NEP 2020

MIT-ADT UNIVERSITY
PUNE, INDIA
A leap towards World Class Education

## Department of

# Computer Science & Engineering

## Programme Structure
## of

# B. Tech-Computer Science & Engineering

## Summary Table

## Distribution of Category / Type of Courses and Credits

## B. Tech Computer Science & Engineering

**(All Specializations)**

| Category / Type of Courses | | Semester wise Credits | | | | | | | | Course wise Total Credits |
|---|---|---|---|---|---|---|---|---|---|---|
| | | I | II | III | IV | V | VI | VII | VIII | |
| BSC/ESC | Basic Science Courses | 6 | 6 | 3 | | | | | | 15 |
| | Engineering Science Courses | 7 | 4 | 4 | | | | | | 15 |
| Program Courses | Programme Core Course (PCC) | | 2 | 11 | 11 | 10 | 8 | 8 | | 50 |
| | Programme Core Course (PEC) | | | | | 3 | 7 | 6 | 6 | 22 |
| Multidisciplinary Courses | Multidisciplinary Minor (MDM) | | | | 4 | | 4 | 4 | 2 | 14 |
| | Open /Generic Electives (OE/GE) *(other than a particular Program)* | 3 | 3 | | | 2 | | | | 8 |
| Skill Courses | Vocational and Skill Enhancement Courses (VSEC) | 2 | 2 | | 2 | 2 | | | | 8 |
| MD Holistic Development Courses- *Humanities, Social Science and Management (HSSM)+ Liberal Learning(LL)* | Ability Enhancement courses (AEC) | 2 | 2 | 2 | | | 1 | | | 7 |
| | Indian Knowledge System (IKS) | | 1 | | | | | | | 1 |
| | Value Education/Value Addition/Professional Ethics/Life skills Courses (VEC/VAC/EVLSC) | | | 2 | | 2 | 2 | | | 6 |
| | Co-curricular Courses (CC) | 2 | 2 | | | | | | | 4 |
| | Entrepreneurship/Economics /Management Courses | | | 2 | 2 | | | | | 4 |
| Experiential Learning Courses | Research Methodology | | | | | | | | | |
| | Mini Projects/ Field Project (MP/FP) | | | | 2 | | 2 | | | 4 |
| | Project | | | | | 2 | | 2 | 10 | 14 |
| | Internship | | | | | | | | | |
| **Total Credits (Semester/ Programme)** | | **22** | **22** | **24** | **21** | **21** | **24** | **20** | **18** | **172** |

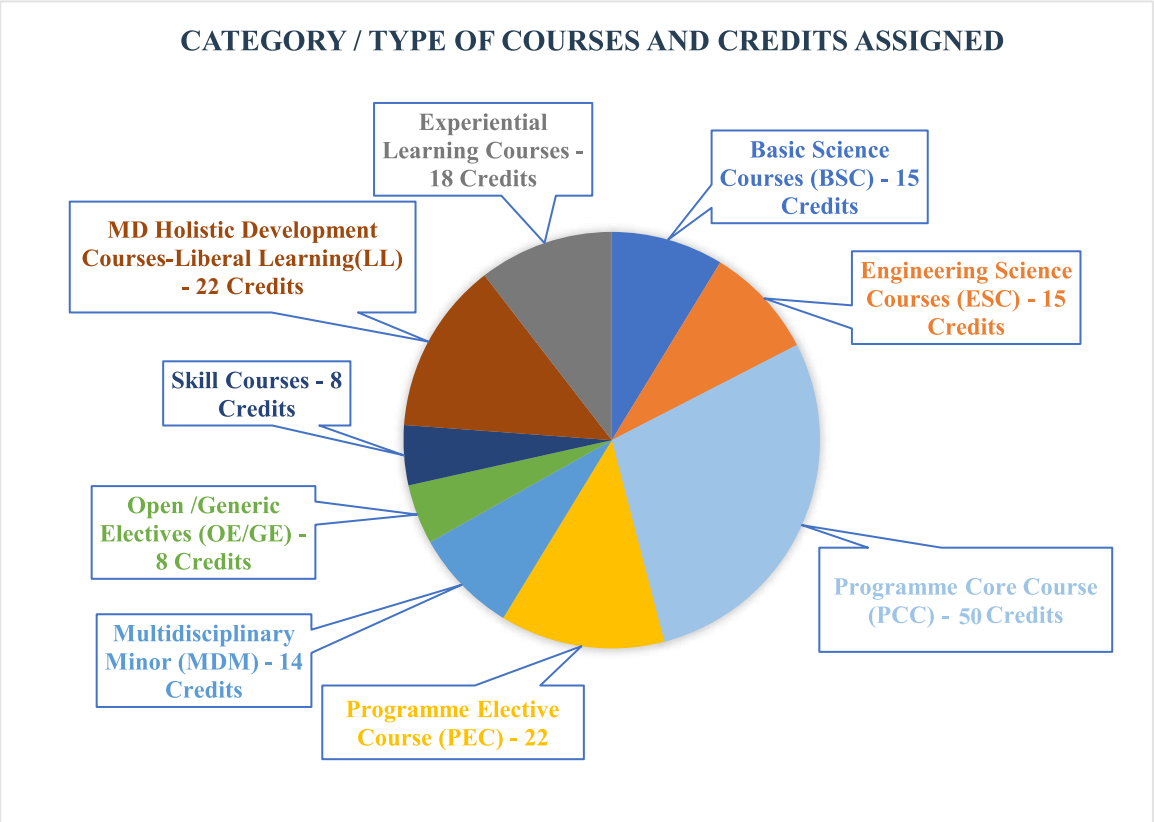
| | |
|---|---|
| MAJOR PROGRAMME COURSES -TOTAL CREDITS (PC+PEC+PRJ+VSEC) | 128 |
| MULTIDISCIPLINARY COURSES-TOTAL CREDITS | 22 |
| HOLISTIC DEVELOPMENT COURSES INCL LL+HSSM-TOTAL CREDITS | 22 |

## THE PIE CHART

## Distribution of Category / Type of Courses and Credits

## B. Tech - Computer Science & Engineering

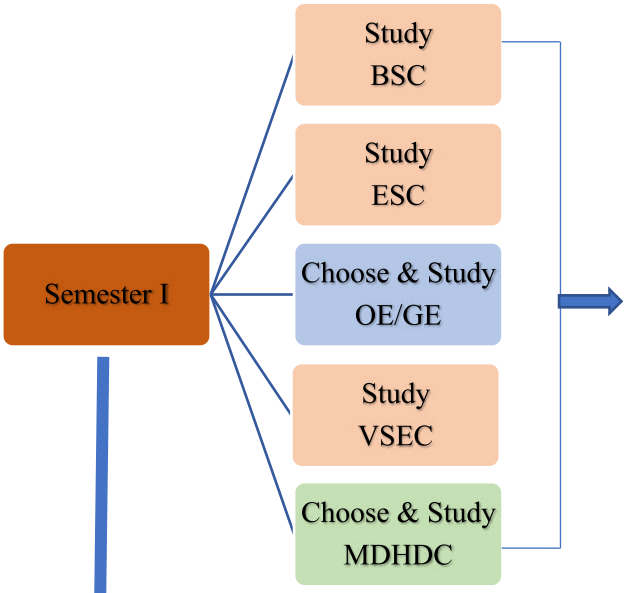
**(All Specializations)**



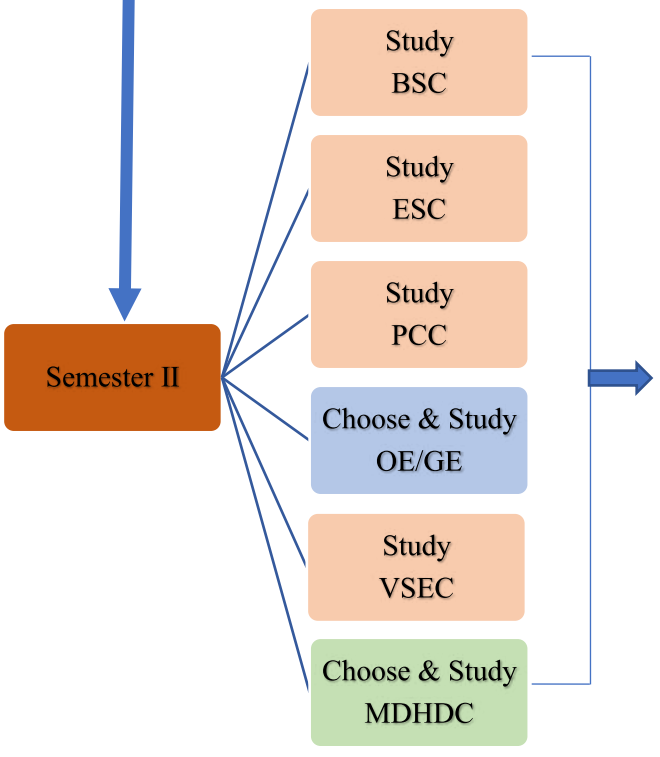
## Flow Diagram to Navigate students through availability of various types of courses and options during the Programme duration

### B.Tech. - Computer Science & Engineering- First Year

**(All Specializations)**



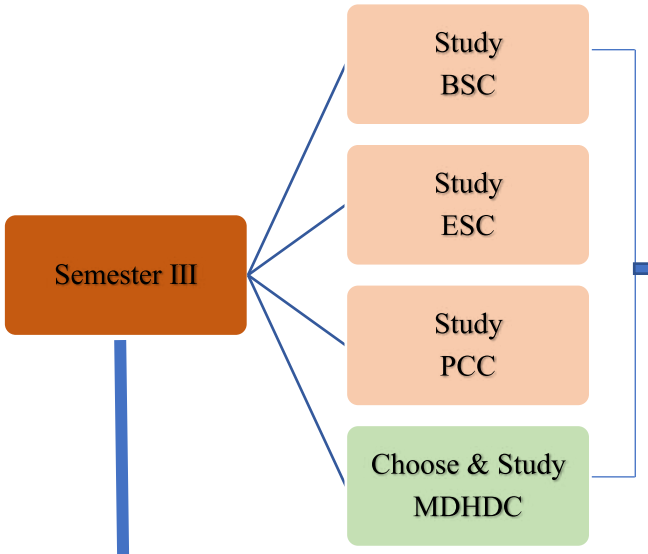

| Course Category | Credits | Reference |
|---|---|---|
| Basic Science Courses (BSC) | 6 | Table 1 |
| Engineering Science Courses (ESC) | 7 | Table 1 |
| Open/Generic Elective Courses (OE/GE) | 3 | Table 4 |
| Vocational and Skill Enhancement Courses (VSEC) | 2 | Table 6 |
| MD Holistic Development Courses-Liberal Learning (MDHDC) | 4 | Table 7 |



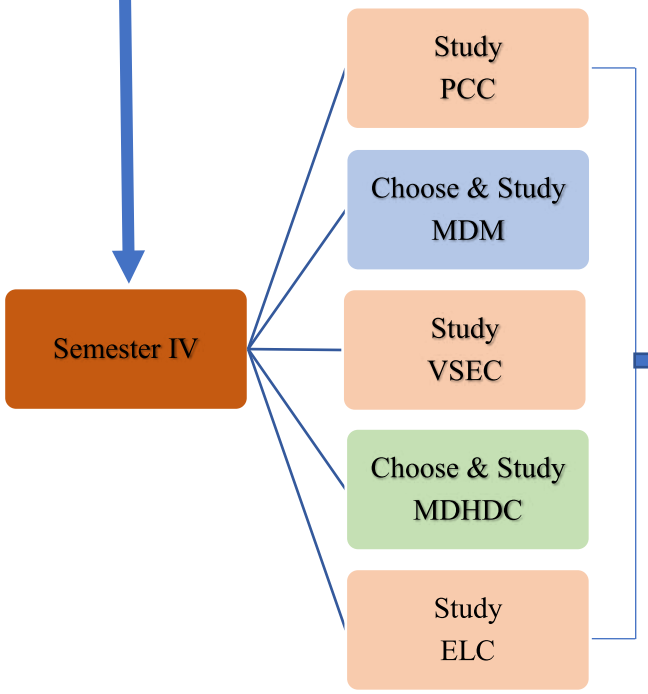

| Course Category | Credits | Reference |
|---|---|---|
| Basic Science Courses (BSC) | 6 | Table 1 |
| Engineering Science Courses (ESC) | 4 | Table 1 |
| Programme Core Course (PCC) | 2 | Table 2 |
| Open/Generic Elective Courses (OE/GE) | 3 | Table 4 |
| Vocational and Skill Enhancement Courses (VSEC) | 2 | Table 6 |
| MD Holistic Development Courses-Liberal Learning (MDHDC) | 5 | Table 7 |

## B.Tech. - Computer Science & Engineering- Second Year

**(All Specializations)**



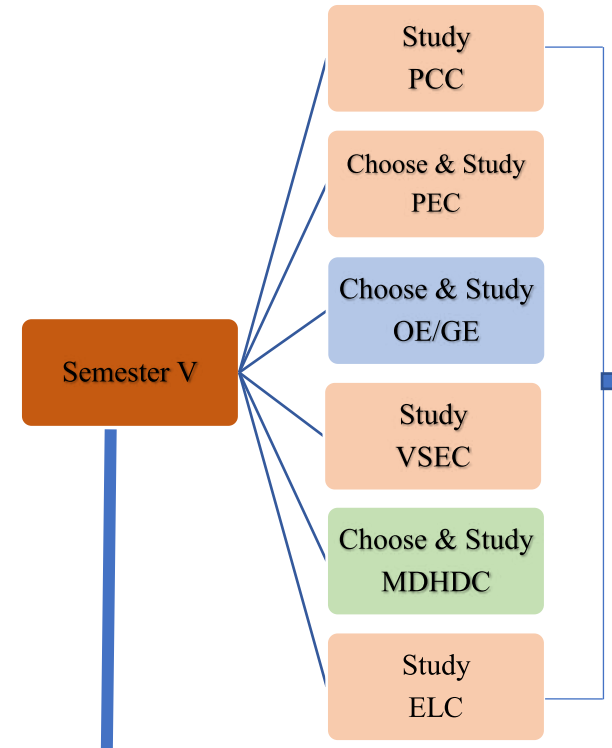

| Course Category | Credits | Reference |
|---|---|---|
| Basic Science Courses (BSC) | 3 | Table 1 |
| Engineering Science Courses (ESC) | 4 | Table 1 |
| Programme Core Course (PCC) | 11 | Table 2 |
| MD Holistic Development Courses-Liberal Learning (MDHDC) | 6 | Table 7 |



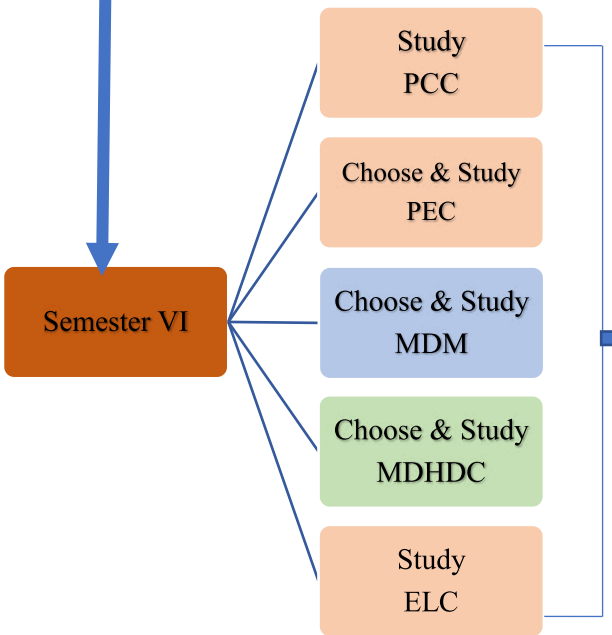

| Course Category | Credits | Reference |
|---|---|---|
| Programme Core Course (PCC) | 11 | Table 2 |
| Multidisciplinary Minor (MDM) | 4 | Table 5 |
| Vocational and Skill Enhancement Courses (VSEC) | 2 | Table 6 |
| MD Holistic Development Courses-Liberal Learning (MDHDC) | 2 | Table 7 |
| Experiential Learning Courses (ELC) | 2 | Table 8 |

# B.Tech. - Computer Science & Engineering- Third Year

**(All Specializations)**



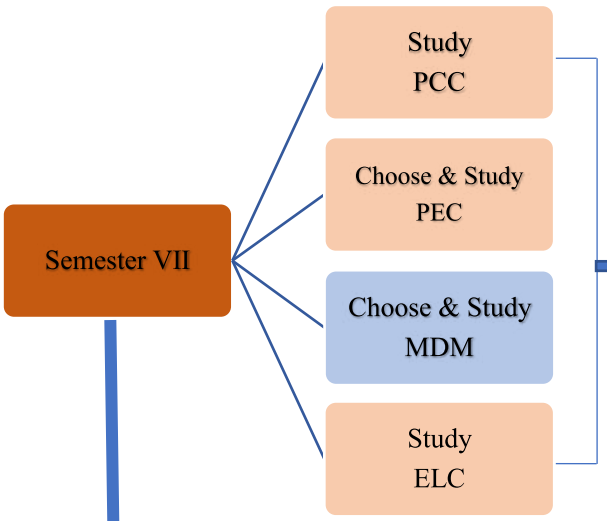

| Course Category | Credits | Reference |
|---|---|---|
| Programme Core Course (PCC) | 10 | Table 2 |
| Programme Elective Course (PEC) | 4 | Table 3.1 to 3.7 |
| Open/Generic Elective Courses (OE/GE) | 2 | Table 4 |
| Vocational and Skill Enhancement Courses (VSEC) | 2 | Table 6 |
| MD Holistic Development Courses-Liberal Learning (MDHDC) | 2 | Table 7 |
| Experiential Learning Courses (ELC) | 2 | Table 8 |



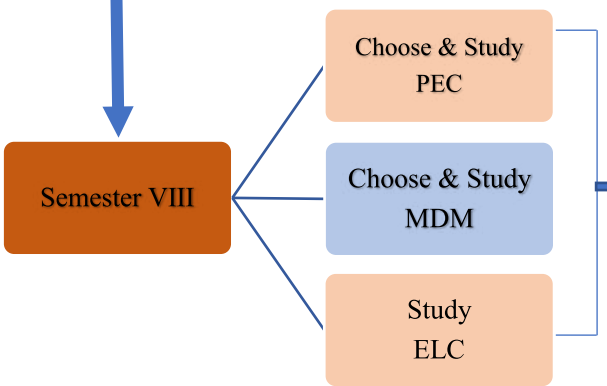

| Course Category | Credits | Reference |
|---|---|---|
| Programme Core Course (PCC) | 8 | Table 2 |
| Programme Elective Course (PEC) | 6 | Table 3.1 to 3.7 |
| Multidisciplinary Minor (MDM) | 4 | Table 5 |
| MD Holistic Development Courses-Liberal Learning (MDHDC) | 3 | Table 7 |
| Experiential Learning Courses (ELC) | 2 | Table 8 |

# B.Tech. - Computer Science & Engineering- Fourth Year

**(All Specializations)**




| Course Category | Credits | Reference |
|---|---|---|
| Programme Core Course (PCC) | 8 | Table 2 |
| Programme Elective Course (PEC) | 6 | Table 3.1 to 3.7 |
| Multidisciplinary Minor (MDM) | 4 | Table 5 |
| Experiential Learning Courses (ELC) | 2 | Table 8 |




| Course Category | Credits | Reference |
|---|---|---|
| Programme Elective Course (PEC) | 6 | Table 3.1 to 3.7 |
| Multidisciplinary Minor (MDM) | 2 | Table 5 |
| Experiential Learning Courses (ELC) | 10 | Table 8 |

# Table 1
## Basic Sciences and Engineering Courses
### B.Tech - Computer Science and Engineering

**(All Specializations)**

| Sr. No. | Course Title | No. of Credits | Name of the Department /Institute/ School | Semester in which course is offered | Remarks |
|---|---|---|---|---|---|
| 1 | Applied Science –I | 3 | ASH | I | BSC |
| 2 | Mathematics Course – I | 3 | ASH | I | BSC |
| 3 | Applied Sciences – II | 3 | ASH | II | BSC |
| 4 | Mathematics Course – II | 3 | ASH | II | BSC |
| 5 | Mathematics Course - III | 3 | ASH | III | BSC |
| 6 | Computational Thinking | 2 | CSE | I | ESC |
| 7 | Programming Language – I | 1 | CSE | I | ESC |
| 8 | Electronics Engineering – I | 3 | CSE | I | ESC |
| 9 | Computer Engineering Workshop | 1 | CSE | I | ESC |
| 10 | Programming Language – II | 1 | CSE | II | ESC |
| 11 | Electronics Engineering – II | 3 | CSE | II | ESC |
| 12 | Electronics Engineering – III | 3 | CSE | III | ESC |
| 13 | Programming Language – III | 1 | CSE | III | ESC |

# Table 2

## Program Core Courses

### B.Tech - Computer Science and Engineering

### (All Specializations)

| Sr. No. | Course Title | No. of Credits | Semester in which course is offered | Specialization |
|---|---|---|---|---|
| 1 | Introduction to Data structures | 2 | II | Common to all specializations |
| 2 | Data Structures | 4 | III | |
| 3 | Database Management Systems | 4 | III | |
| 4 | Software Engineering | 4 | III | |
| 5 | Operating System | 4 | IV | |
| 6 | Computer Networks | 4 | IV | |
| 7 | Theory of computation | 4 | IV | CSE Core |
| 8 | Fundamentals of Artificial Intelligence | 4 | IV | Artificial Intelligence and Analytics |
| 9 | Internet of Things | 4 | IV | Artificial Intelligence and Edge Computing |
| 10 | Distributed Systems | 4 | IV | Cloud Computing |
| 11 | Fundamental of Data Science | 4 | IV | Big Data and Cloud Engineering |
| 12 | Cryptography and Information Security | 4 | IV | Cyber Security and Forensics / Blockchain |
| 13 | Design and analysis of algorithms | 4 | V | CSE Core |
| 14 | Machine Learning | 4 | V | Artificial Intelligence and Analytics |
| 15 | Cloud Computing | 4 | V | Artificial Intelligence and Edge Computing |
| 16 | Cloud Foundation | 4 | V | Cloud Computing |
| 17 | Fundamentals of Cloud Computing | 4 | V | Big Data and Cloud Engineering |
| 18 | Internet of Things | 4 | V | Cyber Security and Forensics / Blockchain |

## Table 2 (contd.)

| Sr. No. | Course Title | No. of Credits | Semester in which course is offered | Specialization |
|---|---|---|---|---|
| 19 | Artificial IntelligenceI & Machine Learning | 4 | V | CSE Core |
| 20 | Data Mining & Analytics | 4 | V | Artificial Intelligence and Analytics |
| 21 | AI and Machine Learning | 4 | V | Artificial Intelligence and Edge Computing |
| 22 | Dockers and containers | 4 | V | Cloud Computing |
| 23 | Design and Analysis of Algorithms | 4 | V | Big Data and Cloud Engineering |
| 24 | Network Security | 4 | V | Cyber Security and Forensics / Blockchain |
| 25 | Web Technology Lab | 2 | V | Common to all specializations |
| 26 | Internet of Things and applications using Raspberry Pi | 4 | VI | CSE Core |
| 27 | Deep Learning | 4 | VI | Artificial Intelligence and Analytics |
| 28 | Edge Computing Hardware and Software Stack | 4 | VI | Artificial Intelligence and Edge Computing |
| 29 | Cloud Deployment | 4 | VI | Cloud Computing |
| 30 | Big Data Analytics | 4 | VI | Big Data and Cloud Engineering |
| 31 | Access Control and Identity management | 4 | VI | Cyber Security and Forensics / |
| 32 | Introduction to Blockchain Technology | 4 | VI | Blockchain |
| 33 | Soft computing | 4 | VI | CSE Core |
| 34 | Data Modelling & Visualization | 4 | VI | Artificial Intelligence and Analytics |
| 35 | Deep Learning | 4 | VI | Artificial Intelligence and Edge Computing |
| 36 | Cloud Security | 4 | VI | Cloud Computing |
| 37 | Data Center Essentials | 4 | VI | Big Data and Cloud Engineering |
| 38 | Cyber Forensics and Investigation | 4 | VI | Cyber Security and Forensics |
| 39 | Machine Learning | 4 | VI | Blockchain |
| 40 | High performance Computing | 4 | VII | CSE Core |
| 41 | Big Data Analytics | 4 | VII | Artificial Intelligence and Analytics |

## Table 2 (contd.)

| Sr. No. | Course Title | No. of Credits | Semester in which course is offered | Specialization |
|---|---|---|---|---|
| 42 | Edge Data Analytics | 4 | VII | Artificial Intelligence and Edge Computing |
| 43 | SysOps and operational services | 4 | VII | Cloud Computing |
| 44 | Dataware house Architecture and Data Mining | 4 | VII | Big Data and Cloud Engineering |
| 45 | Cyber-Physical Systems | 4 | VII | Cyber Security and Forensics |
| 46 | Hyperledger Fabric: DAPP development | 4 | VII | Blockchain |
| 47 | Big data Analytics | 4 | VII | CSE Core |
| 48 | Natural Language Processing | 4 | VII | Artificial Intelligence and Analytics |
| 49 | High Performance Computing | 4 | VII | Artificial Intelligence and Edge Computing |
| 50 | Cloud strategy planning and management | 4 | VII | Cloud Computing |
| 51 | Software Architecture and Design | 4 | VII | Big Data and Cloud Engineering |
| 52 | Vulnerability Analysis and Penetration Testing | 4 | VII | Cyber Security and Forensics |
| 53 | Reverse Engineering & Malware Analysis | 3 | V | Cyber Security and Forensics |
| 54 | Distributed Systems | 3 | V | Blockchain |
| 55 | Cloud Computing | 4 | VI | Cyber Security and Forensics |
| 56 | Programming using Solidity | 4 | VI | Blockchain |
| 57 | Blockchain Technologies | 3 | VII | Cyber Security and Forensics |
| 58 | Augmented Reality and Virtual Reality | 3 | VII | Blockchain |

## Table 3.1
## Program/Specialization Elective Courses
### B.Tech - Computer Science and Engineering

**Specialization: CSE Core**

| Sr. No. | Elective Basket No. | Course Title | No. of Credits | Semester in which Course is offered |
|---|---|---|---|---|
| 1 | EL1 | Cloud Computing | 3 | V |
| | | Data Modeling and Visualization | 3 | |
| | | Cryptography and information Security | 3 | |
| | | Blockchain Technology | 3 | |
| 2 | EL 2 | Cloud Big data services | 3 | VI |
| | | Deep Learning | 3 | |
| | | 5G Security | 3 | |
| | | Bitcoin & Cryptocurrency | 3 | |
| 3 | EL 3 | MLops | 3 | VII |
| | | Computer Vision | 3 | |
| | | Reverse Engineering and Malware Analysis | 3 | |
| | | Cryptocurrency Forensics | 3 | |
| 4 | EL 4 | Azure and GCP Essentials | 3 | VIII |
| | | Conversational AI | 3 | |
| | | Secure Coding | 3 | |
| | | Blockchain and Laws | 3 | |
| 5 | EL 5 | Cloud Storage Technologies | 3 | VIII |
| | | Augmented Reality/Virtual Reality | 3 | |
| | | Cyber security and Forensics | 3 | |
| | | Blockchain in Healthcare | 3 | |

## Table 3.2

## Program/Specialization Elective Courses

### B.Tech - Computer Science and Engineering

### Specialization: Artificial Intelligence and Analytics

| Sr. No. | Elective Basket No. | Course Title | No. of Credits | Semester in which Course is offered |
|---|---|---|---|---|
| 1 | El 1 | Design & Analysis of Algorithm | 3 | V |
| | | Agile Software Development | 3 | |
| | | Information Security | 3 | |
| 2 | EL 2 | Cloud Computing | 4 | VI |
| | | Information Retrieval | 4 | |
| | | Digital Signal Processing | 4 | |
| 3 | EL 3 | Soft Computing | 3 | VI |
| | | Web Data Mining & Analytics | 3 | |
| | | UI/UX Design | 3 | |
| 4 | EL 4 | Gamification | 3 | VII |
| | | Social Network Analysis | 3 | |
| | | Soft Computing | 3 | |
| | | IoT | 3 | |
| 5 | EL 5 | Augmented & Virtual Reality | 3 | VII |
| | | Digital Image Processing | 3 | |
| | | Blockchain Technology | 3 | |
| | | Conversational AI | 3 | |
| 6 | EL 6 | Computer Vision | 3 | VIII |
| | | Applied Edge Computing | 3 | |
| | | Human Computer Interaction | 3 | |
| | | Reinforcement Learning | 3 | |
| 7 | EL 7 | Bioinformatics & Applications | 3 | VIII |
| | | Cognitive Computing | 3 | |
| | | PE-7: Generative AI | 3 | |
| | | Quantum Computing | 3 | |

## Table 3.3
## Program/Specialization Elective Courses

**B.Tech - Computer Science and Engineering**

**Specialization: Artificial Intelligence and Edge Computing**

| Sr. No. | Elective Basket No. | Course Title | No. of Credits | Semester in which Course is offered |
|---|---|---|---|---|
| 1 | EL 1 | Design & Analysis of Algorithm | 3 | V |
| | | CI/CD Pipeline and Tools | 3 | |
| | | Computing Paradigm | 3 | |
| 2 | EL 2 | Edge Computing Use Cases and Industry Applications | 4 | VI |
| | | Fog Computing | 4 | |
| | | Information Retrieval | 4 | |
| 3 | EL 3 | Digital Signal Processing | 3 | VI |
| | | UI/UX Design | 3 | |
| | | Legal and Ethical Considerations of Edge Computing | 3 | |
| 4 | EL 4 | Computer Vision | 3 | VII |
| | | Special Data Analysis Tools and Techniques | 3 | |
| | | Cloud and Business Process Management | 3 | |
| | | Wireless Ad Hoc and Sensor Networks | 3 | |
| 5 | EL 5 | Reinforcement Learning | 3 | VII |
| | | Cloud Security, Backup & Disaster Recovery | 3 | |
| | | Data Visualization | 3 | |
| | | AR & VR | 3 | |
| 6 | EL 6 | Dockers and Containers | 3 | VIII |
| | | Natural Language Processing | 3 | |
| | | Software Defined Network | 3 | |
| | | Edge Computing Standards and Interoperability | 3 | |
| 7 | EL 7 | Edge Security and Privacy | 3 | VIII |
| | | Big Data Analytics | 3 | |
| | | ML Ops in Edge | 3 | |
| | | Edge Computing Economics and Business Models | 3 | |

## Table 3.4
## Program/Specialization Elective Courses

**B.Tech - Computer Science and Engineering**

**Specialization: Cloud Computing**

| Sr. No. | Elective Basket No. | Course Title | No. of Credits | Semester in which Course is offered |
|---|---|---|---|---|
| 1 | EL 1 | Cloud Computing and Internet of Things | 3 | VI |
| | | Access and Control Management | 3 | |
| | | Azure and GCP essentials | 3 | |
| 2 | EL 2 | Big Data Analytics | 3 | VII |
| | | Cloud Big Data Services | 3 | |
| | | Cloud Computing and Blockchain | 3 | |
| 3 | EL 3 | e-Cloud Computing | 3 | VIII |
| | | Management and design of Networks | 3 | |
| | | Cloud DevOps | 3 | |
| 4 | EL 4 | Network design for Data centers | 3 | VIII |
| | | Cloud governance and compliance | 3 | |
| | | Cloud storage technologies | 3 | |

## Table 3.5
## Program/Specialization Elective Courses

**B.Tech - Computer Science and Engineering**

**Specialization: Big Data and Cloud Engineering**

| Sr. No. | Elective Basket No. | Course Title | No. of Credits | Semester in which Course is offered |
|---|---|---|---|---|
| 1 | EL 1 | Cloud Storage | 3 | VII |
| | | Cloud Economics | 3 | |
| | | Text Analytics & Natural Language Processing | 3 | |
| | | Big Data & Governance | 3 | |
| 2 | EL 2 | Big Data for Healthcare | 3 | VII |
| | | Cloud DevOps | 3 | |
| | | Big Data for Finance | 3 | |
| | | Software as a Service | 3 | |
| 6 | EL 3 | Cloud Governance | 3 | VIII |
| | | Social Network Analysis | 3 | |
| | | Data Visualization | 3 | |
| 7 | EL 4 | Big Data for IOT | 3 | VIII |
| | | Data Migration | 3 | |
| | | Distributed Systems | 3 | |

## Table 3.6

## Program/Specialization Elective Courses

**B.Tech - Computer Science and Engineering**

**Specialization: Cyber Security and Forensics**

| Sr. No. | Elective Basket No. | Course Title | No. of Credits | Semester in which Course is offered |
|---|---|---|---|---|
| 1 | EL 1 | Digital Watermarking and Steganography | 3 | VI |
| | | Mobile Security | 3 | |
| | | Disaster Recovery and Business Continuity Management | 3 | |
| | | Information Security Analysis and Audit Management | 3 | |
| 2 | EL 2 | 5G Security | 3 | VII |
| | | Bio-Metrics Security | 3 | |
| | | Cloud Security | 3 | |
| | | Privacy and Security in Online Social Media (NPTEL) | 3 | |
| 3 | EL 3 | Reverse Engineering & Malware Analysis | 3 | VIII |
| | | Embedded security | 3 | |
| | | Storage Management and Security | 3 | |
| | | Forensics and Incident Response | 3 | |
| 4 | EL 4 | Intrusion Detection and Prevention System | 3 | VIII |
| | | Internet Technologies and Cyber Laws | 3 | |
| | | Shell Scripting for System Administration | 3 | |
| | | Secure Coding | 3 | |

## Table 3.7

## Program/Specialization Elective Courses

### B.Tech - Computer Science and Engineering

### Specialization: Blockchain

| Sr. No. | Elective Basket No. | Course Title | No. of Credits | Semester in which Course is offered |
|---|---|---|---|---|
| 1 | EL 1 | Bitcoin and Cryptocurrencies | 3 | VI |
| | | Cryptocurrency Economics | 3 | |
| | | Cryptocurrency Usecases and applications | 3 | |
| | | Cryptocurrency Investment and Disruption | 3 | |
| 2 | EL 2 | Hyperledger Sawtooth framework | 3 | VII |
| | | ARVR Game development | 3 | |
| | | Decentralized Fintech | 3 | |
| | | Cryptocurrency Forensics | 3 | |
| 3 | EL 3 | Polygon Development | 3 | VIII |
| | | Web3 Development | 3 | |
| | | Blockchain In Supply Chain Management | 3 | |
| | | Blockchain legal issues | 3 | |
| 4 | EL 4 | R3 Corda: DAPP development | 3 | VIII |
| | | Metaverse Development | 3 | |
| | | Blockchain in healthcare | 3 | |
| | | Advanced Cryptocurrency Forensics investigation | 3 | |

# Table 4
# Open/Generic Electives
## B.Tech - Computer Science and Engineering
## (All Specializations)

| Sr. No. | Elective Basket No. | Course Title | No. of Credits | Name of the Department /Institute/School | Semester in which Course is offered |
|---|---|---|---|---|---|
| 1 | OE 1 | Drawing & Painting-1 | 3 | SOFA | I |
| | | Sculpture Clay Modelling-1 | 3 | SOFA | |
| | | Photography- 1 | 3 | SOFA | |
| | | Architectural Sensibility-1 | 3 | SOA | |
| | | Literary Sensibility for Enhanced Personality-1 | 3 | MITCOM | |
| | | Intercultural Appreciation and Exchange-1 | 3 | SOFA | |
| | | Indian Classical Music (Vocal)-1 | 3 | SOFA | |
| | | Light Classical & Popular Music (Vocal)-1 | 3 | SOFA | |
| | | Classical Dance- Kathak-1 | 3 | SOFA | |
| | | Event Management-1 | 3 | MITCOM | |
| | | Folk Dance-1 | 3 | SOFA | |
| | | Instrumental Music-Harmonium / Key-board-1 | 3 | SOFA | |
| | | Instrumental Music -Tabla-1 | 3 | SOFA | |
| | | Instrumental Music-Guitar-1 | 3 | SOFA | |
| | | Drama-1 | 3 | SOFA | |

## Table 4 (contd.)

| Sr. No. | Elective Basket No. | Course Title | No. of Credits | Name of the Department /Institute/School | Semester in which Course is offered |
|---|---|---|---|---|---|
| 2 | OE 2 | Drawing & Painting-2 | 3 | SOFA | II |
| | | Sculpture Clay Modelling-2 | 3 | SOFA | |
| | | Photography- 2 | 3 | SFT | |
| | | Architectural Sensibility-2 | 3 | SOA | |
| | | Literary Sensibility for Enhanced Personality-2 | 3 | MITCOM | |
| | | Intercultural Appreciation and Exchange-2 | 3 | SOFA | |
| | | Indian Classical Music (Vocal)-2 | 3 | SOFA | |
| | | Light Classical & Popular Music (Vocal)-2 | 3 | SOFA | |
| | | Classical Dance- Kathak-2 | 3 | SOFA | |
| | | Event Management-2 | 3 | MITCOM | |
| | | Folk Dance-2 | 3 | SOFA | |
| | | Instrumental Music-Harmonium / Key-board-2 | 3 | SOFA | |
| | | Instrumental Music -Tabla-2 | 3 | SOFA | |
| | | Instrumental Music-Guitar-2 | 3 | SOFA | |
| | | Drama-2 | 3 | SOFA | |
| | | Digital Film making and Appreciation-2 | 3 | SOFA | |
| 3 | OE3 | DeepTech in Finance | 2 | MITCOM | V |
| | | Music Lessons | 2 | SOFA | |
| | | Photography | 2 | SOFT | |
| | | Classical music in film | 2 | SOFA | |

## Table 5
## Multidisciplinary Minors (MDM)

### B.Tech - Computer Science and Engineering

**(All Specializations)**

| Sr. No. | Minor Title | Course Title | No. of Credits | Semester in which Course is offered | Name of the Department /Institute/School |
|---|---|---|---|---|---|
| 1 | Marketing | Basics of Marketing | 4 | 4 | MIT College of Management |
| | | Product and Brand Management | 4 | 6 | |
| | | Sales and distribution management | 4 | 7 | |
| | | B2B marketing | 2 | 8 | |
| 2 | FinTech | Fintech Foundations | 4 | 4 | |
| | | Digital Currencies | 4 | 6 | |
| | | Crowd Funding | 4 | 7 | |
| | | DeepTech in Finance | 2 | 8 | |
| 3 | Genomics | Introduction to Bioinformatics | 4 | 4 | MIT School of Bio Engineering Sciences and Research |
| | | AI/ML for drug design | 4 | 6 | |
| | | Genomics | 4 | 7 | |
| | | Capstone Project | 2 | 8 | |
| 4 | Indian Dance Forms MITVSKA | Basics of Indian Classical Dance | 4 | 4 | School of Film and Television |
| | | Folk dance | 4 | 6 | |
| | | Classical Dance | 4 | 7 | |
| | | Fusion | 2 | 8 | |
| 5 | Digital Arts | Photoshop | 4 | 4 | School of Fine Arts |
| | | Blender | 4 | 6 | |
| | | Maya | 4 | 7 | |
| | | Unity | 2 | 8 | |
| 6 | Indian Vocal Music Forms | Basics of Indian Classical Music | 4 | 4 | School of Fine Arts |
| | | Ghazal | 4 | 6 | |
| | | Film and non-film music | 4 | 7 | |
| | | Semi classical | 2 | 8 | |

## Table 6
## Vocational and Skill Enhancement Courses
### B.Tech - Computer Science and Engineering

**(All Specializations)**

| Sr. No. | Course Title | No. of credits | Type of Courses | Name of the Department/Institute/ School | Semester in which Course is offered |
|---|---|---|---|---|---|
| 1 | Design Thinking Part-I | 2 | VSEC | SOC | I |
| 2 | Design Thinking Part-II | 2 | VSEC | SOC | II |
| 3 | Programming Language | 2 | VSEC | SOC | IV |
| 4 | Project Based Learning | 2 | VSEC | SOC | V |

## Table 7
## Multidisciplinary Holistic Development Courses - Humanities, Social Sciences, Management + Liberal Learning

**B.Tech - Computer Science and Engineering**

**(All Specializations)**

| Sr. No. | Course Title | No. of credits | Type of Courses | Name of the department/ Institute/ School | Semester in which Course is offered |
|---|---|---|---|---|---|
| 1 | Ability Enhancement Course – I (English language/language) | 2 | AEC | SHD | I |
| 2 | Health Practices - I | 2 | CC | SHD | I |
| 3 | Ability Enhancement Course – II | 2 | AEC | SHD | II |
| 4 | Indian Knowledge System | 1 | HSSM | SVS | II |
| 5 | Health Practices - II | 2 | CC | SHD | II |
| 6 | Environmental Studies | 2 | HSSM | SOES | III |
| 7 | Economics for Engineers | 2 | VEC | SOC | III |
| 7 | Project Based Learning - I | 2 | AEC | SOC | III |
| 8 | Entrepreneurship | 2 | VEC | SCIL | IV |
| 9 | Aptitude and Professional Skills Core | 2 | VEC | SCIL | V |
| 10 | Foreign Languages | 1 | AEC | SHD | VI |
| 11 | Aptitude and Professional Skills Industry Readiness | 2 | VEC | SCIL | VI |