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| **B. Tech Computer Science and Engineering (Cyber Security)** |
| **Credit Based Scheme of Studies/Examination (w.e.f. Session 2021-22)** |
| **Semester III**  |
|  |   |   |   |   |   |   |   |   |   |   |
| **S. No.** | **Course No.** | **Subject** | **L:T:P** | **Hours/Week** | **Credits** | **Examination Schedule (Marks)** | **Duration of Exam (Hrs)** |
|
| **Major Test** | **Minor Test** | **Practical** | **Total** |
| 1 | PC-CS-CYS- 201A | Introduction to Cyber Security | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 2 | PC-CS-CYS- 203A | Data Structure | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 3 | PC-CS-CYS- 205A | Computational Thinking with Python | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 4 | PC-CS-CYS- 207A | Software Engineering | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 5 | PC-CS-CYS- 209A | Principles of Programming Languages | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 6 | ES-CS-CYS- 211A | Computer Organization and Architecture | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 7 | PC-CS-CYS- 213LA | Data Structure Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 8 | PC-CS-CYS- 215LA | Python Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 9 | PC-CS-CYS- 217LA | Software Engineering Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
|   |  | **Total** |  | **24** | **21** | **450** | **270** | **180** | **900** |  |
| 10 | SIM-201A\* | Seminar on Summer Internship | 2:0:0 | 2 | 0 | 0 | 50 | 0 | 50 |  |
|  |  |  |  |  |  |  |  |  |  |  |

**\*Note: SIM-201A\* is a mandatory credit-less course in which the students will be evaluated for the Summer Internship (training) undergone after 2nd semester and students will be required to get passing marks to qualify.**

**B. Tech Computer Science and Engineering (Cyber Security)**

**Scheme of Studies/Examination (w.e.f. Session 2021-22)**

**Semester IV**

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| **S. No.** | **Course No.** | **Subject** | **L:T:P** | **Hours/****Week** | **Credits** | **Examination Schedule** | **Duration of Exam (Hrs.)** |
|  |  |  |  |  |  | **Major Test** | **Minor Test** | **Practical** | **Total** |  |
| 1 | PC-CS-CYS- 202A | Mathematics forIntelligent Systems | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 2 | ES-CS-CYS- 204A | Object-Oriented Programming System | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 3 | PC-CS-CYS- 206A | Data Base Management Systems | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 4 | ES-CS-CYS- 208A | Internet & Web technology | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 5 | PC-CS-CYS- 210A | Operating System | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 6 | PC-CS-CYS- 212A | Cryptographic Fundamentals | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 7 | PC-CS-CYS- 214LA | Object Oriented Programming Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 8 | PC-CS-CYS- 216LA | Data Base Management Systems Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 9 | ES-CS-CYS- 218LA | Internet & Web Technology Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
|  |  | **Total** |  | **24** | **21** | **450** | **270** | **180** | **900** |  |
| 10 | MC-901A | Environmental Sciences | 3:0:0 | 3 |  | 0 |  | 100 | 0 | 100 |

**B. Tech Computer Science and Engineering (Cyber Security)**

**Scheme of Studies/Examination (w.e.f. Session 2022-23)**

**Semester V**

|  |  |  |  |  |  |  |  |
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| **S. No.** | **Course No.** | **Subject** | **L:T:P** | **Hours/****Week** | **Credits** | **Examination Schedule** | **Duration of Exam (Hrs.)** |
|  |  |  |  |  |  | **Major Test** | **Minor Test** | **Practical** | **Total** |  |
| 1 | PC-CS-CYS- 301A | Design and Analysis of Algorithm | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 2 | PC-CS-CYS- 303A | Security Threats and Trends | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 3 | ES-CS-CYS- 305A | Information Security And Data Hiding  | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 4 | ES-CS-CYS- 307A | Microprocessor & Interfacing  | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 5 | HM-902 | Business Intelligence and Entrepreneurship  | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 6 | PC-CS-CYS- 311A | Computer Networks | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 7 | PC-CS-CYS- 313LA | Computer Networks Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 8 | PC-CS-CYS- 315LA | Design and Analysis of Algorithm Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 9 | ES-CS-CYS- 317LA | Microprocessor & Interfacing Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
|  |  | **Total** |  | **24** | **21** | **450** | **270** | **180** | **900** |  |
| 10 | MC-904A | Energy Resources & Management | 3:0:0 | 3 | 3 | 0 | 0 | 100 | 0 | 100 |
| 11 | SIM-301A\* | Seminar on Summer Internship | 2:0:0 | 2 | 2 | 0 | 0 | 50 | 0 | 50 |

**B. Tech Computer Science and Engineering (Cyber Security)**

**Scheme of Studies/Examination (w.e.f. Session 2022-23)**

**Semester VI**

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| **S. No.** | **Course No.** | **Subject** | **L:T:P** | **Hours/****Week** | **Credits** | **Examination Schedule** | **Duration of Exam (Hrs.)** |
| **Major Test** | **Minor Test** | **Practical** | **Total** |
| 1 | PC-CS-CYS- 302A | Mobile Security | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 2 | OEC | OEC-Elective-I | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 3 | ES-CS-CYS-304A | Digital Forensics | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 4 | PC-CS-CYS-306A | Cryptanalysis | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 5 | ES-CS-CYS-308A | Information theory and coding | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 6 | PC-CS-CYS-310A | Cloud Security & Management | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 7 | PC-CS-CYS-312LA | Information theory and coding Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 8 | ES-CS-CYS-314LA | Digital Forensics Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 9 | PC-CS-CYS-316LA | Cryptanalysis Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
|  |  | **Total** |  | **24** | **21** | **450** | **270** | **180** | **900** |  |

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| **OEC Elective-I** |
| Soft Skills and Interpersonal Communication: OE-CS- CYS -302 |
| Creativity, Innovation and Entrepreneurship: OE-CS- CYS -304 |
| Enterprise Resource Planning: OE-CS- CYS -306 |
| Stochastic Processes and Applications: OE-CS- CYS -308 |

**\*The students will choose any One Open Elective course out of the given elective list in VI Semester.**

**B. Tech Computer Science and Engineering (Cyber Security)**

**Scheme of Studies/Examination (w.e.f. Session 2023-24)**

**Semester VII**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Course No.** | **Subject** | **L:T:P** | **Hours/****Week** | **Credits** | **Examination Schedule** | **Duration of Exam (Hrs.)** |
| **Major Test** | **Minor Test** | **Practical** | **Total** |
| 1 | PC-CS-CYS-401A | Cyber Attacks- OWASP Framework | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 2 | OEC | OEC Elective -II | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 3 | PE-I | Elective\*-I | 2:0:0 | 2 | 2 | 75 | 25 | 0 | 100 | 3 |
| 4 | PE-II | Elective\* - II | 2:0:0 | 2 | 2 | 75 | 25 | 0 | 100 | 3 |
| 5 | PC-CS-CYS- 405LA | Cyber Attacks- OWASP Framework Lab  | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 6 | PC-CS-CYS-407LA | Cloud Security Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 7 | PC-CS-CYS-409LA | Project-I | 0:0:10 | 10 | 5 | 0 | 100 | 100 | 200 | 3 |
| 8 | PC-CS-CYS-413LA | Industrial Training |  |  |  |  | 100 | 0 | 100 |  |
|  |  | **Total** |  | **24** | **17** | **300** | **380** | **220** | **900** |  |

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| **Code** | **PE-I** | **Code** | **PE-II** |
| PE-CS-CYS- 415A | Introduction to cyber laws | PE-CS-CYS-421A | Software Testing |
| PE-CS-CYS-417A | Advance Computer Architecture | PE-CS-CYS-423A | Cybercrime Forensics and Digital Forensics |
| PE-CS-CYS-419A | Software Vulnerability Analysis | PE-CS-CYS-424A | Cloud Security |

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| **OEC Elective-II** |
| Robotics and Intelligent Systems: OE-CS-CYS -401  |
| Ethical Hacking: OE-CS-CYS-403 |
| Privacy and Security in IoT: OE-CS- CYS-405 |
| Digital Electronics: OE-CS-CYS-407  |
| Network Management and Security: OE-CS-CYS-409 |

**Note:**

**\*The students will choose any two departmental Electives courses and One Open Elective course out of the given elective list in VII Semester.**

**\*\*Project should be initiated in the beginning of 7thsemester, and should be completed by the end of 8thsemester with good Report and power-point Presentation etc.**

**\*\*\*4-6 weeks hand on training completed after 6thSemester Exams**

**B. Tech Computer Science and Engineering (Cyber Security)**

 **Scheme of Studies/Examination (w.e.f. Session 2023-24)**

**Semester VIII**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Course No.** | **Subject** | **L:T:P** | **Hours/****Week** | **Credits** | **Examination Schedule** | **Duration of Exam (Hrs.)** |
|  |  |  |  |  |  | **Major Test** | **Minor Test** | **Practical** | **Total** |  |
| 1 | PC-CS- CYS-402A | Block Chain in Cyber security  | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 2 | OEC | OEC Elective-III | 3:0:0 | 3 | 3 | 75 | 25 | 0 | 100 | 3 |
| 3 | PE-III | Elective\*-III | 2:0:0 | 2 | 2 | 75 | 25 | 0 | 100 | 3 |
| 4 | PE-IV | Elective\* - IV | 2:0:0 | 2 | 2 | 75 | 25 | 0 | 100 | 3 |
| 5 | PC-CS- CYS-406LA | Cyber security Block Chain Lab | 0:0:2 | 2 | 1 | 0 | 40 | 60 | 100 | 3 |
| 6 | PC-CS- CYS-410LA | Project-II | 0:0:10 | 10 | 5 | 0 | 100 | 100 | 200 | 3 |
| 7 | PC-CS- CYS-412LA | General Fitness &Professional Aptitude |  |  | 2 | 0 | 0 | 100 | 100 | 8 |
|  |  | **Total** |  | 22 | 18 | **300** | **240** | **260** | **800** |  |

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| **Code** | **PE-III** | **Code** | **PE-IV** |
| PE-CS- CYS- 414A | Penetration Testing | PE-CS- CYS- 422A | Intrusion detection and Prevention  |
| PE-CS- CYS- 416A | Identity And Access Management | PE-CS- CYS- 424A | Introduction to Cyber Crime Investigations |
| PE-CS- CYS- 420A | Biometric Security | PE-CS- CYS- 426A | Social Networks |

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| **OEC Elective-III** |
| Backup Disaster & Recovery: OE-CS- CYS-402 |
| Cryptographic Fundamentals: OE-CS- CYS-404 |
| Artificial Intelligence: OE-CS- CYS-406 |
| Reasoning, Problem Solving and Robotics: OE-CS- CYS-408 |
| Data Injection: OE-CS- CYS-410 |

**Note:**

**\*The students will choose any two departmental electives courses and One Open Elective course out of the given elective list in VIII**