**National Education Policy (NEP) Compliant Curriculum Structure for**
**B. Tech (Computer Science and Technology)**
**(With effect from Academic Year 2025-26)**



**Department of Computer Science and Engineering**

# Symbiosis Institute of Technology, Hyderabad.

**Constituent of Symbiosis International (Deemed University), Pune.**

Established under Section 3 of the UGC Act of 1956 vide notification number F-9-12/2001-U-3 of the Government of India)
Re-Accredited by NAAC with 'A++' Grade

**Survey Number 292, Off Bangalore Highway, Modallaguda (V), Nandigama (M), Rangareddy Dist, Hyderabad, Telangana, India, Pin Code: 509217**

**Symbiosis Institute of Technology, Hyderabad**
**Bachelor of Technology (Computer Science & Technology)**
**Programme Structure 2025-29**

| 1. | OBJECTIVE | B. Tech (Computer Science and Technology) is a full-time four-year graduation programme, which aims at transforming a student into a technically sound professional. The syllabus contains courses on basic sciences, technical arts, humanities & liberal arts and professional courses. The mix of these courses has been evolved with an aim to produce professionals who have knowledge not only of Engineering but who are good managers to contribute in a cross-functional team and have human values. Being a professional programme, it ensures a healthy balance between theoretical foundation and practical exposure to the present-day world.<br>The emphasis is to develop all round personality that would enable the students to take up the challenges of the corporate world and also become responsible citizens of the society. | | |
|---|---|---|---|---|
| 2. | DURATION (IN MONTHS) | 48 (Full Time) | | |
| 3. | INTAKE | 30 | | |
| 4. | RESERVATION | **I.Within the sanctioned intake** | **a) SC (In Percentage)** | **b) ST (In Percentage)** | **c) Differently abled (In Percentage)** |
| | | | 15 | 7.5 | 3 |
| | | **II.Over and above the sanctioned intake** | **a) Kashmiri Migrants (In Seats)** | **b) International Students (In Percentage)** | |
| | | | 2 | 20 | |
| 5. | ELIGIBILITY | Passed 10+2 examination with Physics and Mathematics as compulsory subjects along with one of Chemistry/ Computer Science/Electronics/ Information Technology/Biology/Informatics Practices/ Biotechnology/Technical Vocational subject/ Agriculture/ Engineering Graphics/Business Studies /Entrepreneurship. Obtained at least 45% marks (40% marks in case of candidates belonging to reserved category) in the above subjects taken together.<br>OR<br>Passed D.Voc. Stream in the same or allied sector.(The University will offer suitable bridge courses such as Mathematics, Physics, | | |

| | | Engineering drawing, etc., for students coming from diverse backgrounds to prepare Level playing field and desired learning outcomes of the programme). |
|---|---|---|
| | | B.Tech. : Lateral Entry |
| | | Passed Minimum Three-years/ Two-year (Lateral Entry) Diploma examination with at least 45% marks (40% marks in case of candidates belonging to reserved category) in ANY branch of Engineering and Technology. OR |
| | | Passed B.Sc. Degree from a recognized University as defined by UGC, with atleast 45% marks (40% marks or equivalent grade for Scheduled Caste / Scheduled Tribes) and passed 10+2 examination with Mathematics as a subject. OR |
| | | Passed B. Voc/3-year D.Voc. Stream in the same allied sector. (The Constituent will offer suitable bridge courses such as Mathematics, Physics, Engineering drawing, etc., for the students coming from diverse backgrounds to achieve desired learning outcomes of the programme). |
| 6. | SELECTION PROCEDURE | Merit list by valid score of Symbiosis Entrance Test (SITEEE) or Joint Entrance Examination (JEE - Main) or Any State Government Engineering Entrance Examination. |
| 7. | MEDIUM OF INSTRUCTION | English |
| 8. | PROGRAMME PATTERN | Semester |
| 9. | COURSE & SPECIALIZATION | Annexure A: Bachelor of Technology (Computer Science and Technology) |

| 10. | FEE | | Academic Fee p.a | Institute Deposit | Total |
|---|---|---|---|---|---|
| | Indian Students (Amount in INR) | | 270000 | 20000 | 290000 |
| | International Students | NRI/ PIO/ OCI Category (Amount in US$) | | | |

| | | | |
|---|---|---|---|
| | | **Foreign National Category (Amount in US$)** | | | |
| **11.** | **ASSESSMENT** | The courses will have 60% Continuous Assessment and 40% Term End [University] examination however, some courses (not more than 30% of the total programme credits) may have 100% Continuous Assessment. |
| **12.** | **STANDARD OF PASSING** | The assessment of the student for each examination is done, based on relative performance. Maximum Grade Point (GP) is 10 corresponding to O (Outstanding). For all courses, a student is required to pass both internal and external examinations separately with a minimum Grade Point of 4 corresponding to Grade P. Students securing less than 40% absolute marks in each head of passing will be declared FAIL. The University awards a degree to the student who has achieved a minimum CGPA of 4 out of maximum of 10 CGPA for the programme |
| **13.** | **AWARD OF DEGREE** | Bachelor of Technology (Computer Science and Technology) |

## 14. CLASSIFICATION OF CREDITS

| Semester | Generic Core | Generic Elective | Specialization Core | Specialization Elective | Open Elective | Mandatory Non-Credit Course/s | Non-Letter Grade Audit Course/s | Total |
|---|---|---|---|---|---|---|---|---|
| **Common** | | | | | | | | |
| 1 | 20 | 0 | 0 | 0 | 0 | 0 | As per the student's choice | 20 |
| 2 | 20 | 0 | 0 | 0 | 0 | 0 | | 20 |
| 3 | 20 | 0 | 0 | 0 | 0 | 0 | | 20 |
| 4 | 17 | 0 | 0 | 0 | 3 | 0 | | 20 |
| 5 | 15 | 4 | 0 | 0 | 3 | 0 | | 22 |
| 6 | 15 | 4 | 0 | 0 | 3 | 0 | | 22 |
| 7(A) | 14 | 8 | 0 | 0 | 0 | 0 | | 22 |
| 7(B) | 22 | 0 | 0 | 0 | 0 | 0 | | 22 |
| 8 | 14 | 0 | 0 | 0 | 0 | 0 | | 14 |
| **Total** | **135** | **16** | **0** | **0** | **9** | **0** | | **160** |

| Catalogue Course Code | Course Code | Course Title | Level | Nature | Specialization/ Area/ Department | Teaching Scheme (Hours Per Week) | | | Examination Scheme (Marks) | | | | Total Credits | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Practical | | Theory | | | |
| | | | | | | L | T | Lab | CA | ESE | CA | ESE | | |
| **Semester :1** | | | | | | | | | | | | | | |
| **Generic Core Courses** | | | | | | | | | | | | | | |
| | | Calculus | 1 | BS | | 3 | 1 | 0 | 0 | 0 | 60 | 40 | 4 | 100 |
| | | Fundamentals of Quantum Physics | 1 | BS | | 3 | 0 | 2 | 15 | 10 | 45 | 30 | 4 | 100 |
| | | Digital Electronics and Logic Design | 1 | ES | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | | Programming Paradigm and Problem Solving | 1 | ES | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | | Software and Generative AI Tools | 1 | ES | | 0 | 0 | 2 | 15 | 10 | 0 | 0 | 1 | **25** |
| | | Tinker Lab | 1 | ES | | 0 | 0 | 4 | 50 | 0 | 0 | 0 | 2 | 50 |
| | | Critical Thinking | 1 | HS | | 1 | 0 | 0 | 0 | 0 | 25 | 0 | 1 | 25 |
| | | Indian Knowledge System | 1 | IKS | | 2 | 0 | 0 | 0 | 0 | 50 | 0 | 2 | 50 |
| | | | | | **Total** | **13** | **1** | **12** | **110** | **40** | **240** | **110** | **20** | **500** |
| **Semester :2** | | | | | | | | | | | | | | |
| **Generic Core Courses** | | | | | | | | | | | | | | |
| | | Linear Algebra | 2 | BS | | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Microcontrollers and Sensors | 2 | ES | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | | Computer Architecture and Organization | 1 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | | Software Engineering | 1 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | | Python Programming | 1 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | | Cyber Security | 1 | ES | | 1 | 0 | 2 | 25 | 0 | 25 | 0 | 2 | 50 |
| | | Introduction to Environment and Sustainability | 1 | ES | | 0 | 0 | 2 | 25 | 0 | 0 | 0 | 1 | 25 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Technical Communication Skills | 1 | HS | | 0 | 0 | 2 | 25 | 0 | 0 | 0 | 1 | 25 |
| Creative Thinking | 1 | HS | | 0 | 0 | 2 | 25 | 0 | 0 | 0 | 1 | 25 |
| Health and Wellness-Module I | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MC | Non Graded Course |
| Career Essential - I* | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MC | Non Graded Course |
| | | | Total | 11 | 1 | 16 | 160 | 40 | 190 | 110 | 20 | 500 |
| **Semester :3** | | | | | | | | | | | | |
| **Generic Core Courses** | | | | | | | | | | | | |
| Discrete Mathematics | 2 | BS | CSE and IT | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Data Structures | 2 | PC | CSE and IT | 2 | 0 | 4 | 30 | 20 | 30 | 20 | 4 | 100 |
| Operating Systems | 2 | PC | CSE and IT | 3 | 0 | 2 | 15 | 10 | 45 | 30 | 4 | 100 |
| Database Management Systems | 2 | PC | CSE and IT | 2 | 0 | 4 | 30 | 20 | 30 | 20 | 4 | 100 |
| Programming with JAVA | 2 | PC | CSE and IT | 0 | 0 | 4 | 30 | 20 | 0 | 0 | 2 | 50 |
| Flexi Course | 2 | PC | CSE and IT | 0 | 0 | 4 | 50 | 0 | 0 | 0 | 2 | 50 |
| Web Application Development | 2 | PC | CSE and IT | 0 | 0 | 2 | 15 | 10 | 0 | 0 | 1 | 25 |
| Health and Wellness - Module-II * | | | Others | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MC | Non Graded Course |
| Career Essential - II* | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MC | Non Graded Course |
| | | | Total | 9 | 1 | 20 | 170 | 80 | 150 | 100 | 20 | 500 |
| **Semester:4** | | | | | | | | | | | | |
| **Generic Core Courses** | | | | | | | | | | | | |
| Statistics and Probability | 2 | BS | Applied Sciences | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Computer Networks | 2 | PC | CSE and IT | 3 | 0 | 2 | 15 | 10 | 45 | 30 | 4 | 100 |
| Software Testing Tools | 4 | PC | CSE and IT | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |

| Course | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Data Management and Visualization | 2 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| Design Thinking | 2 | HS | CSE and IT | 0 | 0 | 2 | 25 | 0 | 0 | 0 | 1 | 25 |
| Project Based Learning-I | 2 | PIS | CSE and IT | 0 | 0 | 4 | 50 | 0 | 0 | 0 | 2 | 50 |
| Advanced Python Lab | 3 | PC | Robotics and Automation | 0 | 0 | 2 | 15 | 10 | 0 | 0 | 1 | 25 |
| Career Essential-III* | 2 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MC | Non Graded Course |
| | | | **Total** | **9** | **1** | **14** | **135** | **40** | **150** | **100** | **17** | **425** |
| **Open Elective Courses Group - I (Choose Any One Course)** | | | | | | | | | | | | |
| Quantum Computing for Engineers | 2 | MOPE | Applied Science | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Mathematics for Data Science | 2 | MOPE | Applied Science | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Fundamentals of Machine Learning | 2 | MOPE | Artificial Intelligence and Machine Learning | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| AI System development | 2 | MOPE | Artificial Intelligence and Machine Learning | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Smart Cities planning and management | 2 | MOPE | Civil | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Intelligent Waste Management Techniques | 2 | MOPE | Civil | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Web Technologies | 2 | MOPE | Computer Science and Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Data Science | 2 | MOPE | Computer Science and Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Engineering Simulation and Modelling Tools | 2 | MOPE | Electronics & Tele-communication | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |

| | | Course | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Engineering | | | | | | | | | | |
| | | Medical Electronics | 2 | MOPE | Electronics & Tele-communication Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | 3D Printing and Prototyping | 2 | MOPE | Mechanical Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Battery Management Systems | 2 | MOPE | Mechanical Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Fundamentals of Robotics and Automation | 2 | MOPE | Robotics and Automation | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Robot Process Automation | 2 | MOPE | Robotics and Automation | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | | | | **Semester :5** | | | | | | | | | |
| | | | | | **Generic Core Courses** | | | | | | | | | |
| | | Theory of Computation | 3 | PC | | 3 | 0 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Cryptography and Information Security | 3 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | | Data Science and Business Intelligence | 3 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | | Introduction to Cloud Computing | 2 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | | Service Learning | | HS | | 0 | 0 | 4 | 50 | 0 | 0 | 0 | 2 | 50 |
| | | Entrepreneurship Venture | | HS | | 1 | 0 | 0 | 0 | 0 | 25 | 0 | 1 | 25 |
| | | Vasudhaiva Kutumbakam | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MC | Non Graded Course |
| | | Career Essential-IV* | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MC | Non Graded Course |
| | | | | | **Total** | **10** | **0** | **10** | **95** | **30** | **160** | **90** | **15** | **375** |
| | | | | | **Generic Elective Courses Group - I (Choose Any One Course)** | | | | | | | | | |
| | | Cloud Computing Tools and Techniques | 3 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | | Advanced Computer Networks | 3 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |

| Course | | Category | Dept | L | T | P | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Advances in Machine Learning | 3 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| Data Warehousing and Mining | 3 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| Essentials of Augmented and Virtual Reality | 3 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| IoT Data Analytics | 3 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | | | **Total** | | | | **25** | **0** | **75** | **0** | **4** | **100** |
| **Open Elective Courses Group - II (Choose Any One Course)** | | | | | | | | | | | | |
| Financial Mathematics | 3 | MOPE | Applied Science | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Advanced Materials | 3 | MOPE | Applied Science | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Optimization for ML Systems | 3 | MOPE | Artificial Intelligence and Machine Learning | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Deep Learning Essentials | 3 | MOPE | Artificial Intelligence and Machine Learning | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Sustainability Engineering- Design and Innovation | 3 | MOPE | Civil | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Occupational Health and Safety Management | 3 | MOPE | Civil | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Introduction to Cloud Computing | 3 | MOPE | Computer Science and Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Agile Methodologies | 3 | MOPE | Computer Science and Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Embedded System & IoT | 3 | MOPE | Electronics & Tele-communication Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |

| Course | Cr | Cat | Department | L | T | P | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Introduction to 5G Technology | 3 | MOPE | Electronics & Tele-communication Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Electric and Hybrid Vehicles | 3 | MOPE | Mechanical Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Six Sigma | 3 | MOPE | Mechanical Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| Industrial Robotics | 3 | MOPE | Robotics and Automation | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| PLC and SCADA | 3 | MOPE | Robotics and Automation | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| **Total** | | | | | | | **0** | **0** | **45** | **30** | **3** | **75** |
| **Semester : 6** | | | | | | | | | | | | |
| **Generic Core Courses** | | | | | | | | | | | | |
| Mobile Application Development | 4 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| Design and Analysis of Algorithms | 4 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| Blockchain Technology | 4 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| Flexi Course | 4 | PC | | 2 | 0 | 1 | 25 | 0 | 50 | 0 | 3 | 75 |
| Organizational Behaviour | | HS | | 1 | 0 | 0 | 0 | 0 | 25 | 0 | 1 | 25 |
| Project Based Learning-II | 4 | PIS | | 0 | 0 | 4 | 50 | 0 | 0 | 0 | 2 | 50 |
| Career Essential-V* | 4 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | MC | Non Graded Course |
| **Total** | | | | **9** | **0** | **11** | **120** | **30** | **165** | **60** | **15** | **375** |
| **Generic Elective Courses Group - II (Choose Any One Course)** | | | | | | | | | | | | |
| DevOps | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| Malware Analysis and Secure Coding | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| Computer Vision Applications | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| Pattern Recognition | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| Advance Databases | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |

| | | AR and VR Applications | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IoT Security | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | | | | | **Total** | | | | **25** | **0** | **75** | **0** | **4** | **100** |
| **Open Elective Courses Group - III (Choose Any One Course)** |
| | | Bioinformatics | 4 | MOPE | Applied Science | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Space Science | 4 | MOPE | Applied Science | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | GenAI Tools and Techniques | 4 | MOPE | Artificial Intelligence and Machine Learning | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Data Engineering | 4 | MOPE | Artificial Intelligence and Machine Learning | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | GIS and Remote Sensing Analytics | 4 | MOPE | Civil | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Environmental Impact Assessment | 4 | MOPE | Civil | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Software Testing and Quality Assurance | 4 | MOPE | Computer Science and Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Introduction to AR-VR | 4 | MOPE | Computer Science and Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Renewable Energy Systems | 4 | MOPE | Electronics & Tele-communication Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | Semiconductor Technology Trends | 4 | MOPE | Electronics & Tele-communication Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |

| | Course | | Category | Department | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Supply Chain Management | 4 | MOPE | Mechanical Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | Smart Manufacturing and Introduction of Industry 5.0 | 4 | MOPE | Mechanical Engineering | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | Mobile Robotics | 4 | MOPE | Robotics and Automation | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | Introduction to Aerial Robotics and Drone Technology | 4 | MOPE | Robotics and Automation | 2 | 1 | 0 | 0 | 0 | 45 | 30 | 3 | 75 |
| | | | | **Total** | | | | **0** | **0** | **45** | **30** | **3** | **75** |
| **Semester : 7 (Plan A)** | | | | | | | | | | | | |
| **Students will register for Scheme-A(Regular semester pattern)/ Scheme B (Internship/Entrepreneurship full time/GIP)/BTech(Research)** | | | | | | | | | | | | |
| **Generic Core Courses** | | | | | | | | | | | | |
| | Big Data Analytics | 4 | PC | | 2 | 0 | 2 | 15 | 10 | 30 | 20 | 3 | 75 |
| | Project Management and Practices | 4 | PC | | 2 | 0 | 0 | 0 | 0 | 30 | 20 | 2 | 50 |
| | Flexi Course | 4 | PC | | 2 | 0 | 2 | 50 | 0 | 25 | 0 | 3 | 75 |
| | B.Tech Project | 4 | PIS | | 0 | 0 | 8 | 60 | 40 | 0 | 0 | 4 | 100 |
| | Flexi Course (MOOC) | 4 | PE | | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 2 | 50 |
| | | | | **Total** | **6** | **0** | **12** | **125** | **50** | **135** | **40** | **14** | **350** |
| **Generic Elective Courses Group - III (Choose Any One Course)** | | | | | | | | | | | | |
| | Cloud Security and Privacy | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | IoT in Smart Cities | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | Business and Finance Analytics | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | Building and Training Large Language Models | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | Human Computer Interface | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | Distributed Databases | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | | | | **Total** | | | | **25** | **0** | **75** | **0** | **4** | **100** |
| **Generic Elective Courses Group - IV (Choose Any One Course)** | | | | | | | | | | | | |
| | High Performance Computing | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |

| | | Course | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Digital Forensics | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | | Soft Computing | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | | Information Storage & Retrieval | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | | Robotics and AI | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | | IT Infrastructure and Automation | 4 | PE | | 3 | 0 | 2 | 25 | 0 | 75 | 0 | 4 | 100 |
| | | | | | **Total** | | | | **25** | **0** | **75** | **0** | **4** | **100** |
| Semester : 7 (Plan B) | | | | | | | | | | | | | | |

**Semester : 7 (Plan B)**

**Students will register for Scheme-A(Regular semester pattern)/ Scheme B (Internship/Entrepreneurship full time/GIP)/BTech(Research)**

**Generic Core Courses**

| | | Course | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B.Tech Project | | PIS | | 0 | 0 | 8 | 60 | 40 | 0 | 0 | 4 | 100 |
| | | Internship-I | | PIS | | 0 | 0 | 20 | 250 | 0 | 0 | 0 | 10 | 250 |
| | | Seminar -I | | PIS | | 0 | 0 | 10 | 75 | 50 | 0 | 0 | 5 | 125 |
| | | Flexi Course (MOOC) | | PC | | 0 | 0 | 6 | 75 | 0 | 0 | 0 | 3 | 75 |
| | | | | | **Total** | | 0 | 0 | 44 | 460 | 90 | 0 | 0 | 22 | 550 |

**Semester : 8**

**Generic Core Courses**

| | | Course | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Internship | | PIS | | 0 | 0 | 24 | 180 | 120 | 0 | 0 | 12 | 300 |
| | | Seminar | | PIS | | 0 | 0 | 4 | 30 | 20 | 0 | 0 | 2 | 50 |
| | | | | | **Total** | | 0 | 0 | 28 | 210 | 140 | 0 | 0 | 14 | 350 |

**Symbiosis Institute of Technology, Hyderabad**
**Bachelor of Technology (Computer Science and Technology)**
**Programme Structure 2025-29**
**Annexure A**

| Semester | Continuous Assessment | Term End Examination | Total Credits | Total Marks |
|---|---|---|---|---|

|  |  |  |  |  |
|---|---|---|---|---|
| Semester 1 |  |  | 20 | 500 |
| Semester 2 |  |  | 20 | 500 |
| Semester 3 |  |  | 20 | 500 |
| Semester 4 |  |  | 20 | 500 |
| Semester 5 |  |  | 22 | 550 |
| Semester 6 |  |  | 22 | 550 |
| Semester 7 |  |  | 22 | 550 |
| Semester 8 |  |  | 14 | 350 |
| **Total** |  |  | **160** | **4000** |