Total** | **24** | **24** | **6** | **275** | **325** | **600** |
| **THIRD SEMESTER** | | | | | | | |
| III | Core 4: JAVA Programming | 4 | 6 |  | 50 | 50 | 100 |
| III | Core Lab 4: JAVA Programming  Lab | 4 |  | 5 | 50 | 50 | 100 |
| III | Core 5: Artificial Intelligence | 4 | 6 |  | 50 | 50 | 100 |
| III | Allied 3: Software Engineering | 4 | 6 |  | 50 | 50 | 100 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| III | | Skill based Subject1 : Operating  System | 3 | | 5 | |  | | 30 | 45 | 75 |
| IV | | Tamil \*\*/ Advanced Tamil (OR)Non-major elective-1 (Yoga for Human Excellence)\* /  Women‟s Rights\* | 2 | | 2 | |  | |  | 50 | 50 |
|  | | **Total** | **21** | | **25** | | **5** | | **230** | **295** | **525** |
| **FOURTH SEMESTER** | | | | | | | | | | | |
| III | Core 6: Python Programming | | | 4 | | 6 | |  | 50 | 50 | 100 |
| III | Core 7: Introduction to Machine  Learning | | | 4 | | 6 | |  | 50 | 50 | 100 |
| III | Core Lab 5: Python  Programming Lab | | | 2 | |  | | 3 | 25 | 25 | 50 |
|  | Naan Muthalvan-Skill Course Office Fundamentals  [http://kb.naanmudhalvan.in/Bharat](http://kb.naanmudhalvan.in/Bharathiar_University_(BU)) [hiar\_University\_(BU)](http://kb.naanmudhalvan.in/Bharathiar_University_(BU)) | | | 2 | |  | | 3 | 25 | 25 | 50 |
| III | Allied 4 : Design and analysis of Algorithms | | | 4 | | 6 | |  | 50 | 50 | 100 |
| III | Skill Based Subject 2 (Lab): Capstone Project Work (Based on AI  & Machine Learning | | | 3 | |  | | 4 | 30 | 45 | 75 |
| IV | Tamil \*\*/ Advanced Tamil (OR) Non-major elective – II (General Awareness) \* | | | 2 | | 2 | |  |  | 50 | 50 |
|  | **Total** | | | **21** | | **20** | | **10** | **230** | **295** | **525** |
| **FIFTH SEMESTER** | | | | | | | | | | | |
| III | Core 8: Advanced Machine Learning  using Python | | | 4 | | 6 | |  | 50 | 50 | 100 |
| III | Core Lab 6: Advanced Machine  Learning using Python Lab | | | 4 | |  | | 6 | 50 | 50 | 100 |
| III | Core 9 : Fuzzy Logic and Neural Networks | | | 4 | | 6 | |  | 50 | 50 | 100 |
| III | Elective – I Fundamentals of  Robotics /Business Data Analytics/ Social Network Analysis | | | 4 | | 6 | |  | 50 | 50 | 100 |
| III | Skill Based Subject 3: Database  Management Systems | | | 3 | |  | | 6 | 30 | 45 | 75 |
| IV | Naan Muthalvan – Skill Course – Cloud and IT Essentials for Employabilit**y** | | | 2 | | 2 | |  | 25 | 75 | 100 |
|  | **Total** | | | **21** | | **20** | | **12** | **255** | **320** | **575** |
| **SIXTH SEMESTER** | | | | | | | | | | | |
| III | Core 10 :R Programming | | | 4 | | 4 | |  | 50 | 50 | 100 |
| III | Core Lab 7 : R Programming Lab | | | 4 | |  | | 5 | 50 | 50 | 100 |
| III | Core 11:Project Work Lab | | | 6 | |  | | 5 | 60 | 90 | 150 |
| III | Elective - II  Deep Learning/Web Application  Security/Software Agents | | | 4 | | 5 | |  | 50 | 50 | 100 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| III | Elective - III Natural Language  Processing/Client Server  Computing/Reinforcement Learning | 4 | 5 |  | 50 | 50 | 100 |
| III | Skill based Subject 4 (Lab): Oracle  and SQL Lab | 3 | 4 |  | 30 | 45 | 75 |
|  | Naan Muthalvan - Skill Course Cyber Security **@** [http://kb.naanmudhalvan.in/images/7/71/](http://kb.naanmudhalvan.in/images/7/71/Cybersecurity.pdf) [Cybersecurity.pdf](http://kb.naanmudhalvan.in/images/7/71/Cybersecurity.pdf)  (or) Machine Learning **#** [http://kb.naanmudhalvan.in/images/1/](http://kb.naanmudhalvan.in/images/1/19/PBL_Google.pdf) [19/PBL\_Google.pdf](http://kb.naanmudhalvan.in/images/1/19/PBL_Google.pdf)  (or) Android APP Development **$**  [http://kb.naanmudhalvan.in/images/0/08/](http://kb.naanmudhalvan.in/images/0/08/Android_App_Dev.pdf) [Android\_App\_Dev.pdf](http://kb.naanmudhalvan.in/images/0/08/Android_App_Dev.pdf) | 2 | 2 |  | 25 | 25 | 50 |
| V | Extension Activities\*\* | 2 |  |  | 50 | - | 50 |
|  | **Total** | **29** | **20** | **10** | **365** | **360** | **725** |
|  | **Grand Total** | **142** | **136** | **46** | **1655** | **1945** | **3600** |

* \*NoContinuousInternalAssessment(CIA),UniversityExaminationsOnly.
* \*\*NoUniversityExaminations,ContinuousInternalAssessment(CIA)Only.
* **#** Govt – Non-Autonomous Colleges, **$** Aided – Non-Autonomous Colleges, **@** Self - Financing **(**Non – Autonomous).
* Naan Mudhalvan – skill courses- external marks will be assessed by Industry and internal will be offered by respective course teacher.