CURRICULUM

Academic Year 2025 – 2026 (Autonomous)

Undergraduate Bachelor of Engineering Program- B.E.

Outcome Based Education (OBE)

III & IV SEM

DEPARTMENT OF CSE- (IOT & CSBT)

An Autonomous Institution Affiliated to Visvesvaraya Technological University (VTU) Belagavi
Approved by All India Council for Technical Education (AICTE), New Delhi. Recognized by Govt. of Karnataka
UG programs Accredited by National Board of Accreditation (NBA): CSE, ECE & ISE

2025-2026

About the Institute

East Point College of Engineering and Technology (EPCET) was established in the year 1999 by M. G. Charitable Trust, Bangalore. The College is in the eastern part of Bangalore at Bidarahalli, Virgo Nagar Post, off old Madras Road. It is at a five (5) kilometers distance from K R Puram, Bangalore-49.

The College is affiliated to Visvesvaraya Technological University (VTU), Belgaum. All the Undergraduate B.E. and Post Graduate programs MTech. Offered at EPCET have the approval of AICTE. The College at present offers programs in Artificial Intelligence and Data Science, Computer Science & Engineering, Information Science & Engineering, Electronics & Communication Engineering, Mechanical Engineering, CSE (IOT& CSBT) and Civil Engineering leading to BE degree of VTU. The college is also offering three M. Tech programs- one each in Mechanical Engineering and Civil Engineering. At EPCET, more than 2500 students are studying in various programs, and there are more than 145 faculty members with about 25% of them having Ph.D. Qualifications. Faculty members, in addition to teaching and routine administrative work, undertake research. A few faculty members work in collaboration with prestigious national laboratories like LRDE- DRDO and publish their research findings in Refereed Peer Reviewed Journals. The programs offered by the college were accredited by the NBA during 2008-2011 and 2023-2026.

All the students of the final year undergo internships in reputed industries and more than 80% of the students get placement offers on campus in companies like VMware, Cognizant, Infosys, Accenture, IBM, Covance, and so on. The departments offer various competency and skill development courses to prepare the students for the job market. In addition to this Institute has a unit "Industry Institute Integrated Learning Program (IILP)" with CISCO, AWS, Salesforce, Google Cloud, ARM, UiPath, Microsoft and Texas Instruments. These courses are conducted, and students are encouraged and supported to obtain certification. A significant number of Alumni have assumed important positions in industry and government. A few alumni have set up their own start-ups in and around Bangalore and a considerable number have settled down overseas. The Institute has enough classrooms, Tutorial rooms, seminar halls, well-equipped laboratories, and a library with more than 50000 books. The campus is completely Wi-Fi enabled. In the laboratories, industry-standard software is made available for students to learn and practice

The college encourages faculty members to attend seminars, conferences organized by other Colleges and industries. Also, faculties have been given the freedom to organize seminars, conferences, and faculty development programs annually. Every year at least 5-6 seminars/ conferences/ FDP are conducted. Seminar halls are available within the college for organizing Student Development programmers and conferences. The College has entered MoU with several industries and foreign Universities.

The campus has Medical College, a Superspecialist hospital with 800 beds, Pharmacy College, Two

Nursing Institutes, a Higher Education Institute and a PU Institute. Students have opportunities to interact with students of medical, pharmacy nursing, management, commerce, and Science. Students have transport, hostel and sports facilities. There are more than 15 students' clubs for students to participate in various activities and experience. The College has set an ambitious vision, and it is working continuously to adapt newer concepts in teaching, learning, and student assessments to realize its vision through working on its mission. The College aims to increase the students' satisfaction level with a holistic approach to education.

About the department

The Department of Computer Science and Engineering (IOT & CSBT) at East Point College of Engineering and Technology (EPCET), established in 2022-23 and the Institute is affiliated with VTU, Belagavi. Department offers a four-year B.E. program with 60 student intakes. Its mission is to provide students with a strong foundation in computer science, programming, and emerging technologies. The curriculum covers a wide range of subjects, including programming languages, algorithms, operating systems, and artificial intelligence. The department also boasts a VTU-recognized research center, well-equipped labs, and a dedicated faculty involved in research and teaching. Graduates have secured admissions to prestigious universities and excelled in leading IT companies

About the program

Year of Establishment	2022-23
Name of the Program offered	BE- Computer Science & Engineering (IOT & CSBT)
Intake	60

Institute Vision and Mission

Vision
The East Point College of Engineering and Technology aspires to be a globally acclaimed institution, recognized for excellence in engineering education, applied research, and nurturing students for holistic development.

Mission

M1: To create Engineering graduates through quality education and to nurture innovation, creativity and excellence in teaching, learning and research.

M2: To serve the technical, scientific, economic and societal developmental needs of our communities.

M3: To induce integrity, teamwork, critical thinking, personality development, and ethics in students and to lay the foundation for lifelong learning.

Department Vision and Mission

Vision

To be the foremost innovator and leader in the field of IoT and Cybersecurity, driving the evolution of secure and connected technologies, ensuring the trust and safety of digital ecosystems worldwide.

Mission

M1: We are dedicated to advancing digital trust by pioneering cutting- edge solutions that secure IoT devices, networks, and data, guaranteeing the reliability and privacy of the connected world.

M2: Our mission is to continuously innovate and develop robust cyber security technologies that proactively anticipate and counter emerging threats, fostering a secure environment or IoT (Internet of Things) applications.

M3: We are committed to educating and empowering businesses, individuals, and communities through extensive training and awareness programs, equipping them with the knowledge to defend against cyber threats.

Program Educational Objectives (PEOs)

PEO1: Graduates will have successful careers in IoT and Cyber Security or related fields, demonstrating expertise and leadership in securing and managing interconnected systems.

PEO2: Graduates will engage in lifelong learning and professional development, staying current with evolving technologies and security threats to adapt to changing industry demands.

PEO3: Graduates will possess the skills to analyze and solve complex IoT and cyber security challenges, applying critical thinking, ethical decision-making, and innovative approaches.

Program Specific Outcome (PSO)

PSO1: Graduates will be proficient in understanding, configuring, and securing IoT devices, networks, and platforms, including familiarity with IoT protocols and technologies.

PSO2: Graduates will have expertise in securing IoT devices, including hardware security, firmware integrity, and encryption of data at rest and in transit.

PSO3: Graduates will possess the skills to conduct digital forensics investigations in IoT environments to trace and analyze security incidents.

Semester wise Credit Breakdown for B.E Degree Curriculum Batch 2025-29

Sl. No	Category	Credits Per Semester								Total Credits	Credits in %
		I	II	III	IV	V	VI	VII	VIII		
1	HSMC	1	2			3				6	4%
2	PLC/ETC	3	3							6	4%
3	BSC/ASC	8	8	4						20	13%
4	IPCC			4	4	4	4	4		20	13%
5	PCC			7	9	4	3	8		31	19%
6	PEC					4	8	4		16	10%
7	OEC						3	4		7	4%
8	PCCL			1	1	1	1	1		5	3%
9	ESC	6	6	3	3					18	11%
10	AEC/ SEC/ SDC/ TS/UHV	2	1	1	3	3				10	6%
11	INT								5	5	3%
12	PROJ						2	2	12	16	10%
	Total	20	20	20	20	19	21	23	17	160	100%

SDA-Skill Development Activities, TD/PSB- Teaching Department / Paper Setting Board, ASC-Applied Science Course, ESC- Engineering Science Courses, ETC- 29052023/V10 scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE) 2 Emerging Technology Course, AEC- Ability Enhancement Course, HSMS-Humanity and Social Science and management Course, SDC- Skill Development Course, CIE–Continuous Internal Evaluation, SEE- Semester End Examination, IC – Integrated Course (Theory Course Integrated with Practical Course)

PCC Value Course, MC: Mandatory Course (Non-credit), AEC: Ability Enhancement Course, SEC: Skill Enhancement Course, L: Lecture, T: Tutorial, P: Practical. ESC: Engineering Science Course, ETC: Emerging Technology Course, PLC: Programming Language Course, MC Mandatory Course, PCC: Professional Core Course, PCCL: Professional Core Course laboratory, UHV: Universal Human

III Semester

<table>
<tr><td colspan="14">BE in Computer Science & Engineering (IOT & CSBT)
Scheme of Teaching III Semester
Outcome Based Education and Choice Based Credit System (CBCS)
Effective from the academic year Batch - 2025-2029</td></tr>
<tr><td rowspan="3">Sl. No</td><td rowspan="3">Course</td><td rowspan="3">Course Code</td><td rowspan="3">Course Title</td><td rowspan="3">Teaching Department (TD)/ Board</td><td colspan="4">Teaching Hours /Week</td><td colspan="4">Examination</td></tr>
<tr><td>Theory</td><td>Tutorial</td><td>Practical</td><td>SDA</td><td>CIE Marks</td><td>SEE Marks</td><td>Total Marks</td><td rowspan="2">Credits</td></tr>
<tr><td>L</td><td>T</td><td>P</td><td>S</td><td></td><td></td><td></td></tr>
<tr><td>1</td><td>BSC</td><td>24IC31</td><td>Mathematics III for CSE</td><td>Mathematics</td><td>3</td><td>2</td><td>0</td><td>0</td><td>50</td><td>50</td><td>100</td><td>04</td></tr>
<tr><td>2</td><td>PCC</td><td>24IC32</td><td>Operating Systems</td><td>IoT</td><td>4</td><td>0</td><td>0</td><td>0</td><td>50</td><td>50</td><td>100</td><td>04</td></tr>
<tr><td>3</td><td>PCC</td><td>24IC33</td><td>Data Structure & Applications</td><td>IoT</td><td>3</td><td>0</td><td>0</td><td>0</td><td>50</td><td>50</td><td>100</td><td>03</td></tr>
<tr><td>4</td><td>IPCC</td><td>24IC34</td><td>Digital Design & Computer Organization</td><td>IoT</td><td>3</td><td>0</td><td>2</td><td>0</td><td>50</td><td>50</td><td>100</td><td>04</td></tr>
<tr><td>5</td><td>PCCL</td><td>24ICL35</td><td>Data Structure & Applications lab</td><td>IoT</td><td>0</td><td>0</td><td>2</td><td>0</td><td>50</td><td>50</td><td>100</td><td>01</td></tr>
<tr><td>6</td><td>ESC/ PLC</td><td>24IC36X</td><td>ESC/PLC</td><td>IoT</td><td>2</td><td>0</td><td>2</td><td>0</td><td>50</td><td>50</td><td>100</td><td>03</td></tr>
<tr><td>7</td><td>AEC</td><td>24IC37X</td><td>Ability Enhancement Course - III</td><td>IoT dept/ IT Industry</td><td>0</td><td>0</td><td>2</td><td>0</td><td>50</td><td>50</td><td>100</td><td>01</td></tr>
<tr><td>8</td><td>MC</td><td>24NS38/ 24PE38/ 24YO38</td><td>NSS/ PE/ YOGA</td><td>NSS/YOGA/ PE coordinator</td><td>0</td><td>0</td><td>2</td><td>0</td><td>100</td><td>-</td><td>100</td><td>-</td></tr>
<tr><td colspan="5">Total</td><td></td><td></td><td></td><td></td><td>450</td><td>350</td><td>800</td><td>20</td></tr>
</table>

Engineering Science Course (ESC/PLC)– III

Course Code	Course Title
24IC36A	Object Oriented Programming with Java
24IC36B	Object Oriented Programming with C++
24IC36C	Python for Data Science

Ability Enhancement Course

Course Code	Course Title
24IC37A	IOT Case Studies and Future Trends
24IC37B	IOT with ARDUINO
24IC37C	Prompt Engineering
24IC37D	Cyber Security and its Applications

IV Semester

					Teaching Hours /Week				Examination			
Sl. No	Course	Course Code	Course Title	Teaching Department (TD)/ Board	Theory	Tutorial	Practical	SDA	CIE Marks	SEE Marks	Total Marks	Credits
					L	T	P	S				
1	PCC	24IC41	Design and Analysis Algorithm	IoT	3	0	0	0	50	50	100	3
2	PCC	24IC42	Database Management System	IoT	3	0	0	0	50	50	100	3
3	PCC	24IC43	Python for Web Security	IoT	3	0	0	0	50	50	100	3
4	IPCC	24IC44	Microcontroller and IoT	IoT	3	0	2	0	50	50	100	4
5	PCCL	24ICL45	Design and Analysis Algorithm Lab	IoT	0	0	2	0	50	50	100	1
6	BSC/ ESC	24IC46X	BSC/ESC	IoT Dept./Mathematics Dept.	2	2	0	0	50	50	100	3
7	AEC	24IC47X	Ability Enhancement Course	IoT Dept./ IT Industry	0	0	2	0	50	50	100	1
8	UHV	24UH48	Universal Human Values	Any Dept.	2	0	0	0	50	50	100	2
9	MC	24NS49/ 24PE49/ 24YO49	NSS/PE/YOGA	NSS/YOGA/ PE COORDINATOR	0	0	2	0	100	-	100	-
	Total								500	400	900	20

Engineering Science Course (BSC/ESC)– IV

Course Code	Course Title
24IC46A	Linear Algebra
24IC46B	Discrete Mathematics Structures
24IC46C	Graph Theory
24IC46D	Optimization Technique

Ability Enhancement Course

Course Code	Course Title
24IC47A	Workplace Security Practices
24IC47B	DBMS with SQL and Mango DB
24IC47C	Data Analytics for IoT
24IC47D	Problem Management in Cyber security