

**BMS Institute of Technology and Mgmt.**  
**SELF ASSESSMENT REPORT(TIER - I) FOR Computer Science and Engineering**

## Part A : Institutional Information

**1 Name and Address of the Institution**

BMS Institute of Technology and Mgmt.,  
Dodaballapur Road, Avalahalli, Yelahanka,

**2 Type of the Institution:**

<input checked="" type="radio"/> Self-Supported Institute	<input type="radio"/> Autonomous
<input type="radio"/> Deemed University	<input type="radio"/> Non-Autonomous (Affiliated)
<input type="radio"/> University	<input type="radio"/> Any Other(Please Specify)
<input type="radio"/> Institute of National Importance	

**3 Year of establishment of the Institution:**

2002

**4 Ownership Status:**

<input type="radio"/> Central Government	
<input type="radio"/> State Government	
<input type="radio"/> Government Aided	<input type="radio"/> Any Other(Please Specify)
<input checked="" type="radio"/> Self financing	

**5 Name and Address of Affiliating University(if any)**

Visvesvaraya Technological University, Jnanasangama, Machche Sante Bastavade Road, Belagavi - 590 018.

**6 Other Academic Institutions of the Trust/Society/Company etc., if any**

Name of Institutions	Year of Establishment	Programs of Study	Location
BMS College of Engineering	1946	Engineering, MCA, MBA	Bengaluru
BMS College of Law	1963	Law	Bengaluru
BMS College for Women	1964	Arts, Commerce, Science	Bengaluru
BMS PU College for Women	1964	Arts, Commerce, Science	Bengaluru
BMS School of Architecture	2010	Architecture, Planning	Bengaluru
BMS Centre for Executive Education	2013	Management	Bengaluru
BMS Evening College of Arts	2013	Arts, Commerce	Bengaluru
BMS College of Architecture	2016	Architecture, Planning	Bengaluru
BMS College of Commerce	2018	Arts, Commerce, Science, Management	Bengaluru
BMS Academy for Professional Development	2023	Civil Services	Bengaluru

**7 Details of all the programs being offered by the Institution under consideration:**

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Computer Science and Engineering	UG	2002	2024	60	Yes	900	Granted accreditation for 3 years for the period (specify period)	2022	2025		4
<b>Sanctioned Intake for Last Five Years for the Computer Science and Engineering</b>											
<b>Academic Year</b>								<b>Sanctioned Intake</b>			
2024-25							900				
2023-24							240				
2022-23							180				
2021-22							180				
2020-21							180				
2019-20							180				
Computer Science and Engineering	PG	2014	2014	18	No	18	Granted accreditation for 3 years for the period (specify period)	2021	2024		2
Information Science & Engineering	UG	2010	2024	60	Yes	0	Granted accreditation for 3 years for the period (specify period)	2024	2027		4
<b>Sanctioned Intake for Last Five Years for the Information Science &amp; Engineering</b>											
<b>Academic Year</b>								<b>Sanctioned Intake</b>			
2024-25							00				
2023-24							240				
2022-23							180				
2021-22							180				
2020-21							180				
2019-20							180				
Cyber Security	PG	2022	2022	18	No	18	Not eligible for accreditation	--	--		2
Artificial Intelligence and Machine Learning	UG	2019	2019	60	Yes	360	Applying first time	--	--	No	4

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
<b>Sanctioned Intake for Last Five Years for the Artificial Intelligence and Machine Learning</b>											
<b>Academic Year</b>							<b>Sanctioned Intake</b>				
2024-25							360				
2023-24							180				
2022-23							120				
2021-22							60				
2020-21							60				
2019-20							60				
Electronics and Communications Engineering	UG	2002	2002	60	Yes	180	Granted accreditation for 3 years for the period (specify period)	2022	2025	0	4
<b>Sanctioned Intake for Last Five Years for the Electronics and Communications Engineering</b>											
<b>Academic Year</b>							<b>Sanctioned Intake</b>				
2024-25							180				
2023-24							120				
2022-23							120				
2021-22							180				
2020-21							180				
2019-20							180				
Mechanical Engineering	UG	2002	2002	60	No	60	Granted accreditation for 3 years for the period (specify period)	2022	2025	0	4
Civil Engineering	UG	2013	2013	60	No	60	Granted accreditation for 3 years for the period (specify period)	2023	2026	0	4
Computer Science and Business Systems	UG	2023	2023	60	No	60	Not eligible for accreditation	--	--	0	4
MCA	PG	2003	2003	60	Yes	120	Granted accreditation for 3 years for the period (specify period)	2022	2025	0	2

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
<b>Sanctioned Intake for Last Five Years for the MCA</b>											
<b>Academic Year</b>							<b>Sanctioned Intake</b>				
2024-25							120				
2023-24							120				
2022-23							60				
2021-22							60				
2020-21							60				
2019-20							60				
MBA	PG	2022	2022	60	Yes	120	Not eligible for accreditation	--	--	0	2
<b>Sanctioned Intake for Last Five Years for the MBA</b>											
<b>Academic Year</b>							<b>Sanctioned Intake</b>				
2024-25							120				
2023-24							120				
2022-23							60				
2021-22							0				
2020-21							0				
2019-20							0				
Electrical and Electronics Engineering	UG	2003	2003	60	No	60	Granted accreditation for 3 years for the period (specify period)	--	--	0	4
M Tech in VLSI System Design	PG	2025	2025	24	No	24	Not eligible for accreditation	--	--	0	2

**8 Programs to be considered for Accreditation vide this application:**

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Computer Science and Engineering
2	Under Graduate	Engineering & Technology	Electronics & Communication Engineering
3	Under Graduate	Engineering & Technology	Mechanical Engineering
4	Under Graduate	Engineering & Technology	Electrical and Electronics Engineering
5	Under Graduate	Engineering & Technology	Artificial Intelligence and Machine Learning

Table No. A8.2

S No	Name of the Department	Name of the Program	Name of Allied Departments/Cluster	Name of Allied Program
1	Computer Science and Engineering	Computer Science and Engineering	Computer Science and Business System	Computer Science and Business System
2	Computer Science and Engineering	Computer Science and Engineering	Artificial Intelligence and Machine Learning	Artificial Intelligence and Machine Learning

**9 Total Number of Faculty Members in Various Departments:**

ID	Department Name	Number of faculty members in the Department (UG and PG)											
		2024-25 (CAY)				2023-24 (CAYm1)				2022-23 (CAYm2)			
		No. of Professors	No. of Associate Professors	No. of Assistant Professors	Total faculty members	No. of Professors	No. of Associate Professors	No. of Assistant Professors	Total faculty members	No. of Professors	No. of Associate Professors	No. of Assistant Professors	Total faculty members
1	Electronics and Communication Engineering (ECE)	5	12	14	31	3	7	20	30	4	7	18	29
2	Computer Science and Engineering (CSE)	8	8	47	63	6	11	22	39	4	6	21	31
3	Information Science and Engineering (ISE)	4	8	24	36	6	8	23	37	5	7	20	32
4	Mechanical Engineering (ME)	1	2	16	19	2	2	13	17	3	2	13	18
5	Electrical and Electronics Engineering (EEE)	1	2	11	14	1	2	12	15	1	2	12	15
6	Electronics and Telecommunication Engineering (ETE)	2	1	7	10	1	2	7	10	1	2	8	11
7	Civil Engineering (CV)	1	2	10	13	1	2	10	13	1	3	11	15
8	Artificial Intelligence and Machine Learning (AIML)	2	4	21	27	2	4	15	21	1	2	6	9
9	Computer Science and Business Systems (CSBS)	0	2	2	4	0	0	0	0	0	0	0	0
10	Master of Computer Applications (MCA)	2	2	8	12	1	3	8	12	1	1	6	8
11	Master of Business Administration (MBA)	0	3	9	12	1	1	7	9	1	1	2	4
12	Physics	1	4	7	12	1	2	7	10	0	2	5	7
13	Chemistry	1	3	9	13	1	3	6	10	0	1	6	7
14	Mathematics	4	0	17	21	4	0	11	15	4	0	7	11

15	Humanities and Social Sciences	0	0	11	11	0	0	23	23	0	0	26	26

**10 Total Number of Engineering Students in Various Departments:**

ID	Department Name	Number of students in the Department (UG and PG)		
		2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)
1	Electronics and Communication Engineering (ECE)	646	641	724
2	Computer Science and Engineering (CSE)	1820	987	914
3	Information Science and Engineering (ISE)	745	911	851
4	Mechanical Engineering (ME)	235	234	237
5	Electrical and Electronics Engineering (EEE)	243	235	250
6	Electronics and Telecommunication Engineering (ETE)	183	229	222
7	Civil Engineering (CV)	209	215	191
8	Artificial Intelligence and Machine Learning (AIML)	818	474	324
9	Computer Science and Business Systems (CSBS)	131	63	0
10	Master of Computer Applications (MCA)	206	166	118
11	Master of Business Administration (MBA)	197	173	59
12		0	0	0
13		0	0	0

**11 Vision of the Institution:**

To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.

**12 Mission of the Institution:**

Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

**13 Contact Information of the Head of the Institution and NBA coordinator, if designated:**

<b>Head of the Institution</b>	
Name	Dr. Sanjay H A
Designation	Principal, BMSIT&M
Mobile No.	9342560303
Email ID	principal@bmsit.in

 **NBA Coordinator, If Designated**

Name	Dr. Thippeswamy G
Designation	Professor, HOD CSE
Mobile No.	9448864856
Email ID	hod_cse@bmsit.in

## PART B: Criteria Summary

Criteria No.	Criteria	Total Marks	Institute Marks
1	OUTCOME-BASED CURRICULUM	120	120.00
2	OUTCOME-BASED TEACHING LEARNING	120	120.00
3	OUTCOME-BASED ASSESSMENT	120	120.00
4	STUDENTS' PERFORMANCE	120	107.66
5	FACULTY INFORMATION	100	73.33
6	FACULTY CONTRIBUTIONS	120	102.00
7	FACILITIES AND TECHNICAL SUPPORT	100	100.00
8	CONTINUOUS IMPROVEMENT	80	80.00
9	STUDENT SUPPORT AND GOVERNANCE	120	109.00
	<b>Total</b>	<b>1000</b>	<b>932</b>

## Part B : Criteria Summary

1 OUTCOME-BASED CURRICULUM (120)	Total Marks 120.00
1.1 Vision, Mission and Program Educational Objectives (PEOs) (35)	Total Marks 35.00

**1.1.1 State the Vision and Mission of the Institute and the Department (5)**

Institute Marks : 5.00

Vision of the institute	To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.								
Mission of the institute	Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.								
Vision of the Department	To be a centre of excellence in Computer Science and Engineering education and research, nurturing technically competent, ethically responsible and socially conscious professionals to meet global challenges and drive sustainable innovation.								
Mission of the Department	<table border="1"> <thead> <tr> <th>Mission No.</th> <th>Mission Statements</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>To impart quality education in Computer Science and Engineering by integrating fundamental knowledge with emerging technologies and industry practices.</td> </tr> <tr> <td>M2</td> <td>To foster innovation, problem-solving and research aptitude through a curriculum enriched with project-based learning, professional activities and collaborative initiatives.</td> </tr> <tr> <td>M3</td> <td>To develop graduates with strong ethical values, leadership qualities and a commitment to lifelong learning through co-curricular and extra curricular activities.</td> </tr> </tbody> </table>	Mission No.	Mission Statements	M1	To impart quality education in Computer Science and Engineering by integrating fundamental knowledge with emerging technologies and industry practices.	M2	To foster innovation, problem-solving and research aptitude through a curriculum enriched with project-based learning, professional activities and collaborative initiatives.	M3	To develop graduates with strong ethical values, leadership qualities and a commitment to lifelong learning through co-curricular and extra curricular activities.
Mission No.	Mission Statements								
M1	To impart quality education in Computer Science and Engineering by integrating fundamental knowledge with emerging technologies and industry practices.								
M2	To foster innovation, problem-solving and research aptitude through a curriculum enriched with project-based learning, professional activities and collaborative initiatives.								
M3	To develop graduates with strong ethical values, leadership qualities and a commitment to lifelong learning through co-curricular and extra curricular activities.								

**1.1.2 State PEOs of the Program (5)**

Institute Marks : 5.00

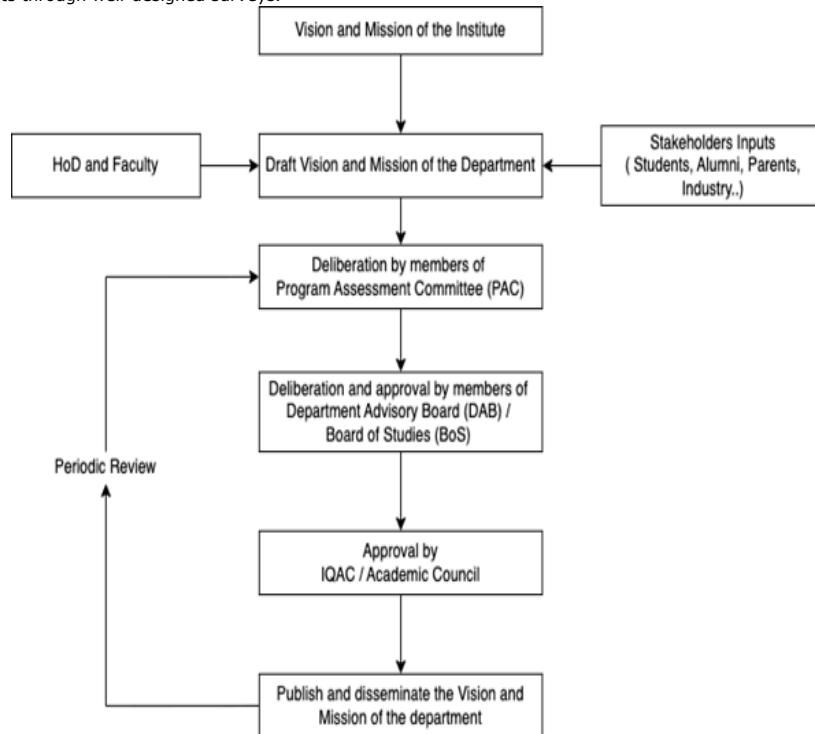
PEO No.	Program Educational Objectives Statements
PEO1	Professional Excellence: Pursue successful careers in industry, academia and entrepreneurship by applying the foundational knowledge of Computer Science and Engineering with professional competence.
PEO2	Higher Education and Lifelong Learning: Engage in higher studies, research or professional development programs demonstrating a commitment to lifelong learning in a rapidly evolving technological landscape.
PEO3	Ethics and Social Responsibility: Exhibit ethical behaviour, effective communication, teamwork and leadership qualities with a strong sense of responsibility toward society and the environment.

**1.1.3 Process of Defining Vision, Mission and PEOs (10)**

Institute Marks : 10.00

#### **Process for Defining the Departments Vision and Mission**

The Vision and Mission of the Department of Computer Science and Engineering are formulated through a structured and collaborative approach, ensuring alignment with academic objectives, industry trends, and societal needs. Feedback is systematically gathered from various stakeholders including students, faculty, alumni, industry professionals, and parents through well-designed surveys.



**Fig 1.1.3.1: Process of defining Vision and Mission of the department.**

The departments Vision and Mission are formulated through a structured process, guided by the overarching Vision and Mission of the Institute. The steps involved are as follows:

- **Alignment with Institute Vision and Mission**

The process begins with the Institute's Vision and Mission serving as the foundational framework for developing the department's Vision and Mission.

- **Drafting by HoD and Faculty**

The Head of Department (HoD), in collaboration with faculty members, prepares the initial draft of the department's Vision and Mission statements.

- **Stakeholder Consultation**

The draft statements are shared with internal and external stakeholders to gather their insights and feedback.

- **Review by PAC**

The Program Assessment Committee (PAC) reviews the draft statements along with stakeholder inputs, and deliberates to refine and finalize them.

- **Deliberation by DAB/BoS**

The finalized statements are submitted to the Department Advisory Board (DAB) or Board of Studies (BoS) for further deliberation and recommendation.

- **Approval by IQAC/Academic Council**

The recommended Vision and Mission statements are then placed before the Internal Quality Assurance Cell (IQAC) or the Academic Council for final approval.

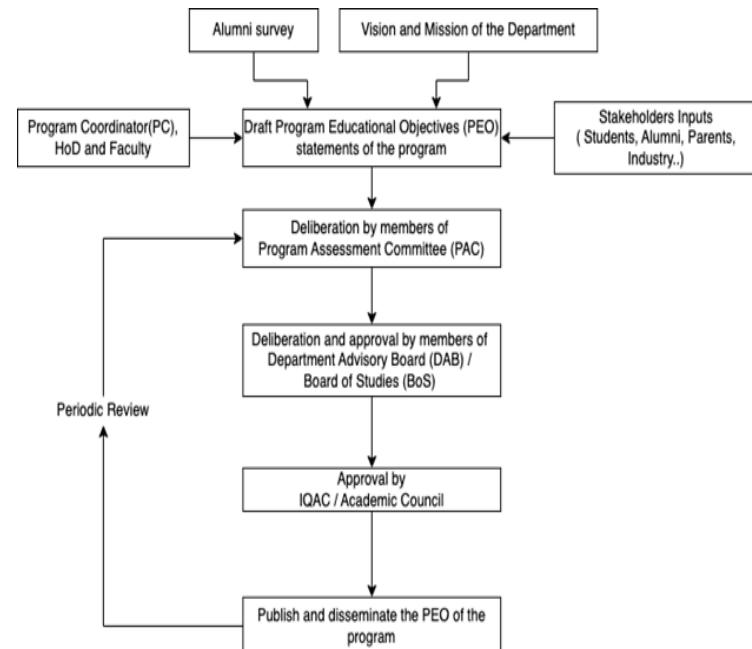
- **Publication and Dissemination**

Upon approval, the Vision and Mission statements are formally published and communicated to all relevant stakeholders.

- **Periodic Review**

The PAC undertakes a periodic review of the Vision and Mission statements to ensure they remain current, relevant, and aligned with institutional goals.

Process for Defining the Departments Program Educational Objectives[PEO's]



**Fig 1.1.3.2: Process of defining Department's PEO's.**

The process of defining Program Educational Objectives (PEOs) as illustrated in the flowchart involves a structured and collaborative approach to ensure alignment with the departments mission and stakeholder expectations. Here is a step-by-step explanation of the process:

- **Inputs Collection:**

- **Alumni Survey:** Gathers feedback from graduates on how well the program prepared them.
- **Vision and Mission of the Department:** Ensures alignment with the department's strategic goals.
- **Stakeholder Inputs:** Involves collecting opinions from students, alumni, parents, and industry representatives.
- **Program Coordinator (PC), HoD, and Faculty:** Play a central role in interpreting inputs and initiating the drafting process.

- **Drafting PEOs:**

Based on the collected inputs, the Program Coordinator, HoD, and faculty draft the PEO statements that reflect the intended outcomes of the program after 2-3 years of graduation.

- **Review by Program Assessment Committee (PAC):**

The draft PEOs are discussed and refined by the PAC, a body responsible for assessing the quality and relevance of the program outcomes.

- **Approval by Department Advisory Board (DAB) / Board of Studies (BoS):**

The revised PEOs are deliberated and approved by the DAB/BoS, which includes external experts, senior faculty, and industry members.

- **Approval by IQAC / Academic Council:**

The final approval is done by the Internal Quality Assurance Cell (IQAC) or Academic Council to ensure academic integrity and institutional compliance.

- **Publication and Dissemination:**

Once approved, the PEOs are published and disseminated to all stakeholders including students, faculty, and accrediting bodies.

- **Periodic Review:**

The PEOs are subjected to periodic review based on evolving industry trends, academic feedback, and stakeholder input to keep them current and effective.

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**1.1.4 Dissemination of Vision, Mission and PEOs (5)**

Institute Marks : 5.00

**Vision, Mission and PEOs are published at:**

- Institute Website (<https://bmsit.ac.in/dept/computer-science-and-engineering>)
- Notice boards
- Classrooms
- Laboratories
- Lab Manuals
- MANTHANA (Institute Magazine)
- Brochures and Newsletter(s) (PRINTF("CSE") / import CSE)
- Prominent places in Corridors

**Disseminated to:**

- **Internal stakeholders:** -
  - Members of Governing Bodies
  - Faculty Members and Staff
  - Students
- **External stakeholders (website and email):** -
  - Employers
  - Alumni
  - Parents
  - Professional Bodies
  - Statutory Bodies (VTU, AICTE, UGC, etc..)

In addition to the above, awareness about Vision, Mission, and PEOs is created among stakeholders during different occasions in the institution and has been explained below, under two groups, namely:

**I. Creating awareness among internal stakeholders****a) Induction Program to Students & Parents:**

Students of the first year and their parents are invited to attend an induction program organized by the institution once a year. In this meeting, awareness about Vision, Mission, Program Educational Objectives (PEOs), POs & PSOs are discussed.

**b) Orientation Program for Faculty:**

Orientation program to all the newly joined faculty members, along with existing faculty members, is conducted in the institute once a year. In this program, senior faculty members of the institute discuss the Vision, Mission, PEOs, POs & PSOs to all the newly joined faculty members. Also, the same is discussed by the HODs in the department meetings.

**c) First session of the Coursework:**

At the beginning of every semester, the concerned course coordinators will explain the Vision, Mission, PEOs, POs, and PSOs displayed in the classroom/laboratory and explain the respective course to the students.

Outcomes with the correlation of COs to POs & PSOs. Also faculty will create awareness among the students about their role in achieving these objectives and outcomes.

**d) During Department Level Faculty/Technical Staff Meetings:**

Once in a semester, during the Staff meetings, HoD will discuss Vision, Mission, PEOs, POs & PSOs.

**e) During Brainstorming Session:**

Before the commencement of every semester, a brainstorming session will be held with faculty and HOD to discuss the Delivery Methods, Course contents and Assessment Methods for every course. The session involves the process of referring to Vision, Mission & PEOs to correlate with COs, POs & PSOs and their alignment.

**II. Creating awareness among external stakeholders**

**a) Industry-Institute Interaction meetings:**

Meetings are held with Industry as a part of Industry Institute Interaction, Senior professors will present Vision, Mission & PEOs to the Industry Personnel and their suggestions are recorded.

**b) Alumni Meetings:**

Alumni meet will be conducted once in a year. During the meet Vision, Mission, PEOs, POs and PSOs are discussed and their suggestions are recorded.

**c) Parent-Teacher Meetings:**

The meeting of parents with teachers of the department is held once in a semester. In this meeting, the department head will create awareness about Vision, Mission and PEOs among the parents.

**d) Mail Communication:**

Vision, Mission & PEOs is embedded in the signature section of the email of all the faculty and technical staff.

**e) Brochure:**

Vision, Mission & PEOs are printed in workshop, FDPs, Student orientation programs, Inaugural functions, Hackathons, Ideathons, seminars, etc..

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**1.1.5 Mapping of PEOs with Mission (10)**

Institute Marks : 10.00

PEO Statements	M1	M2	M3
Professional Excellence: Pursue successful careers in industry, academia and entrepreneurship by applying the foundational knowledge of Computer Science and Engineering with professional competence.	3	3	2
Higher Education and Lifelong Learning: Engage in higher studies, research or professional development programs demonstrating a commitment to lifelong learning in a rapidly evolving technological landscape.	2	3	3
Ethics and Social Responsibility: Exhibit ethical behaviour, effective communication, teamwork and leadership qualities with a strong sense of responsibility toward society and the environment.	3	2	3

**Justification for Matrix above:**

The Mission–PEO Mapping Matrix has been systematically developed to demonstrate the alignment between the department's mission statements and the expected educational outcomes of the Computer Science and Engineering program. The correlation values (1 – slight, 2 – moderate, 3 – strong) reflect the **degree to which each mission element contributes to the achievement of each Program Educational Objective (PEO)**. Below is a detailed justification for the assigned correlation values:

**Table 1.1.5b: PEO to Mission justification table**

PEO-MISSION-CORRELATION TABLE			
PEO	MISSION	CORRE - LATION	Justification
PEO-1	M1	3	This mission element directly equips students with strong theoretical and practical knowledge required for professional excellence.
	M2	3	Innovation and applied learning improve students' employability and professional competencies.
	M3	2	Ethics and leadership complement professional excellence but are not the primary drivers.
PEO-2	M1	2	The integration of emerging technologies fosters curiosity and prepares students for higher education and lifelong learning.
	M2	3	Research and problem-solving skills directly support aspirations for higher studies and continuous learning.
	M3	3	This mission element strongly supports lifelong learning and higher education as central goals.

<b>PEO-3</b>	<b>M1</b>	3	Ethical and social aspects are addressed through the development of professional competence, thereby making a substantial contribution. These are integrated and evaluated through the Addition Assessment Test, co-curricular activities, and partial deliveries.
	<b>M2</b>	2	Collaboration and participation in professional activities have an indirect but meaningful influence on the development of soft skills and a sense of responsibility. These elements are embedded within the curriculum to support holistic student growth.
	<b>M3</b>	3	This mission is most strongly aligned with PEO-3, as it directly nurtures ethics, leadership, and social consciousness by promoting engagement in socially responsible projects, encouraging teamwork and leadership roles in both academic and co-curricular activities, and fostering awareness of ethical implications in computing. Through coursework, professional activities, and real-world problem-solving, students are guided to develop a strong ethical foundation and a commitment to societal well-being—core elements of PEO-3.

The correlation values assigned in the matrix are not arbitrary; they are derived from a systematic and logical assessment of how each mission statement contributes to the achievement of the department's long-term educational objectives. This mapping ensures that all PEOs are adequately and proportionally addressed through well-defined mission elements, thereby demonstrating strategic coherence and alignment with the NBA's Outcome-Based Education (OBE) framework.

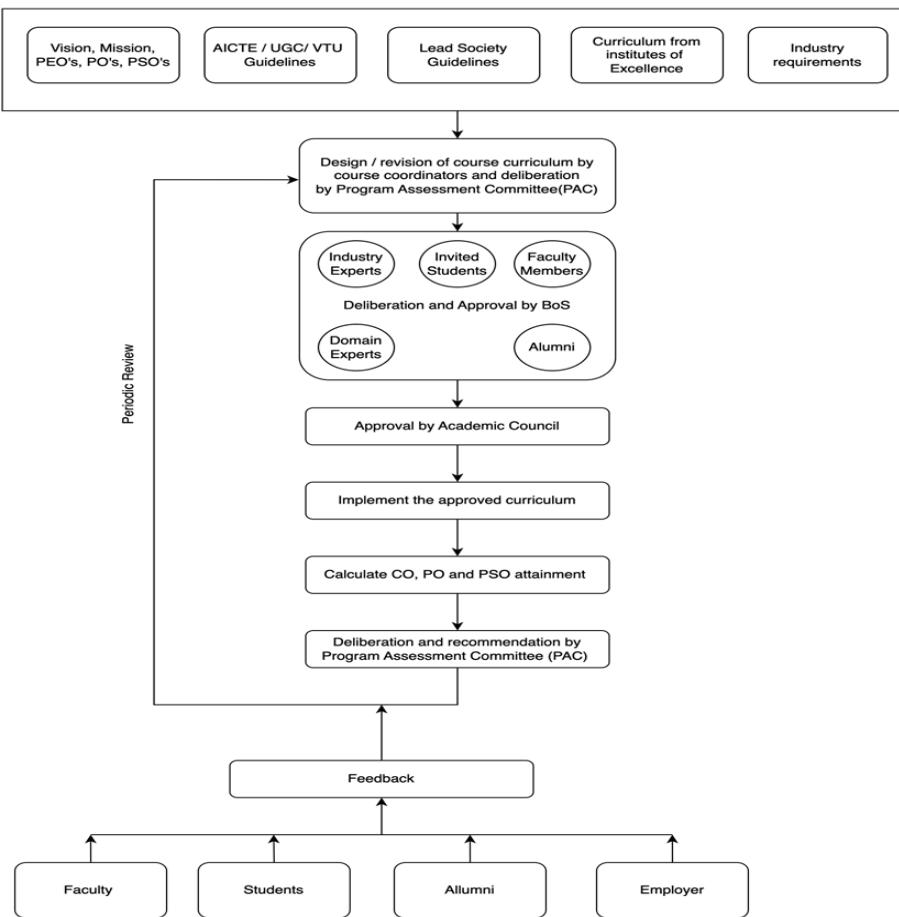
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#### 1.2 Curriculum Structure and Features (30)

Total Marks 30.00

**1.2.1 State the Process for Developing/Revising the Program Curriculum (10)**

Institute Marks : 10.00



**Figure 1.2.1.1: Process for Developing/Revising the Program Curriculum**

The curriculum design process begins with the formulation of a curriculum scheme that aligns with the Program Outcomes (POs) and Program Specific Outcomes (PSOs). Prior to finalization, the Program Coordinator guides the Course Coordinators and faculty members to review and benchmark curricula and syllabi from leading national and international universities. The curriculum design and revision process is a structured and continuous cycle aimed at maintaining academic excellence and ensuring alignment with national standards, industry requirements, and institutional goals.

The following stages describe the systematic approach adopted:

#### 1. Inputs for Curriculum Design / Revision:

The process begins with gathering inputs from the following sources:

- Vision, Mission, PEOs, POs, and PSOs of the Department and Program.
- AICTE / UGC / Visvesvaraya Technological University (VTU) Guidelines
- IEEE and ACM Guidelines
- Curricula from Institutes of Excellence
- Industry Requirements

## **2. Curriculum Design / Revision**

Based on the inputs received as above, the Program Coordinator (PC) prepares the scheme structure and the same will be reviewed by the Program Assessment Committee (PAC).

- Then, the Course coordinator/s initiate the design or revision of the curriculum by defining the Course Outcomes (COs) and then develop a detailed curriculum.
- The PC consolidates all the curriculum and the same is placed before the Program Assessment Committee (PAC) for the review and deliberation.

## **3. Deliberation and Approval by Board of Studies (BoS)**

The proposed curriculum which was suggested by the PAC is presented to the Board of Studies comprising:

- Industry Experts
- Domain Experts
- University nominee
- Faculty Members
- Alumni
- Invited Students

The BoS deliberates and approves the curriculum which is holistic, industry-aligned, and future-ready.

## **4. Approval by Academic Council**

The BoS recommended curriculum is then placed before the Academic Council for institutional approval.

## **5. Implementation**

Once approved by the Academic Council, the curriculum is implemented.

## **6. Attainment Calculation**

The course contents will be delivered as per the Teaching Learning Process adopted and once the course delivery and the assessments are completed, the attainment levels of Course Outcomes (COs), Program Outcomes (POs), and Program Specific Outcomes (PSOs) are computed to measure academic performance and outcome effectiveness. The Course coordinators will carry out the CO Gap analysis and the PC consolidates PO and PSO Gap analysis based on the CO gap analysis and the same will be placed in the PAC for deliberations and suggestions for the next cycle.

## **7. PAC Review and Recommendations**

The Program Assessment Committee reviews these attainment levels and provides recommendations for further improvement in the curriculum / teaching learning process / assessments based on the extent to which the attainments are met.

## **8. Feedback Mechanism**

Feedback on the curriculum is obtained from the members involving:

- Faculty
- Students
- Alumni
- Employers

Their feedback is periodically collected and used to refine and enhance the curriculum in subsequent cycles.

## **9. Continuous Quality Improvement (CQI):**

The recommendations from the PAC and the stakeholder's feedback analysis will act as input for the periodic revision of the curriculum.

### **1.2.2 Curriculum Structure (10)**

Institute Marks : 10.00

ID	Course Code	Course Title	Classroom Instruction (CI) (in hours per semester)		Lab Instruction (LI) (in hours per semester)	Term Work (TW) and Self Learning (SL) (TW+ SL) (in hours per semester)	Total no. of Hours per semester	Total Credits (C)* (Total Hours/30)
			L	T				
1	BMATS101	Mathematics for CSE Stream-	40	13	13	54	120	4.00

**1.2.3 Components of Curriculum (5)**

Institute Marks : 5.00

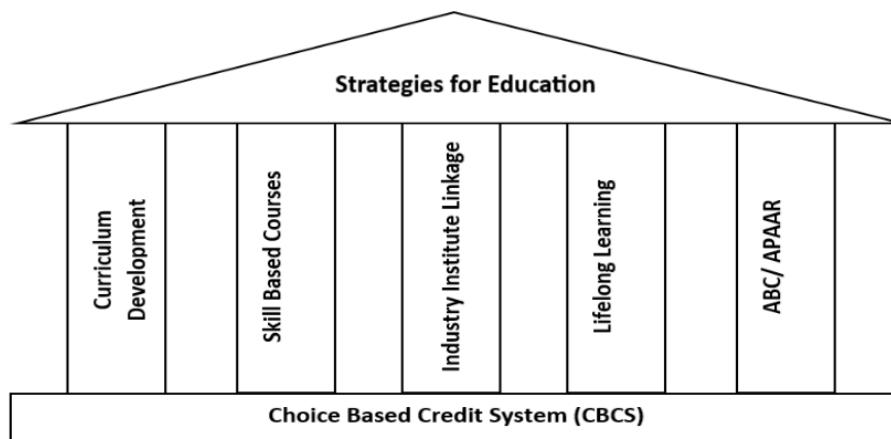
Course Components	Curriculum Content (% of total number of credits of the program )	Total number of contact hours	Total number of credits
Basic Sciences	11.8	570.00	19.00
Basic Engineering	16.2	780.00	26.00
Humanities and Social Scie	10.0	480.00	16.00
Program Core	34.4	1650.00	55.00
Program Electives	7.5	360.00	12.00
Open Electives	5.6	270.00	9.00
Project(s)	8.1	390.00	13.00
Internships/Seminars	6.2	300.00	10.00
Any other (Please specify)	0.0	135.00	0.00
<b>Total number of Credits</b>			<b>160.00</b>

**1.2.4 Strategies for Education Reforms (5)**

Institute Marks : 5.00

To create a more dynamic and relevant educational experience, several strategies are being implemented to reform and modernize the curriculum, ensuring it aligns with the evolving needs of today's learners. These reforms focus on enhancing student learning outcomes, promoting greater flexibility, and encouraging interdisciplinary exposure. In line with the vision of the National Education Policy (NEP) 2020, transforming engineering education requires a strategic shift towards multidisciplinary and interdisciplinary approaches. This shift aims to foster holistic development, stimulate innovation, and strengthen real-world problem-solving skills. Achieving this transformation calls for a comprehensive curriculum redesign that goes beyond traditional disciplinary boundaries.

Curriculum design plays a crucial role in addressing the evolving needs and demands of society. The Choice Based Credit System (CBCS) empowers students by offering the flexibility to select interdisciplinary, multidisciplinary, and ability enhancement or skill-based courses that align with their interests and career goals. Educational reform strategies are structured around five guiding pillars, as illustrated in the accompanying figure, to ensure a comprehensive and future-ready learning framework. Fig 1.2.4.1



**Fig. 1.2.4.1 strategies for education reforms**

The following strategies provide a structured roadmap for implementing educational reforms through curriculum mapping, stakeholder engagement, and ensuring institutional readiness.

#### **1. Introduction of Innovation and Design Thinking as a Practical Course:**

To cultivate creative problem-solving skills and foster real-world application of knowledge, Innovation and Design Thinking has been introduced as a hands-on, practical course. This course immerses students in the core phases of design thinking—empathizing, defining, ideating, prototyping, and testing—enabling them to tackle complex challenges across technological, business, and societal domains. Students will work in collaborative groups to identify real-world problems through fieldwork, especially those with interdisciplinary and multidisciplinary dimensions. The outcome will be the development of prototypes or working models, applying the design thinking process in a structured and meaningful way.

#### **2. One-Year Internship Program:**

A one-year internship is a critical component in promoting interdisciplinary and multidisciplinary learning. By engaging in real-world professional environments, students gain exposure to practical challenges that require the integration of knowledge from diverse fields. Working in cross-functional teams with professionals from various domains enhances students' ability to apply theoretical knowledge, strengthens holistic problem-solving capabilities, and deepens their understanding of how different disciplines intersect in real-world applications. Additionally, the internship experience cultivates essential soft skills such as communication, adaptability, teamwork, and professional collaboration.

#### **3. Interdisciplinary Projects (Mini and Major Projects)**

To enhance students' ability to function effectively both as individuals and as team members or leaders in diverse, multidisciplinary settings, the Institute has integrated interdisciplinary projects into all programs. These include both mini and major projects that require students to collaborate across departments.

This initiative encourages students and faculty from various disciplines to come together to solve complex, real-world problems. To foster a true interdisciplinary culture, students are encouraged to form project teams comprising members from different academic programs. This collaboration not only improves technical competencies but also cultivates teamwork, communication, and project management skills.

#### **4. Open Electives**

Open electives are a vital component in fostering a multidisciplinary mindset within engineering education. By allowing students to choose courses outside their core curriculum, open electives promote exposure to diverse knowledge domains.

For example, an engineering student can opt for subjects offered by other engineering branches, broadening their academic and professional perspectives. This cross-disciplinary exposure is instrumental in solving real-world problems, which often require integrated knowledge from multiple disciplines. Beyond academic benefits, open electives support personal growth, adaptability, and nurture the habit of lifelong learning.

#### **5. NPTEL Online Courses (MOOCs)**

The integration of NPTEL MOOCs (Massive Open Online Courses) into the curriculum is a strategic initiative to promote lifelong, self-directed learning, especially in the context of interdisciplinary education.

Offered by premier institutions like IITs and IISc, NPTEL courses cover a broad spectrum of subjects including engineering, science, humanities, management, and emerging technologies. Students are allowed to take these courses as professional or open electives, enabling them to explore topics beyond their core discipline. The flexibility and self-paced nature of MOOCs encourage independent learning and cross-domain expertise, essential for future-ready professionals.

#### **6. Incentive Policy for NPTEL Course Completion**

To further motivate students toward lifelong and interdisciplinary learning, the Institute has introduced an Incentive Policy for NPTEL course completion.

Beyond the credit requirements, students are encouraged to take additional NPTEL courses. Under the approved policy, the Institute reimburses examination registration fees for completed courses and provides additional incentives for students who achieve high ranks or top performance in these courses. This initiative supports continuous learning and reinforces the value of cross-disciplinary academic exploration.

#### **7. Introduction of Biology for Information Technology and Bioinformatics**

To encourage a systems-level and integrated perspective, Biology for Information Technology and Bioinformatics have been incorporated into the curriculum. Traditionally seen as separate disciplines, biology and engineering are increasingly converging in fields such as biomedical engineering, biotechnology, and environmental systems.

These courses provide engineering students with foundational biological knowledge, enabling them to better understand biological processes and apply engineering principles to biologically inspired challenges. This fosters cross-domain thinking and prepares students for careers and research at the intersection of biology and engineering.

#### **8. Promotion of Honors and Minor Degree Programs**

To support academic flexibility and encourage personalized learning trajectories, the Institute has introduced Honors and Minor Degree options within undergraduate programs:

- Honors Degree: Allows students to delve deeper into advanced and specialized areas within their major, often requiring engagement in multidisciplinary research or project work.
- Minor Degree: Enables students to gain expertise in a discipline outside their primary field of study. For example, a Computer Science student may pursue a minor in Mechanical Engineering, Semiconductor Design, Management, or Humanities.

These pathways empower students to tailor their education to personal interests and career aspirations, thereby supporting a broader and more adaptable skill set.

#### **9. Course Projects as Learning Activities**

Course-integrated projects serve as key pedagogical tools to promote interdisciplinary and applied learning. Embedded within specific courses, these projects encourage students to use course concepts to address real-world, cross-disciplinary problems.

Working in teams, students enhance their subject comprehension while developing critical skills such as teamwork, communication, and problem-solving. Course projects help bridge theory and practice, laying the groundwork for more complex capstone or industry-led projects.

#### **10. Industry-Driven Projects**

To bridge the gap between academia and industry, the Institute has partnered with industry stakeholders to introduce real-world project experiences.

- Projects are introduced early as guided mini-projects and culminate in major projects co-supervised by industry professionals.
- These projects encourage students to work on real-time problems, requiring interdisciplinary collaboration and application of knowledge from multiple domains.

This hands-on approach enhances employability, innovation, and an understanding of how academic concepts translate to practical impact.

#### **11. Introduction of Ability Enhancement and Skill-Based Courses**

The curriculum now includes Ability Enhancement Courses (AECs) and Skill-Based Courses, designed to cultivate practical competencies and interdisciplinary awareness. AECs introduce students to emerging technologies and tools that may lie outside their core discipline. For example, non-IT students can take courses such as Generative AI, which provides foundational exposure to artificial intelligence and its applications. These courses promote a broader academic outlook, helping students stay current with industry trends and technological advancements.

## 12. Establishment of the Academic Bank of Credits (ABC) System

In line with NEP 2020, the Academic Bank of Credits (ABC) has been established to offer flexible, student-centric learning opportunities.

The ABC system allows students to accumulate, transfer, and redeem credits earned from various recognized institutions or MOOCs such as NPTEL, enabling seamless mobility between institutions and disciplines.

This initiative supports continuous learning, enhances academic flexibility, and fosters a modular approach to education.



**BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT**  
(Autonomous Under VTU)

**Department of Computer Science and Engineering**  
ABC Registration form submission details - 2022 Batch

**Semester - II, Section - C**

Sl.No.	USN	Name of the Candidate	ABC Registration ID
1	1BY22CS141	RAKSHITA M AILI	142-968-809-818
2	1BY22CS142	RAKSHITHA L N	375-466-144-053
3	1BY22CS143	RAMESH	837-432-023-594
4	1BY22CS144	RANJITA	268-994-821-987
5	1BY22CS145	REGAMILIEL PHAWA	548-587-265-589
6	1BY22CS146	REYYAN ALEEM JANBAZ	934-379-802-282
7	1BY22CS147	ROHAN CHAVAN	402-872-767-014
8	1BY22CS148	ROHAN D J	321-102-906-676
9	1BY22CS149	ROHIT PATIL	592-707-268-398
10	1BY22CS150	ROHITH	362-753-113-939
11	1BY22CS151	S DHAMINI	131-322-685-600
12	1BY22CS152	S MANJU SANKALP	380-791-615-599
13	1BY22CS153	S MITHUL NARAYANA	343-617-424-376
14	1BY22CS154	S MIZBA ANJUM	805-426-709-121
15	1BY22CS155	SAI CHETHANA REDDY N S	829-992-893-437
16	1BY22CS156	SAI KRISHNA T	875-206-084-009
17	1BY22CS157	SAKSHI MISHRA	992-364-519-978

**Figure 1.5 Sample APAAR IDs of 3rd Sem Students 2022 Batch**

The Academic Bank of Credits (ABC) is a transformative initiative aligned with the National Education Policy (NEP) 2020, aimed at fostering a flexible and student-centric learning ecosystem. This system enables students to accumulate, store, and transfer academic credits earned from various recognized institutions over time, thereby supporting multiple entry and exit options within higher education.

From an educational reform perspective, ABC offers the following benefits:

- Enhances academic mobility by allowing credit transfer across institutions.
- Recognizes prior learning and diverse learning pathways, including online and experiential learning.

- Encourages interdisciplinary and multidisciplinary learning by allowing students to explore courses across disciplines and institutions.
- Supports lifelong learning, empowering learners to resume education at any point in life.

The Institute has proactively implemented the ABC system by ensuring that:

- All students have created their ABC IDs.
- The Institution has integrated the student academic records into the National Academic Depository (NAD) portal, thereby aligning with national standards for academic transparency and credit recognition.

### **13. Social Connect and Responsibility Course**

The Social Connect and Responsibility (SCR) course plays a vital role in fostering interdisciplinary and multidisciplinary learning by engaging students with pressing real-life social challenges that transcend traditional academic boundaries.

As part of this course, students undertake societal relevance projects, focusing on issues such as environmental degradation, public health, and community development, viewed through multiple lenses—including sociology, economics, environmental science, engineering, and public policy.

This exposure encourages students to:

- Understand the societal impact of engineering and scientific solutions.
- Collaborate across disciplines to design effective, sustainable interventions.
- Develop empathy, civic responsibility, and a commitment to social equity.

By addressing complex societal issues through interdisciplinary collaboration, the SCR course helps students become socially conscious engineers and responsible citizens.

### **14. Faculty upskilling through FDPs and certifications**

Regular training through Faculty Development Programs ensures that faculty members stay current with modern pedagogical methods and emerging technologies. These programs significantly enhance the quality of teaching and promote continuous professional development.

### **15. Inclusive and equitable access to education**

Special initiatives and support mechanisms are implemented to reach marginalized and underrepresented groups, ensuring inclusive and equitable access to education. These efforts align with the National Education Policy's goals of promoting equity and providing fair opportunities for all learners.

### **16. Enhancement of assessment and evaluation methods**

Transitioning from traditional rote-based examinations to competency-driven, formative, and holistic assessments fosters deeper conceptual understanding and enhances learning outcomes. This approach prioritizes skill development, critical thinking, and practical application over memorization, leading to more meaningful educational experiences.

### **17. Establishment of strong mentorship and student support systems**

Faculty mentors play a crucial role in supporting students across academics, career planning, and mental well-being. Complementary support systems, such as counseling services and peer groups, help create a nurturing environment that encourages personal and professional growth. This guidance empowers students to make informed decisions about their future paths after graduation, fostering confidence and independence.

### **18. Accreditation and quality assurance mechanisms**

The CSE Program at BMSIT&M implements strong internal quality systems while actively seeking external accreditation. This dual approach guarantees accountability, facilitates benchmarking, and drives continuous enhancement of educational standards, ensuring excellence in learning outcomes.

### **19. AICTE Activity Points System**

The AICTE Activity Point System is an initiative by the All India Council for Technical Education to promote the holistic development of students beyond the classroom. This system mandates participation in extracurricular, co-curricular, and socially responsible activities, thereby cultivating leadership, teamwork, and civic engagement skills alongside academic learning.

As per the National Education Policy, higher engineering education institutions are required to implement activity-based learning through the allocation of activity points for undergraduate students. These students actively participate in socially relevant initiatives such as the Swachh Bharat Abhiyan (Clean India Mission), Stem Cell Awareness Programs, Tobacco and Cancer Awareness Campaigns, Blood Donation Camps at BMSIT&M, Cybercrime Awareness Programs, and outreach activities like visiting and educating students in government schools.

### **20. IEEE Society and student Clubs**

We have an active IEEE student branch at BMSIT&M, where students are highly engaged and regularly organize a variety of events at the college level—both independently and in collaboration with other clubs. Notably, the IEEE EMBS chapter has successfully secured grants for its project proposals.

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**1.3 PO, PSO and their Mapping with Courses (20)**

Total Marks 20.00

**1.3.1 POs and PSOs (5)**

<b>PSO1</b>	Core and Emerging Technology Proficiency: Apply foundational knowledge of computer science and engineering to analyse, design and develop computing solutions across core domains such as algorithms, programming, databases, networking, web technologies and software engineering. Demonstrate proficiency in modern tools and emerging technologies including Artificial Intelligence, Machine Learning, Data Science, Cloud Computing, IoT and Cybersecurity to build innovative and effective software systems.
<b>PSO2</b>	Computational Problem Solving and Professional Competence: Employ analytical thinking and problem-solving abilities to address real-world challenges with societal impact through the application of computing platforms. Exhibit professional ethics, effective communication and teamwork skills necessary for success in multidisciplinary and collaborative environments.

**1.3.2 Mapping between the Courses and POs/PSOs (15)**

Institute Marks : 15.00

PO:

PO Number	List of Courses
PO1	BMAT101, BPHY102, BPOPS103, BESCK104D, BETCK105H, BIDTK158, BMATS201, BCHES202, BCEDK203, BESCK204C, BPLCK205D, BCS301, BCS302, BCS303, BCS304, BCSL305, BCSL306A, BSC307, BCS401, BCS402, BCS403, BCS404, BCS456A, BCS405A, BBOC407, BCS501, BCS502, BCS505D, BCSL504, BCS506, BRMK507, BCS505B, BCS505D, BCS601, BCS602, BCS603, BCS604A, BCS604B, BCS604C, BCS604D, BAI605B, BCS608A, BCS608C, BCS607, BCS608, BCS701, BCS801X, BCS803, BCS705, BCS606
PO2	BMAT101, BPHY102, BPOPS103, BESCK104D, BETCK105H, BIDTK158, BMATS201, BCHES202, BESCK204C, BPLCK205D, BCS301, BCS302, BCS303, BCS304, BCSL306A, BCS358A, BCS401, BCS402, BCS403, BCS404, BCS456A, BCS405A, BBOC407, BCS501, BCS502, BCS505D, BCSL504, BCS506, BCS505B, BCS505D, BCS601, BCS602, BCS603, BCS604B, BCS604D, BAI605B, BCS608A, BCS608C, BCS607, BCS608, BCS701, BCS801X, BCS803, BCS705, BCS606
PO3	BESCK104D, BETCK105H, BIDTK158, BESCK204C, BCS304, BCSL305, BCS358A, BCS401, BCS402, BCS403, BCS404, BCS501, BCS502, BCSL504, BCS506, BRMK507, BCS601, BCS604B, BAI605B, BCS608A, BCS608C, BCS607, BCS608, BCS803, BCS705, BCS606
PO4	BPHY102, BIDTK158, BCHES202, BESCK204C, BPLCK205D, BCS303, BCS304, BCSL305, BCSL306A, BCS358A, BCS401, BCS403, BCS404, BCS501, BCS502, BCS505D, BCSL504, BCS506, BRMK507, BCS505B, BCS505D, BCS601, BCS602, BAI605B, BCS608A, BCS608C, BCS607, BCS608, BCS801X, BCS803, BCS705, BCS606
PO5	BMAT101, BMATS201, BCEDK203, BCS302, BCSL306A, BCS358A, BCS402, BCS403, BCS404, BCS502, BCS505D, BCSL504, BCS506, BCS505B, BCS505D, BCS601, BCS604A, BCS604C, BAI605B, BCS608A, BCS608C, BCS607, BCS608, BCS701, BCS702, BCS801X, BCS803, BCS705, BCS606
PO6	BESCK104D, BCHES202, BSFHK258, BCS304, BSC307, BCS401, BCS404, BCS456A, BBOC407, BUHK408, BCS506, BESK508, BCS604A, BAI605B, BCS608C, BCS608, BCS803, BCS705, BCS606
PO7	BESCK104D, BCHES202, BSFHK258, BCS304, BSC307, BCS401, BCS404, BCS456A, BBOC407, BUHK408, BCS506, BESK508, BCS604A, BAI605B, BCS608C, BCS608, BCS803, BCS705, BCS606
PO8	BETCK105H, BESCK204C, BSFHK258, BCS302, BCS304, BCSL305, BCS401, BCS402, BCS404, BCS456A, BBOC407, BUHK408, BCS502, BCS506, BESK508, BAI605B, BCS608A, BCS608C, BCS607, BCS608, BCS803, BCS705, BCS606
PO9	BENGK106, BESCK204C, BPLCK205D, BPWSK206, BSFHK258, BCS302, BCS304, BSC307, BCS401, BCS402, BCS403, BCS456A, BBOC407, BUHK408, BCS501, BCS502, BCS505D, BCSL504, BCS506, BCS505B, BCS505D, BCS602, BCS608A, BCS607, BCS608, BCS801X, BCS803, BCS705, BCS606
PO10	BCS502, BCS602, BCS608A, BCS607, BCS608, BCS801X, BCS803, BCS705, BCS606
PO11	BPHY102, BESCK104D, BIDTK158, BCHES202, BPLCK205D, BSFHK258, BCS304, BCSL305, BCSL306A, BCS358A, BCS401, BCS403, BCS404, BCS456A, BBOC407, BCS501, BCS502, BCS505D, BCS506, BCS505B, BCS505D, BCS601, BCS602, BCS604A, BCS608A, BCS608C, BCS607, BCS608, BCS702, BCS803, BCS705, BCS606

PSO:

PO Number	List of Courses
PSO1	BPOPS103, BETCK105H, BCEDK203, BESCK204C, BCS302, BCS304, BCSL305, BCS358A, BCS401, BCS402, BCS403, BCS404, BBOC407, BCS501, BCS502, BCS506, BCS601, BCS603, BCS604A, BAI605B, BCS608A, BCS607, BCS608, BCS705, BCS606, BCS803
PSO2	BESCK104D, BCEDK203, BESCK204C, BCS304, BCSL305, BCS401, BCS403, BCS404, BCS501, BCS502, BCS504, BCS506, BCS601, BCS604A, BCS608A, BCS608, BCS705, BCS606, BCS803

## 1.4 Course Outcomes and Course Articulation Matrix (30)

Total Marks 30.00





No. of Core Courses : 10	C2 : 4	C3 : 4	C4 : 2
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Note : Number of Outcomes for a Course is expected to be around 6.

Course Code :	BCS302	Semester :	3
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Course Outcome	Statements
BCS302.1	Illustrate the functions of the basic processing unit and pipelining.
BCS302.2	Apply appropriate techniques to solve and realize the logic expressions for digital circuits.
BCS302.3	Analyse the functionality of various devices in communicating with processor and I/O devices.
BCS302.4	Design the various digital circuits using hardware or software tools.

Course Code :	BCS304	Semester :	3
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Course Outcome	Statements
BCS304.1	Acquire the knowledge on different data structures and its applications.
BCS304.2	Apply different types of linear data structures and its operations to solve a given problem.
BCS304.3	Apply different types of non-linear data structures and its operations to solve a given problem.
BCS304.4	Implement solutions using appropriate data structures for the real world problem

Course Code :	BCS401	Semester :	4
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Course Outcome	Statements
BCS401.1	Make use of asymptotic notations and mathematically represent the complexity of the algorithm and explore the various classes (P,NP, NP Complete and NP Hard) problems.
BCS401.2	Apply divide & conquer and decrease & conquer approaches to solve the computational problems.
BCS401.3	Analyze backtracking, branch & bound, Greedy Method, transform & conquer and dynamic programming techniques to solve the real world problems.
BCS401.4	Develop applications using suitable data structures and algorithms.

Course Code :	BCS403	Semester :	4
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Course Outcome	Statements
BCS403.1	Illustrate the basic concepts of relational database management system.
BCS403.2	Design a relational database management system for a given scenario.
BCS403.3	Build queries using Structured Query Language .
BCS403.4	Apply different normal forms for database design.
BCS403.5	Develop database applications for the given problem.

<b>Course Code :</b>	<b>BCS502</b>	<b>Semester :</b>	<b>5</b>
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<b>Course Outcome</b>	<b>Statements</b>
BCS502.1	Apply Computer networking concepts to perform data communication between different entities.
BCS502.2	Analyse different layer services and protocols.
BCS502.3	Implement algorithms for different concepts of computer networks.
BCS502.4	Examine different network architectures used in various organizations and identify factors that influence their design.

<b>Course Code :</b>	<b>BCS503</b>	<b>Semester :</b>	<b>5</b>
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<b>Course Outcome</b>	<b>Statements</b>
BCS503.1	Make use of the concept of abstract machines and their power to recognize the languages.
BCS503.2	Apply the finite state machines for modelling and solving computing problems.
BCS503.3	Design grammars, PDA, Turing machines for formal languages.
BCS503.4	Analyze the relationship of language classes, grammar and automata

<b>Course Code :</b>	<b>BCS602</b>	<b>Semester :</b>	<b>6</b>
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<b>Course Outcome</b>	<b>Statements</b>
BCS602.1	Apply the key concepts, types, and challenges of Machine Learning to identify appropriate learning algorithms for solving problems
BCS602.2	Develop machine learning models using appropriate algorithms for classification, regression, and decision-making tasks.
BCS602.3	Make use of advanced techniques like ensemble learning, instance-based learning, and Bayesian methods to enhance model accuracy and efficiency.
BCS602.4	Analyze the performance of different machine learning models using statistical and evaluation metrics

<b>Course Code :</b>	<b>BCS603</b>	<b>Semester :</b>	<b>6</b>
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<b>Course Outcome</b>	<b>Statements</b>
BCS603.1	Understand the structure of a compiler and apply tokenization to the source code.
BCS603.2	Apply the parsing techniques for the given grammar to do syntax analysis
BCS603.3	Analyse the syntax-directed translation techniques in the given grammar.
BCS603.4	Make use of suitable techniques to generate the intermediate code and target code.

Course Code :	BCS701	Semester :	7
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Course Outcome	Statements
BCS701.1	Illustrate Network Security algorithms to solve the given problem.
BCS701.2	Apply the concepts of Hash functions and random number generation in network security.
BCS701.3	Apply the concepts of Key management in maintaining Security.
BCS701.4	Make use of Network cryptographic techniques for mobile applications.

Course Code :	BCS702	Semester :	7
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Course Outcome	Statements
BCS702.1	Apply the concepts of Parallel Computers, Data and Temporal Parallelism for various problems.
BCS702.2	Apply the knowledge of different structures of parallel computers
BCS702.3	Analyze the performance evaluation of parallel computers
BCS702.4	Develop the Parallel Programs in CUDA C

#### 1.4.2 Course Articulation Matrix (15)



## 1 . course name : C2BCS302

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C2BCS302.1	Illustrate the	2 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS302.2	Apply approc	2 ✓	1 ✓	- ✓	- ✓	2 ✓	- ✓	1 ✓	1 ✓	1 ✓	1 ✓	- ✓
C2BCS302.3	Analyse the	2 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS302.4	Design the	2 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	1 ✓	1 ✓	1 ✓	1 ✓	- ✓
<b>Average</b>		<b>0.00</b>										

## 2 . course name : C2BCS304

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C2BCS304.1	Acquire the	1 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS304.2	Apply differ	1 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS304.3	Apply differ	2 ✓	2 ✓	2 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS304.4	Implement:	2 ✓	2 ✓	- ✓	2 ✓	2 ✓	2 ✓	2 ✓	3 ✓	3 ✓	3 ✓	1 ✓
<b>Average</b>		<b>0.00</b>										

## 3 . course name : C2BCS401

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C2BCS401.1	Make use c	2 ✓	1 ✓	1 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS401.2	Apply divid	2 ✓	1 ✓	1 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS401.3	Analyze ba	2 ✓	2 ✓	1 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS401.4	Develop ap	3 ✓	2 ✓	2 ✓	1 ✓	1 ✓	1 ✓	1 ✓	2 ✓	2 ✓	1 ✓	2 ✓
<b>Average</b>		<b>0.00</b>										

## 4 . course name : C2BCS403

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C2BCS403.1	Illustrate the	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS403.2	Design a re	1 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS403.3	Build queri	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS403.4	Apply differ	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C2BCS403.5	Develop da	1 ✓	1 ✓	2 ✓	1 ✓	2 ✓	- ✓	- ✓	1 ✓	3 ✓	- ✓	1 ✓

Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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## 5 . course name : C3BCS502

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C3BCS502.1	Apply Com	3 ✓	- ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	2 ✓
C3BCS502.2	Analyse difi	- ✓	2 ✓	1 ✓	3 ✓	- ✓	- ✓	- ✓	3 ✓	1 ✓	- ✓	2 ✓
C3BCS502.3	Implement :	- ✓	- ✓	2 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	1 ✓
C3BCS502.4	Examine di	- ✓	- ✓	1 ✓	- ✓	3 ✓	- ✓	3 ✓	- ✓	- ✓	- ✓	3 ✓
Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 6 . course name : C3BCS503

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C3BCS503.1	Make use c	2 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	3 ✓	3 ✓	- ✓	- ✓
C3BCS503.2	Apply the fi	2 ✓	2 ✓	1 ✓	1 ✓	- ✓	- ✓	- ✓	3 ✓	3 ✓	- ✓	- ✓
C3BCS503.3	Design gra	2 ✓	2 ✓	1 ✓	1 ✓	- ✓	- ✓	- ✓	3 ✓	3 ✓	- ✓	- ✓
C3BCS503.4	Analyze the	2 ✓	- ✓	- ✓	1 ✓	- ✓	- ✓	- ✓	3 ✓	3 ✓	- ✓	- ✓
Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 7 . course name : C3BCS602

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C3BCS602.1	Apply the k	2 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	2 ✓	2 ✓	- ✓	1 ✓
C3BCS602.2	Develop m	2 ✓	1 ✓	- ✓	2 ✓	- ✓	- ✓	- ✓	2 ✓	2 ✓	- ✓	1 ✓
C3BCS602.3	Make use c	2 ✓	2 ✓	- ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	1 ✓	- ✓	- ✓
C3BCS602.4	Analyze the	1 ✓	1 ✓	- ✓	2 ✓	- ✓	- ✓	- ✓	1 ✓	- ✓	- ✓	1 ✓
Average		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## 8 . course name : C3BCS603

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C3BCS603.1	Understand	2 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C3BCS603.2	Apply the p	2 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓
C3BCS603.3	Analyse the	2 ✓	1 ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓	- ✓

C3BCS603.4	Make use c	2	▼	1	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼
Average		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	

9 . course name : C4BCS701

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11					
C4BCS701.1	Illustrate Nt	2	▼	3	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼
C4BCS701.2	Apply the c	3	▼	2	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼
C4BCS701.3	Apply the c	3	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼
C4BCS701.4	Make use c	3	▼	3	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼
Average		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	

10 . course name : C4BCS702

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11					
C4BCS702.1	Apply the c	2	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼
C4BCS702.2	Apply the k	3	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼	2	▼
C4BCS702.3	Analyze the	3	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼	2	▼
C4BCS702.4	Develop the	3	▼	-	▼	-	▼	-	▼	2	▼	-	▼	-	▼	-	▼
Average		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00	

**1 . Course Name : C2BCS302**

<b>Course</b>	<b>PSO1</b>	<b>PSO2</b>
C2BCS302.1	- ▼	- ▼
C2BCS302.2	- ▼	- ▼
C2BCS302.3	- ▼	- ▼
C2BCS302.4	1 ▼	- ▼
<b>Average</b>	<b>0.00</b>	<b>0.00</b>

**2 . Course Name : C2BCS304**

<b>Course</b>	<b>PSO1</b>	<b>PSO2</b>
C2BCS304.1	2 ▼	1 ▼
C2BCS304.2	2 ▼	1 ▼
C2BCS304.3	2 ▼	1 ▼
C2BCS304.4	3 ▼	3 ▼
<b>Average</b>	<b>0.00</b>	<b>0.00</b>

**3 . Course Name : C2BCS401**

<b>Course</b>	<b>PSO1</b>	<b>PSO2</b>
C2BCS401.1	2 ▼	1 ▼
C2BCS401.2	2 ▼	1 ▼
C2BCS401.3	2 ▼	1 ▼
C2BCS401.4	3 ▼	3 ▼
<b>Average</b>	<b>0.00</b>	<b>0.00</b>

**4 . Course Name : C2BCS403**

<b>Course</b>	<b>PSO1</b>	<b>PSO2</b>
C2BCS403.1	- ▼	- ▼
C2BCS403.2	- ▼	- ▼
C2BCS403.3	- ▼	- ▼
C2BCS403.4	- ▼	- ▼
C2BCS403.5	- ▼	- ▼

Average	0.00	0.00
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**5 . Course Name : C3BCS502**

Course	PSO1	PSO2
C3BCS502.1	3 ▼	2 ▼
C3BCS502.2	3 ▼	- ▼
C3BCS502.3	3 ▼	- ▼
C3BCS502.4	1 ▼	- ▼
<b>Average</b>	<b>0.00</b>	<b>0.00</b>

**6 . Course Name : C3BCS503**

Course	PSO1	PSO2
C3BCS503.1	- ▼	2 ▼
C3BCS503.2	3 ▼	2 ▼
C3BCS503.3	3 ▼	2 ▼
C3BCS503.4	- ▼	2 ▼
<b>Average</b>	<b>0.00</b>	<b>0.00</b>

**7 . Course Name : C3BCS602**

Course	PSO1	PSO2
C3BCS602.1	2 ▼	- ▼
C3BCS602.2	2 ▼	- ▼
C3BCS602.3	2 ▼	- ▼
C3BCS602.4	2 ▼	- ▼
<b>Average</b>	<b>0.00</b>	<b>0.00</b>

**8 . Course Name : C3BCS603**

Course	PSO1	PSO2
C3BCS603.1	- ▼	- ▼
C3BCS603.2	- ▼	- ▼
C3BCS603.3	1 ▼	- ▼

C3BCS603.4	-	▼	-	▼
Average	0.00		0.00	

**9 . Course Name : C4BCS701**

Course	PSO1	PSO2
C4BCS701.1	2	▼
C4BCS701.2	2	▼
C4BCS701.3	2	▼
C4BCS701.4	2	▼
Average	0.00	0.00

**10 . Course Name : C4BCS702**

Course	PSO1	PSO2
C4BCS702.1	2	▼
C4BCS702.2	2	▼
C4BCS702.3	2	▼
C4BCS702.4	2	▼
Average	0.00	0.00

**1.5 Program Articulation Matrix (5)**

Total Marks 5.00

**Program Articulation Matrix**



Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BMAT101	2	1	PO3	PO4	1	PO6	PO7	PO8	PO9	PO10	PO11
BPHYS102	2	1	PO3	1	PO5	PO6	PO7	PO8	PO9	PO10	1
BPOPS103	2	1	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BESCK104D	2	3	2	PO4	PO5	2	PO7	PO8	1	2	2
BETCK105H	1	1	1	PO4	PO5	PO6	1	PO8	1	PO10	PO11
BENGK106	PO1	PO2	PO3	PO4	PO5	PO6	PO7	1	2	PO10	PO11
BIDTK158	1	1	1	1	PO5	PO6	PO7	PO8	PO9	PO10	1
BMATS201	2	1	PO3	PO4	1	PO6	PO7	PO8	PO9	PO10	PO11
BCHEs202	2	1	PO3	1	PO5	1	PO7	PO8	PO9	PO10	1
BCEDK203	2	PO2	PO3	PO4	2	PO6	PO7	PO8	2	PO10	PO11
BESCK204C	2	2	2	2	3	2	2	2	2	2	2
BPLCK205D	2	2	PO3	1	PO5	PO6	PO7	2	1	PO10	1
BPWSK206	PO1	PO2	PO3	PO4	PO5	PO6	PO7	2	3	PO10	PO11
BSFHK258	PO1	PO2	PO3	PO4	PO5	1	1	3	2	PO10	1
BCS301	2	1	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BCS302	2	1	PO3	PO4	2	PO6	1	1	1	1	PO11
BCS303	2	1	PO3	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BCS304	1	1	2	1	PO5	1	1	3	3	1	1
BCSL305	2	PO2	1	1	PO5	PO6	1	PO8	PO9	PO10	1
BCSL306A	2	1	PO3	1	1	PO6	PO7	PO8	PO9	PO10	1
BCSK307	1	PO2	PO3	PO4	PO5	1	PO7	1	1	PO10	PO11
BCS358A	PO1	2	1	1	1	PO6	PO7	PO8	1	1	1
BCS401	2	2	1	1	1	1	1	2	2	1	2
BCS402	2	1	1	PO4	1	PO6	1	2	2	1	PO11
BCS403	1	1	2	1	2	PO6	PO7	1	3	PO10	1
BCSL404	2	1	1	2	3	1	2	PO8	PO9	PO10	1
BCS456A	2	1	PO3	PO4	PO5	3	1	2	2	PO10	1
BCS405A	2	1	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BBOC407	2	2	PO3	PO4	PO5	3	1	3	1	PO10	1
BUHK408	2	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BCS501	1	1	3	1	PO5	PO6	PO7	3	3	2	2

BCS502	3	2	1	3	3	PO6	3	3	1	PO10	2
BCS503	2	2	1	1	PO5	PO6	PO7	3	3	PO10	PO11
BCS505D	2	3	PO3	2	2	PO6	PO7	3	PO9	PO10	2
BCSL504	2	2	2	1	1	PO6	PO7	3	2	PO10	2
BCS506	3	2	3	2	2	2	3	3	3	2	2
BRMK507	2	PO2	1	1	PO5	PO6	PO7	PO8	1	PO10	PO11
BESK508	PO1	PO2	PO3	PO4	PO5	1	1	PO8	PO9	PO10	PO11
BCS505B	3	1	PO3	1	1	PO6	PO7	2	3	PO10	2
BCS505D	2	3	PO3	2	2	PO6	PO7	3	PO9	PO10	2
BCS601	3	3	2	2	3	PO6	PO7	PO8	PO9	2	2
BCS602	2	1	PO3	2	PO5	PO6	PO7	2	2	PO10	1
BCS603	2	1	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BCS604A	2	2	PO3	PO4	3	3	PO7	PO8	PO9	PO10	1
BCS604B	2	1	1	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BCS604C	2	PO2	PO3	PO4	1	PO6	PO7	PO8	PO9	PO10	PO11
BCS604D	1	1	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BAI605B	2	3	3	3	2	3	2	PO8	PO9	PO10	PO11
BCS608A	3	3	2	3	3	PO6	2	2	1	1	3
BCS608C	3	3	3	3	3	1	3	PO8	3	PO10	3
BCS607	2	2	1	1	1	PO6	1	2	2	PO10	2
BCS608	3	3	3	3	2	3	3	3	3	2	3
BCS701	3	2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BCS702	3	PO2	PO3	PO4	2	PO6	PO7	PO8	PO9	PO10	2
BCS606	3	3	3	3	2	3	3	3	3	2	3
BCS705	3	3	3	3	2	3	3	3	3	2	3
BCS803	3	3	3	3	3	3	3	3	3	3	3

Course Code	PSO1	PSO2
BAI605B	1	PSO2
BBOC407	3	PSO2
BCEDK203	2	1
BCHES202	PSO1	PSO2
BCS301	PSO1	PSO2

BCS302	1	PSO2
BCS303	PSO1	PSO2
BCS304	1	2
BCS358A	1	PSO2
BCS401	2	3
BCS402	1	PSO2
BCS403	1	2
BCS405A	PSO1	PSO2
BCS456A	PSO1	PSO2
BCS501	1	2
BCS502	3	2
BCS503	3	2
BCS505B	PSO1	PSO2
BCS505D	PSO1	PSO2
BCS505D	PSO1	PSO2
BCS506	2	2
BCS601	3	2
BCS602	PSO1	PSO2
BCS603	1	PSO2
BCS604A	2	2
BCS604B	PSO1	PSO2
BCS604C	PSO1	PSO2
BCS604D	PSO1	PSO2
BCS606	3	3
BCS607	1	PSO2
BCS608	3	3
BCS608A	3	3
BCS608C	PSO1	PSO2
BCS701	2	2
BCS702	2	2
BCS705	3	3
BCS803	3	3

BCSK307	PSO1	PSO2
BCSL305	1	2
BCSL306A	PSO1	PSO2
BCSL404	1	2
BCSL504	3	PSO2
BENGK106	PSO1	PSO2
BESCK104D	PSO1	3
BESCK204C	2	2
BESK508	PSO1	PSO2
BETCK105H	1	PSO2
BIDTK158	PSO1	PSO2
BMATS201	PSO1	PSO2
BPLCK205D	PSO1	PSO2
BPOPS103	1	PSO2
BPWSK206	PSO1	PSO2
BRMK507	PSO1	PSO2
BSFHK258	PSO1	PSO2
BUHK408	PSO1	PSO2

2 OUTCOME-BASED TEACHING LEARNING (120)

Total Marks 120.00

**2.1 Describe Processes Followed to Ensure Quality of Teaching & Learning (20)**

Total Marks 20.00



### **Academic Processes at UG-CSE**

1.The Dean Academics office will issue the Institute-level calendar of events. The Academic Calendar serves as an information source and planning document for students, faculty, and department.

- The institute-level calendar will include key dates such as Course registration, Commencement of classes, Continuous Internal Evaluation (CIE) dates, list of holidays, Commencement dates for mini/major student projects, and Continuous comprehensive assessment (CCA)/AAT dates, Marks and attendance freezing, Last working day.
- At the department level, a separate calendar of events will be prepared, by including department-specific activities such as invited talks, industrial visits, and other relevant activities similar to the Institute calendar of events.

2. Timetable Preparation: As per the course registration and commencement of classes timetable will be prepared at the department level to ensure that all classes are engaged in a timely manner.

3. Course Plan Preparation: Course plans will be prepared by the course coordinator in line with the academic calendar. This includes hour wise lesson plan, delivery plan, Assessment plan and CO-PO mappings.

4. Delivery Methods: Various delivery methods are planned such as lectures, PowerPoint presentations, blended learning, cooperative learning etc.

5. Assessment/Evaluation: Students will be assessed through

- Continuous Internal Exams (CIE) and Semester end exams.
- Laboratory exams.
- Alternate assessment tools (AAT) such as course projects, case studies, GATE based questions, programming assignments, self-paced MOOCs, poster presentations, open-ended experiments etc.

6. Based on CIE and SEE, Bright and Slow learners are identified.

- Bright learners are encouraged for minor degree, Honours degree, Participation in Hackathons, MOOCs etc.
- For slow learners additional coaching is given via remedial classes and special counselling is conducted by the faculty members.

7. Internship, Publications, and Placements: Encouraging students to carry out internships, publish articles in conferences and journals, participate in placements activities, participate in project exhibition, online courses and motivation for higher education is encouraged.

#### **A. Adherence to Academic Calender**

#### **Academic Calendar: Preparation and Implementation**

The **Academic Calendar** serves as a comprehensive guide outlining key academic activities and milestones throughout the semester. It includes semester start and end dates, holidays, internal assessments, parent-teacher meetings, weekly proctoring, and other critical events. The following outlines the systematic process for its preparation, communication, and implementation:

##### **1. Formulation of the Academic Calendar**

- A draft academic calendar is prepared by the **Dean - Academics** in coordination with the **Controller of Examinations**, based on the University Calendar of Events.

##### **2. Finalization and Approval**

- The draft calendar is reviewed and finalized during the **Heads of Departments (HoDs) meeting**, prior to the commencement of the academic year.

##### **3. Communication to Stakeholders**

- Once approved, the academic calendar is disseminated to all stakeholders via:
  - College notice boards
  - Official website
  - Institutional email communications

##### **4. Key Components of the Academic Calendar**

- Student registration dates
- Semester commencement and conclusion dates
- Continuous Internal Evaluation (CIE) and Semester-End Examination (SEE) schedules
- Deadlines for course withdrawal and dropping

- Declared holidays
- Scheduled Parent-Teacher Meetings

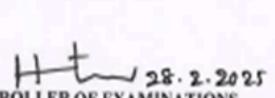
VISION OF THE INSTITUTE											
MISSION OF THE INSTITUTE											
Month	Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Working Days	EVENTS	
	W-00	9	10	11	12	13	14	15	0	13 - 14 Mar.: Course Registration for II Semester	
MARCH	W-01	16	17	18	19	20	21	22	6	17 Mar.: Commencement of BE II Semester Classes	
	W-02	23	24	25	26	27	28	29	6		
	W-03	30	31						0	31 Mar.: Qutub e Ramzan	
	W-04			1	2	3	4	5	4		
	W-05	6	7	8	9	10	11	12	5	07 Apr.: Faculty Feedback-1 by Students	
	W-06	13	14	15	16	17	18	19	3	10 Apr.: Mahavir Jayanthi	
	W-07	20	21	22	23	24	25	26	6	14 Apr.: Ambedkar Jayanthi	
	W-08	27	28	29	30				2	16 Apr.: Announcement of Continuous Comprehensive Assessment(CCA) - CCA1 and CCA2	
	W-09					1	2	3	1	25- 26 Apr.: Utsaha	
	W-10									30 Apr.: Basava Jayanthi	
	W-11									01 May.: May Day	
	W-12									08 May.: IA1 QPs Scrutiny	
	W-13									13-16 May.: Internal Assessment 1	
APRIL	W-14									20-21 May: Evaluation of CCA1	
	W-15									22 May: Last date to enter IA1 Marks in Contineo Portal	
	W-16									23-24 May: Dropping of the courses	
	W-17									24 May.: Parents Teachers Meeting	
	W-18									26 May: Finalization of CCA1 Marks	
MAY	W-19										
	W-20										
	W-21									13-14 Jun: Evaluation of CCA2	
JUN	W-22									16 Jun: Finalization of CCA2	
	W-23									16 Jun : Conduction of Lab Internals in	

JULY	W-14	15	16	17	18	19	20	21	5		Marks	20 Jun.: IA2 QPs Scrutiny	regular lab slots		
	W-15	22	23	24	25	26	27	28	6		25-28 Jun.: Internal Assessment 2				
	W-16	29	30						1						
	W-16			1	2	3	4	5	5		01 Jul.: Withdrawal of courses	03 Jul.: Last date to enter IA2 Marks in Contineo Portal	03 Jul.: Faculty Feedback-2 by Students	04 Jul.: Freezing of CIE Marks and Attendance in Contineo Portal	05 Jul.: Last Working Day of II Semester classes

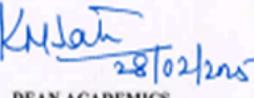
Variations in dates of events if any for valid reasons will be notified by the concerned.



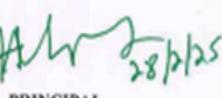
COE-COORDINATOR



CONTROLLER OF EXAMINATIONS



DEAN ACADEMICS



PRINCIPAL



SECOND SEMESTER B.E. INTERNAL ASSESSMENT (CIE) - TIMETABLE  
 FIRST INTERNALS TEST

Date: 06-05-2025

		Offline mode						Online mode		
Date	→	13-05-2025 (Tuesday)		14-05-2025 (Wednesday)		15-05-2025 (Thursday)		16-05-2025 (Friday)		
Sem	Time → Branch	MS 9:30 AM- 11:00 AM	AS 2:00 PM-3:30 PM	MS 9:30 AM- 11:00 AM	AS 2:00 PM- 3:30 PM	MS 9:30 AM- 11:00 AM	AS 2:00 PM- 3:30 PM	MS 9:30 AM-10:30 AM	AS 11:00 AM- 12:00 PM	AS 2:00 PM- 3:00 PM
II	CSE (I to 14)	BMATCS21 Ordinary Differential Equations and Numerical Methods	BPHYCS22 Quantum Computing and Photonics	BESC24A Introduction to Civil Engineering	BETC25A Introduction to IOT	BPOP23 Principles of Programming using C	BSKK27/ BBKK27 SamskrutiKA Kannada/ Balake Kannada	-	-	-
	CSE (15), AIML (I to 6), CSBS			BESC24B Introduction to Electrical Engineering	BETC25B Introduction to Cyber Security					
	ECE (I to 3)			BESC24D Introduction to Mechanical Engineering	BETC25C Introduction to Cloud Computing					
II	BMATCS21 Ordinary Differential Equations and Numerical Methods	BCHECS22 Materials Chemistry for Energy and Data processing	BESC24C Introduction to Electronics Engineering	BPLC25B Introduction to Python Programming	BPLC25B Introduction to Civil Engineering	BSFH28 Scientific Foundations of Health	BICO27 Indian Constitution	-	-	-
				BPLC25C Basics of JAVA Programming						
				BESCEEE22 Materials Chemistry for Energy and Display Systems	BESCEEE22 Introduction to Electrical Engineering					
II	BMATEE21 Numerical Methods and Linear Algebra	BESCEEE22 Materials Chemistry for Energy and Display Systems	BESCEEE22 Introduction to Mechanical Engineering	BESCEEE22 Introduction to Electronics Engineering	BPLC25D Introduction to C++ Programming	BSFH28 Scientific Foundations of Health	BICO27 Indian Constitution	-	-	-
				BESCEEE22 Introduction to Electronics Engineering	BPLC25D Introduction to C++ Programming					
				BESCEEE22 Introduction to Electronics Engineering	BPLC25D Introduction to C++ Programming					

First Year coordinator

Principal

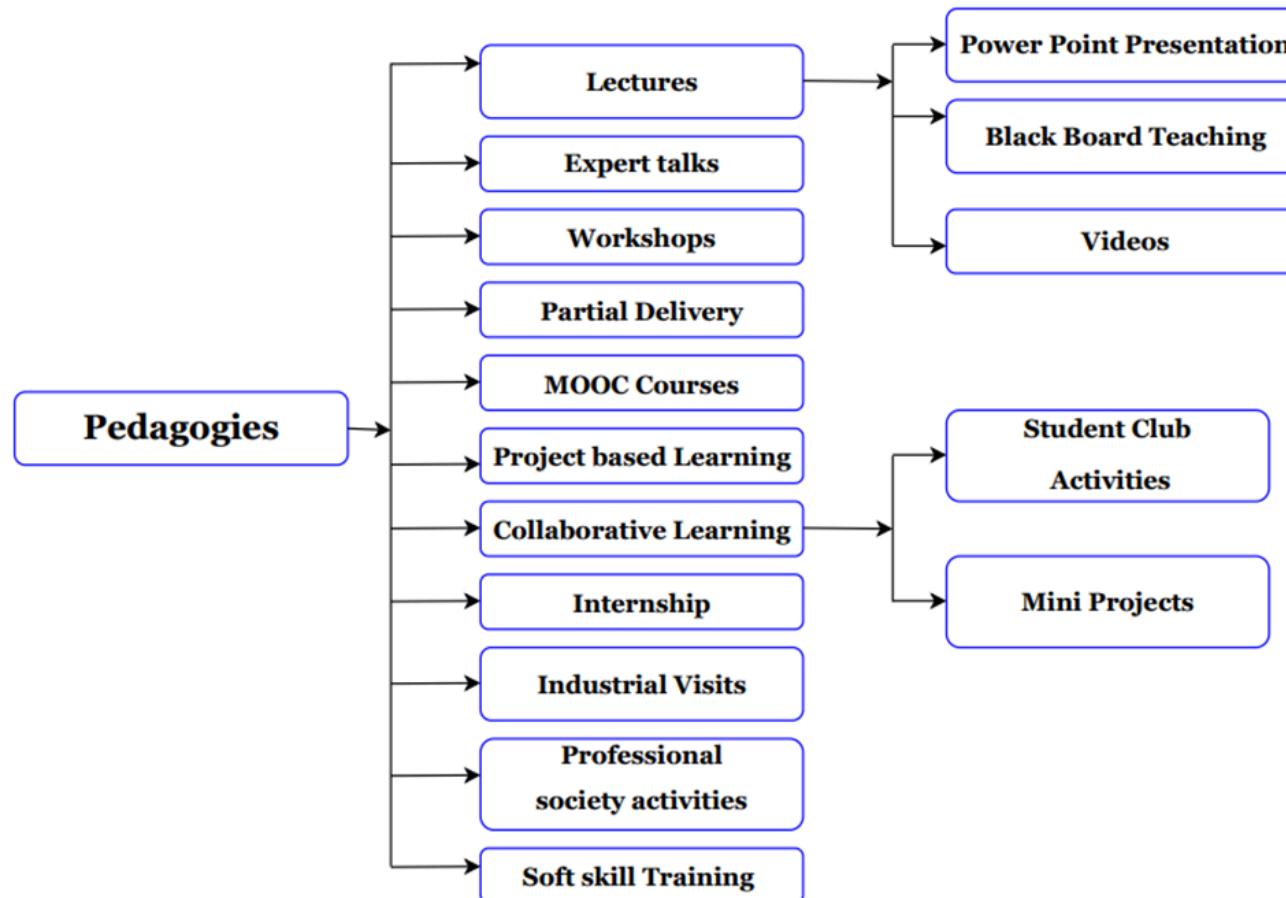
## Sample Academic Calendar &amp; CIE schedule

## B. Instruction methods using pedagogical initiatives:

Classroom teaching: The course delivery by the course coordinators is through a set of tools like

- Chalk and talk - green/black board.
- PowerPoint Presentation (PPT).
- Case studies/Innovative Questions
- Project based Learning.
- Group discussions/tasks
- Collaborative learning /Cooperative learning /Flip classes

- Use of Open-Source Software



**Table 2.1: Course delivery methods of different courses offered**

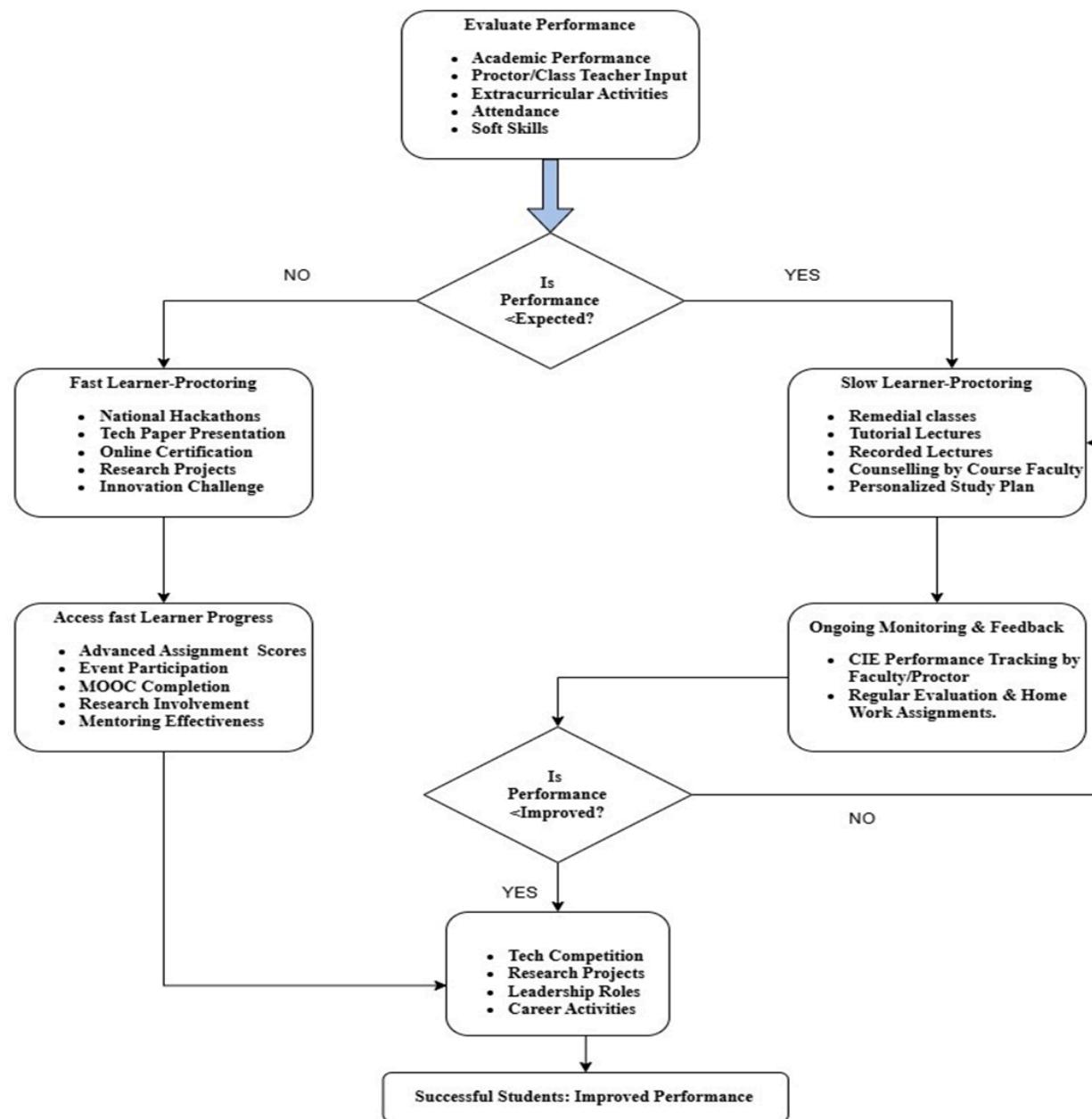
SL No	Semester	Name of the Subject	Subject Code	PP T	Chal k & Talk	Cas e Stud y	PB L	E- Studio	Collaborat ive Learning

1	I	Mathematics for CSE Stream-I	BMATS10 1		✓				
2		Physics for CSE stream	BPHYS10 2	✓	✓	✓			✓
3		Principles of Programming Using C	BPOPS10 3	✓	✓				
4		Introduction to Mechanical Engineering	BESCK10 4D	✓	✓				
5		Introduction to Internet of Things	BETCK10 5H	✓	✓				
6		Communicative English	BENGK10 6	✓	✓				
7		Samskrutika Kannada/ Balake Kannada	BKSKK10 7/ BKBKK10 7		✓				
8		Innovation & Design Thinking	BIDTK158	✓					✓
9	II	Mathematics for CSE Stream-II	BMATS20 1		✓				
10		Chemistry for CSE Stream	BCHES20 2		✓				✓
11		Computer Aided Engineering Drawing	BCEDK20 3	✓	✓				✓
12		Engineering Science Course –II Introduction to Electronics Engineering	BESCK20 4	✓	✓				✓
13		Programming Language Course Introduction to C++ Programming	BPLCK20 5	✓	✓				
14		Professional Writing Skills in English	BPWSK20 6	✓	✓				
15		Indian Constitution	BICOK20 7	✓	✓	✓			
16		Scientific Foundation of Health	BSFHK25 8	✓					

17	III	Mathematics for Computer Science	BCS301		✓				
18		Digital Design & Computer Organization	BCS302	✓	✓	✓	✓		
19		Operating Systems	BCS303	✓	✓	✓			✓
20		Data Structures and Application	BCS304	✓	✓				
21		Data Structures Lab	BCSL305	✓	✓				
22		OOPS WITH JAVA (JAVA)	BCS306A	✓	✓				
23		Data analytics with Excel	BCS358A	✓					✓
24		Social Connect and Responsibility	BSCK307	✓					
25	IV	ANALYSIS AND DESIGN OF ALGORITHMS (ADA)	BCS401	✓	✓		✓		
26		MICROCONTROLLE RS (MCT)	BCS402	✓	✓	✓	✓		
27		Database Management System (DBMS)	BCS403	✓	✓		✓		
28		Analysis and Design of Algorithms (ADAL)	BCSL404	✓	✓				
29		Discrete Mathematical Structure (DMS)	BCS405A	✓	✓				✓
30		Green IT and Sustainability (GIS)	BCS456A	✓	✓				
31		Biology for Engineers (BFE)	BBOK407		✓				
32		Universal Human Values (UHV)	BUHK408	✓	✓				

33	V	Software Engineering and Project Management	BCS501	✓	✓	✓			
34		Computer Networks	BCS502	✓	✓				
35		Theory of Computation	BCS503	✓	✓		✓		✓
36		Web Technology Lab	BCSL504	✓		✓			
37		Professional Elective Course I	BCS505X	✓	✓				
38		Mini Project	BCS506			✓			
39		Research Methodology and IPR	BRMK507	✓	✓				✓
40		Environmental Studies	BESK 508	✓	✓				
41		Cloud Computing	BCS601	✓	✓	✓			
42	VI	Machine Learning	BCS602	✓	✓	✓			
43		Compiler Design	BCS603	✓	✓				
44		Professional Elective Course II (Cyber Security, Block Chain Essentials, Full Stack Development, Data warehousing and Data mining)	BCS604X	✓	✓	✓	✓		✓
				✓	✓	✓			
				✓	✓	✓	✓		✓
				✓	✓	✓	✓		✓
45		Open Elective Course I Introduction to Data Structures	BCS605X	✓	✓				✓
46		Major Project Phase I	BCS605						✓
47		Machine Learning Lab	BCSL607	✓	✓				
48		Ability Enhancement Course/Skill Generative AI/DevOps	BCS608A/ BCS608C			✓			
49		Indian Knowledge System	BIKS610	✓					

#### C. Support Students based on their ability

**Criteria for Fast Learners**

- Scoring **>75%** in internal and university exams
- Excellent lab and project performance
- Active participation in hackathons, coding contests, and paper presentations

- Completion of MOOCs, internships, and certifications beyond the syllabus

#### **Initiatives and implementation details of Encouraging Bright Students**

- Bright students are recommended for BMSET scholarship from the Department.
- Students having orientation towards research are encouraged to do quality publications.
- Students having high academic track records are encouraged to take up competitive examinations like GATE, TOEFL, GRE etc., and encouraged for higher studies.
- Students are encouraged to participate in inter-cultural Events and global education through symposia and online activities.
- The bright students having an orientation towards Entrepreneurship are encouraged by the college and department to develop their entrepreneur skills through Innovation Cell (BICEP).

As per the university guidelines Ref:VTU/BGM/SA/Aca-Cirs/2024-25/2394, college will offer a fast track degree for an extraordinary student. The same is done by offering courses to fulfill the requirements of the programme in three and half years.

**Table 2.2: Support for Fast learners**

Strategy	Description
<b>Assignments</b>	Research-based and open-ended problems beyond the syllabus in core subjects.
<b>Mini and Capstone Projects</b>	Encouraged from early semesters in areas like AI, ML, and Cybersecurity.
<b>MOOC Enrolments</b>	Fast learners are guided to complete NPTEL, Coursera, and Infosys Springboard courses.
<b>Hackathons and Tech Events</b>	Support provided to participate in Smart India Hackathon, IEEE events, CodeChef contests, etc.
<b>Technical Paper Writing</b>	Students guided to write and present papers at national/international conferences.
<b>Internship and Industry Linkage</b>	Short-term internships or live projects with startups/companies via BICEP and IIC.

**Table 2.3 Sample achievements of Bright Students**

<ul style="list-style-type: none"> <li>Students of 5th semester,CSE named Vanshika soin , shriya choudhary and sachin suryavanshi won third prize in ideathon 2024 in channabasveshwara Institute of technology</li> </ul>	
<ul style="list-style-type: none"> <li>Student of 3rd sem D section,usn 1BY23CS249 Thota Laasya Reddy won third prize in AIGLE AIR team HackDayPondicherry</li> </ul> <p>Theme: Conversion of CO<sub>2</sub> to O<sub>2</sub> using algae.</p>	
<ul style="list-style-type: none"> <li>Students of V Semester,Shreya M (Team Leader), Sudarshan Shetty, Karthik R C and Karthik K Participated in the event Fetching Fortunes conducted by IIT Hyderabad and Secured Top 9 th Position for the Idea TransparentMind AI under the guidance of Dr. Ambika G.N mentorship</li> </ul>	

**Table 2.4 Sample List of Students Paper Publication**

Year	Journal	Conference	No of Student Publications
CAY (2024-25)	1	6	7

<b>CAY m1 (2023-24)</b>	1	11	12
<b>CAY m2 (2022-23)</b>	1	2	3

**Criteria for Slow Learners**

- Students scoring <50% in internal assessments (IA)
- Consistent backlogs in core subjects
- Poor lab performance and weak programming skills
- Low engagement in classroom and academic activities

**Initiatives and implementation details of Assisting Slow Learners**

- The proctors monitor the performance of slow learners regularly. The student deviations from studies are observed and corrective measures are suggested by proctors.
- The proctors also go a step ahead and have periodic interaction with the parents about the performance of slow learners.
- Responsibility from both parents and proctors will create a positive mind-set and will help to overcome the inabilities and hurdles faced by the slow learners.
- Every parent is informed about the Internal Assessment Marks and Attendance of their ward.
- Special counselling and remedial classes are conducted for their improvement.
- The slow learners are grouped with bright students as peer groups in activities and in projects. This wraps them into the mainstream by exchanging the ideas.



**BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT**  
AVALAHALLI, YELAHANKA, BENGALURU-560064

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**IV SEMESTER B.E. REMIDIAL TIMETABLE FOR THE ACADEMIC YEAR 2022-2023**

SECTION: A

CLASS ROOM: BSN CR 101(A)/102 (B) / 103 (C)

W.E.F: 31/07/2023

	I 8.30-9.30	II 9.30-10.30	10.30- 10.50	III 10.50-11.50	IV 11.50-12.50	12.50- 1.45	V 1.45-2.40	VI 2.40-3.35	VII 3.35-4.30
MONDAY							SE/B	MES/B	
TUESDAY								DAA/A DAA/B SE/C	
WEDNESDAY								SE/A DAA/C	
THURSDAY								MAT/C	
FRIDAY							MAT/A	MES/A MES/C MAT/B	

SUBJECT	CODE	FACULTY
ADVANCED ENGINEERING MATHEMATICS (MAT)	21MTB41	DR. ANITHA KIRAN (A), DR. CHETHAN A S (B), DR. PRIYANKA PAL (C)
MICROCONTROLLER AND Embedded SYSTEMS (MES)	21CS45	DR. ASHWINI N (A), DR. LAKSHMI B N (B), PROF. DURGABHAVANI (C)
DESIGN AND ANALYSIS OF ALGORITHMS (DAA)	21CS46	DR. SATISH KUMAR T (A), DR. MANOJ H M (B), PROF. DURGA DEVI (C)
SOFTWARE ENGINEERING (SE)	21CS47	PROF. VISHAKHA YADAV (A), DR. ARUN KUMAR B R (B), DR. ARUNA KUMARI B N (C)

TIMETABLE OFFICERS

Professor and Head  
Department of Computer Science & Engineering  
BMS Institute of Technology & Management  
Yelahanka, Bangalore-560064

**Sample TimeTable for the Remedial class**

**Table 2.5 Strategies to improve slow learners**

Strategy	Description
Bridge Courses	Conducted at the beginning of the semester for subjects like C Programming, Data Structures, and DBMS.
Remedial Classes	Scheduled for topics in which students perform poorly, usually after college hours.
Mentoring and Counselling	Faculty mentors monitor academic progress and provide motivation, study plans, and counselling.
Simplified Teaching Methods	Use of flowcharts, concept maps, and hands-on demos to enhance comprehension.

Strategy	Description
Assignment Support	Additional practice questions and structured lab exercises.
Language Support	Technical English and communication sessions to improve comprehension for non-English background students.

**Table 2.6 Sample of assisting slow learners**

USN	Name	CI A	SE E	CIA- SEE	Credits Earned	Gra de	Grade Point	SGP A	CGP A
1BY22CS 053	CHIRANJIBI PRASAD DAS	40	22	62	4	B+	7	6.89	6.51
1BY22CS 215	ARNAV MAHESH	41	30	71	4	A	8	7.05	6.45
1BY22CS 135	PRANAY SINGH	34	18	52	4	C	5	4.26	6.58
1BY22CS 129	PANKAJ KUMAR YADAV	34	19	53	4	C	5	7.11	6.64
1BY21CS 105	N DILEEP SAI	31	24	55	4	B	6	5.79	5.89

**D. QUALITY OF CLASSROOM TEACHING**

The department is committed to delivering high-quality, student-centric education through structured and effective teaching-learning processes. Recognizing that effective classroom instruction is the cornerstone of academic excellence, the department has implemented a systematic framework to ensure rigor, engagement, and continuous improvement in teaching. By integrating outcome-based education (OBE), faculty development initiatives, technology-enhanced pedagogy, and feedback mechanisms, we strive to foster deep learning, critical thinking, and industry-relevant skills.

**1. Structured Lesson Planning & Delivery**

- Course File Preparation:** Faculty prepare detailed **course files** (syllabus, lesson plans, reference materials) before the semester.
- Bloom's Taxonomy Alignment:** Learning outcomes are mapped to **cognitive levels** (remember, apply, analyse) for effective delivery.
- Time-Bound Execution:** Weekly plans ensure coverage as per the **academic calendar**.

**2. Faculty Development & Training**

- Workshops:** Training on advanced technologies and tools.
- Industry Expert Sessions:** Guest lectures by professionals bridge **theory-practice gaps**.

**3. Continuous Monitoring & Feedback**

- Student Feedbacks:** Taken twice a semester to assess teaching effectiveness, clarity, and engagement.
- Internal Audits:** HOD or Associate Head conducts random class visits to evaluate adherence to lesson plans.
- Feedback Compliance:** Actions taken on student grievances (if any) are documented.

**4. Use of Innovative Teaching Methods**

- Active Learning:** Case studies, coding labs, and hackathons.
- Blended Learning:** LMS (ERP & Google Classroom) hosts recorded lectures, quizzes, and discussion forums.
- Project-Based Learning (PBL):** Mini-projects align with real-world AI applications (e.g., Deep Learning, NLP, Computer Vision).

**5. Assessment & Improvement**

- Outcome-Based Education (OBE):** Exams/tests mapped to Course Outcomes (COs) via rubrics.
- Academic Audit:** End-semester review identifies gaps in teaching (e.g., low CO attainment → revised pedagogy).
- Improvement:** Corrective actions (e.g., remedial classes, updated lecture contents) ensure continuous improvement.

## **6. Infrastructure & Digital Support**

- **Smart Classrooms:** Equipped with projectors and Smart Boards.
- **Recorded Lectures:** Backup for absentee students via E – Studio.

## **E. CONDUCTION OF EXPERIMENTS AND CONTINUOUS ASSESSMENT IN THE LABORATORY**

- **Lab Manual & Scheduling:** Each laboratory course is supported by a well-structured lab manual aligned with the latest syllabus. The experiment schedule is prepared in advance and shared with students at the beginning of the semester.
- **Observation Book - Pre-lab Preparation:** Students are expected to come prepared by reviewing the aim, algorithm, and logic of the experiment before entering the lab.
- **Execution of Programs/ Experiments:** Each student performs experiments individually or in pairs (based on the nature of the experiment and equipment availability) under the supervision of the course instructor and lab technician.
- **Faculty Demonstration:** Faculty members give brief instructions or live demonstrations before starting each experiment.
- **Observation & Record Books:** Students maintain observation books (updated in real-time during the lab) and neatly written, faculty-verified record books for all experiments.
- **Coding Best Practices:** Emphasis is given to coding standards, proper documentation, modularity, and debugging skills.

### **Continuous Assessment in Laboratories**

The continuous assessment of students in the lab is done systematically throughout the semester based on the following components:

#### **A .Internal Evaluation Criteria**

- **Regular Lab Performance**
  - Timely execution of experiments
  - Clarity of concepts and logic
  - Use of proper coding/debugging practices
- **Viva Voce**
  - Conducted at the end of each lab session or at regular intervals
  - Assesses understanding of theory behind the experiment and application knowledge
- **Lab Record Submission**
  - Timely, accurate, and complete documentation in record books
- **Final Internal Lab Test / Mock Exam**
  - Covers execution and understanding of all experiments conducted
  - Mimics university practical exam pattern

#### **B. CO (Course Outcome) Attainment Tracking**

Each lab experiment is mapped to specific Course Outcomes (COs), and assessment rubrics are followed to evaluate performance at various Bloom's levels (e.g., Apply, Analyze, Create). The data is collected to calculate CO attainment and improve teaching-learning processes.

The rubrics followed are enlisted below:

**Table 2.7 Rubrics for Evaluating the performance of students in Laboratory**

	Excellent	Very Good	Good	Satisfactory
Fundamental Knowledge (4) (PO1)	The student has well depth knowledge of the topics related to the course (4)	Student has good knowledge of some of the topics related to course (3)	Student is capable of narrating the answer but not capable to show in depth knowledge(2)	Student has not understood the concepts clearly (1)

Design Of Experiment (5) (PO2 & PO3)	Student is capable of discussing more than one design for his/her problem statement and capable of proving the best suitable design with proper reason (5)	Student is capable of discussing few designs for his/her problem statement but not capable of selecting best(4)	Student is capable of discussing single design with its merits and de-merits(3)	Student is capable of explaining the design (1-2)
Implementation (8) (PO3 & PO8)	Student is capable of implementing the design with best suitable algorithm considering <b>optimal solution</b> . (7-8)	Student is capable of implementing the design with <b>best suitable algorithm and should be capable of explaining it</b> (5-6)	Student is capable of implementing the <b>design with proper explanation</b> .(3-4)	Student is capable of <b>implementing the design</b> . (1-2)
Result &Analysis (5) (PO4)	Student is able to run the program on various cases and compare the result with proper analysis. (5)	Student will be able to run the program for all the cases.(4)	Student will be able to run the code for few cases and analyze the output.(3)	Student will be able to run the program but not able to analyze the output.(1-2)
Demonstration (8) (PO9)	The lab record is well-organized, with clear sections (e.g., Introduction, Method, Results, Conclusion). Transitions between sections are smooth. (7-8)	The lab record is organized, with clear sections, but some sections are not well-defined. (5-6)	The lab record lacks clear organization or structure. Some sections are unclear or incomplete. (3-4)	The lab record is poorly organized, with missing or unclear sections. (1-2)

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2.2 Quality of Student Capstone Project (25)

Total Marks 25.00



## **Identification of Capstone/Major Project**

In the journey of academic achievement, identifying a capstone or major project is a pivotal step that sets the stage for a successful project experience. This outlines the essential process of planning, selecting a topic, and ensuring alignment with current industry trends or research gaps. The objective is to create projects that are not only meaningful and feasible but also capable of delivering tangible outcomes. By engaging in this process, students will have the opportunity to apply their theoretical knowledge to practical engineering problems, thereby gaining valuable skills and experience.

### **Steps Involved in Project Identification**

The aim of the Project work is to give students an opportunity to apply the Theoretical knowledge that they have gained while studying to solve practical engineering problems. By doing so, it is hoped that the students will gain knowledge and experience in solving problems systematically.

To ensure that the students acquire skill sets through the execution of the project work, the Project work will be carried out in two Phases. To ensure that students receive effective mentorship and their projects align with faculty expertise, the following structured approach has been adopted. This method fosters a seamless connection between faculty and students, optimizing the quality of projects through specialized guidance.

#### **1. Project Execution Framework**

##### **Clear Guidelines and Milestones**

- Documentation: Publish a comprehensive Project Handbook detailing objective, scope, deliverables, evaluation criteria, timelines, and formatting standards.

##### **Phased Execution**

- 6th Sem: Topic selection, problem definition, literature survey, finalization of the methodology, initial implementation, and intermediate report submission.
- 7th Sem: System development, testing, result analysis, and final documentation.
- Milestones & Deadlines: Define key checkpoints: Synopsis submission, periodic reviews, progress reports, demo evaluations.
- Communication: Use Google Class Rooms (GCR)/ Google Drive, email, or WhatsApp groups for broadcasting instructions, templates, and reminders.

#### **2. Team Formation Guidelines**

- Team Size: 3–4 students per team to ensure optimal contribution.

##### **Formation Strategy**

- Allow self-formed teams with faculty approval.
- For unmatched students, coordinate balanced team formation based on skills and interests.
- Interdisciplinary and multi-disciplinary strategy

##### **Skill Diversity**

- Encourage multi-skill teams combining development, research, and documentation strengths.

#### **3. Project Guide Allocation Process**

##### **Domain wise Faculty Pool Preparation**

- Compile a list of faculty members for mentorship including
  - Area of expertise
  - Research Interests
  - Previous Mentorship Experience

##### **Selection of problem statement – The problem statement can be identified from the following sources**

- Industry driven problem statements
- Smart India Hackathon (SIH) problem statements
- Research Projects with the faculty
- Projects with alumni
- Projects with Prof. of Practice

##### **Guide Allotment & identification of problem statement**

Step 1: Collect project ideas and faculty preferences.

Step 2: Match student project domains with faculty expertise.

Step 3: Interaction with the faculty members.

Step 4: Publish the guide allotment to the students.

Step 5: Synopsis submission.

#### Guide Responsibilities

- Offer technical guidance, monitor progress, and review documentation.
- Conduct regular mentoring sessions.
- Ensure project originality and adherence to academic integrity.

#### 4. Resource and Platform Support

- Provide access to:
  - Relevant software tools (e.g., Python, TensorFlow, PyTorch, MATLAB).
  - Lab infrastructure or cloud platforms if needed.
  - Technical repositories and libraries.
- Encourage usage of collaboration platforms such as Google Drive, GitHub, Notion, Microsoft Teams, or Trello.

#### 5. Monitoring and Evaluation

##### Regular Reporting

- Bi-weekly Reports: Teams must submit progress summaries with tasks completed, pending work to their project guides.
- Project diary: Project guides will enter the project progress in the project diary.
- Review Meetings: Mid-phase reviews by guides and internal panels.

##### Evaluation Criteria

- Clearly defined rubric based on:
- Innovation and Problem Relevance
- Technical Depth and Feasibility
- Execution and Working Prototype
- Documentation and Presentation
- Team Coordination and Time Management

#### 6. Final Presentation and Evaluation

- Project Showcase: At the end of the 6<sup>th</sup> semester, students are evaluated as a phase 1 review for 100 marks (30 marks + 70 Marks). At the end of the term i.e. 7<sup>th</sup> semester, organize a final project exhibition or presentation day. This could be a poster session, a formal presentation, or a demo day where students show their work in front of internal as well as external examiners.
- Feedback and Assessment: Provide feedback based on the outcome and presentation. Include constructive criticism to help students learn and improve for future projects.

#### 7. Feedback and Improvement

- Student Feedback: Collect end-of-project feedback to improve coordination for subsequent batches.
- Faculty Review: Post-project faculty discussion on challenges faced and improvements to be made in the process.

**Table 2.8 The faculty list, along with their areas of expertise, is as follows:**

Sl. No	Faculty Name	Domain
1	Dr. Sanjay H A	Distributed Computing, Parallel Computing, Performance Modelling
2	Dr. Anil G.N	Computer Networks
3	Dr. Thippeswamy G	Computer Vision
4	Dr. Satish Kumar T	Algorithms, Compiler Design
5	Dr. Mahesh G	Wireless Sensor Network, Machine Learning
6	Dr. Radhika K. R	Data Science, Data Mining

7	Dr. Ravi Hosur	Image Processing, IoT, AIML
8	Dr. Aruna Kumari	NLP, Big Data
9	Dr. Vishakha Yadav	Computer Vision
10	Dr. Anand R	Artificial Intelligence
11	Dr. Ambika G. N	Robotics, Deep Learning
12	Dr. Vidya R	Network Security, IoT
13	Dr. Usha B.A.	Information Security
14	Dr. Hemamalini B H	Educational Data Mining
15	Dr. Gerard Deepak	Semantic AI, Web Mining, eXplainable AI
16	Dr. Muneshwara M.S	Blockchain Network, IoT, Cloud Computing
17	Dr. Durga Bhavani A	Internet of Things
18	Dr. Lakshmi B N	Machine Learning, Medical Informatics, Networks
19	Dr. Jai Arul Jose G	Information Security
20	Dr. Neetha P U	Deep Learning, Image Processing, Cloud Computing, LLMs, Blockchain
21	Dr. Nagabhushan SV	Machine Learning, Decision Science, Optimization
22	Dr. Ashwini N	Machine Learning
23	Dr. Shankar R	ML, Sentiment Analysis, Full Stack Development
24	Dr. Dhanalakshmi B K	Cloud Computing, Hand Gestures, ML
25	Dr. Bharathi R	IoT, AI, AR-VR, Data Analytics, Network Security
26	Dr. Pushpa S K	Machine learning and algorithms, Block chain, IoT
27	Dr. Surekha K B	IoT, Computer Networks, Machine Learning
28	Dr. Narasimha Murthy M S	Cloud Computing, IoT, Machine Learning
29	Dr. Rakesh N.	VoIP and security protocols, IoT & Wireless Sensor Network, Machine & Deep Learning
30	Dr. Bhuvaneshwari C M	NLP, ML, HCI
31	Dr. Manjunath T N	Big Data Analytics, Data Science, Cloud and IoT
32	Dr. Arun Kumar B R	Block chain, Computer Networks, Cyber Security
33	Dr. Sheela Kathavate	Parallel Computing, Cyber Security, Data Science
34	Dr. Veena N	Generative AI, Cybersecurity in Cyber Physical Systems, IoT with Cloud
35	Dr. Geeta Amol Patil	Real-time Systems, IoT, Generative AI
36	Dr. Shoba M	Data Science, Cyber Security, Blockchain, IoT, WSNs, Generative AI
37	Dr. Prakash G L	Cloud Computing, ML, Gen AI, Algorithms
38	Dr. Mohan BA	Cloud/Edge Computing, AIML in Networks/Cybersecurity/IoT, Real-time IoT
39	Dr. Chandrashekhar K. T	AIML & Big Data Applications, Cloud Computing, Networks/Cybersecurity
40	Dr. Vinutha K	GenAI, AJML, AIML & Big Data Applications, IoT, WSNs
41	Dr. Ravikumar B N	Artificial Intelligence, Generative AI, Cyber Security
42	Dr. Basavraj G N	Wireless Sensor Networks, IoT, Blockchain
43	Dr. Chethana C	Artificial Intelligence, Cloud Computing, IoT
44	Dr. Mahalakshmi S	GenAI, AJML, IoT, Blockchain, Soft Computing, HPC

45	Dr. Shanthi D L	IoT & WSN, Soft Computing and Optimization, RL/NLP
46	Dr. GireeshBabu C N	IoT/Cloud Computing, Networks/Cybersecurity, AIML & Big Data Apps
47	Dr. Swetha M S	Cybersecurity & Blockchain, Cloud Computing, IoT / Generative AI
48	Dr. Savitha S	Cybersecurity & Blockchain, Deep Learning, IoT Security
49	Dr. Harish Kumar N	WSN, Cryptography & Network Security, IoT Security
50	Dr. Kalai Vani Y S	Cyber Security, Deep Learning, Cloud Computing
51	Dr. Srinivas B V	Cloud/Edge Computing, Soft Computing, Deep Learning
52	Prof. Ambika R S	Cybersecurity, IoT Security, AIML & Big Data Applications
53	Mrs. G.Y Durgadevi	Network Security
54	Mr. Rajesh N V	Sentiment Analysis
55	Mrs. A. Mari Kirthima	IoT
56	Mrs. Tanya Chandra	Artificial Intelligence, Deep Learning
57	Mrs. Shama H M	Machine Learning
58	Prof. Brunda S	Deep Learning, Image Processing
59	Prof. Akshay Arya	Computer Networks, Blockchain, Cyber Security, Machine Learning
60	Prof. Chandini A	Machine Learning
61	Prof. Priyanka M R	Blockchain Security, Distributed Networking in Cloud
62	Prof. Soujanya S D	Artificial Intelligence, DBMS
63	Mr. Jagadish P	Machine Learning
64	Mrs. Shilpa M	ML, Data Structure
65	Mrs. Gowthami	Machine Learning, Cybersecurity, Big Data Analytics
66	Mr. Mohammed Khurram	Computer Networks, ML, AR/VR, Cloud Computing
67	Mrs. Packya Lekshmi	Cybersecurity, Network Security, Big Data, Data Analytics
68	Mrs. Arpitha S	Machine Learning, Deep Learning, Data Analytics, NLP, Security
69	Mr. Beerappa	Cyber Security, Digital Forensics, Cryptography, Computer Networks
70	Ms. Chaitanya V	Machine Learning, Deep Learning
71	Mr. Sonne Gowda	Cybersecurity, Cloud Computing, Machine Learning
72	Mrs. Saritha A K	Cybersecurity and AIML, Network Security, Cloud Computing
73	Ms. Amulya P	Cloud Computing, Artificial Intelligence
74	Mrs. Sowmya K	Generative AI & LLM, AI & ML, Cybersecurity
75	Mrs. Bhavya G.	Machine & Deep Learning, Generative AI, Soft Computing
76	Mr. Vinay Kumar Y B	Machine & Deep Learning, Artificial Intelligence, Cloud Computing
77	Mrs. Annapareddy Haarika	IoT Security, Artificial Intelligence, Machine Learning
78	Mrs. Malini M	Deep Learning, Predictive AI, Cloud Computing
79	Ms. Spandana L	Artificial Intelligence, Machine Learning, Soft Computing
80	Mr. Pushpanathan G	Wireless Sensor Networks, Network Security, IO

**EVALUATION PROCESS**

The Student Project Review and Assessment Committee (SPRAC) constituted by the head of the department would evaluate the project in two phases according to the standard rubrics as per the calendar of events.

#### **Phase 0:**

During Phase 0, students come up with project ideas and write a synopsis to explain them after discussing with their allotted project guide. This phase is like a first check to see if the ideas are practical, original, and useful. Based on this check, the ideas will either be accepted to move forward or sent back with feedback for improvement.

Students must prepare a detailed synopsis that includes:

- The project title
- The problem statement
- Objectives
- Methodology
- Expected outcomes
- A rough timeline showing how they will complete the project

Guides will review each synopsis for its relevance, originality, whether it can realistically be done, how clearly everything is explained etc. After reviewing, the project will be either accepted or accepted with modifications or will be asked for resubmission. There will be no awarding of marks during phase 0.

#### **Rubrics for Project work Phase I**

**Review 1:** Literature Survey, Problem Identification, Detailed analysis of the Objectives and Study of existing Methodologies

**Review 2:** Detailed methodology, Expected deliverables, Presentation skills and Report Evaluation

Marks Distribution for Phase I, Review 1: 30 Marks				
(Evaluated jointly by a committee comprising Guide and other designated members)				
Parameters	Allocated Marks	HIGH	MEDIUM	LOW
Literature Survey & Relevance to Present Context	10	An extensive literature survey was conducted and collected good information about the existing system. (8-10)	A moderate literature survey was made and collected some basic information about the existing system. (4-7)	Inadequate literature survey was made and not collected basic information about the existing system. (0-3)
Problem Identification & Objectives	10	Detailed and extensive explanation of the purpose and need of the project. (8-10)	Brief explanation of the purpose and need of the project. (4-7)	Problem identification is not clear. (0-3)
Study of Existing Methodology	5	Detailed study of the existing methodologies was made. (4-5)	Moderate study of the existing methodologies was made. (2-3)	Little study of the existing methodologies was made. (0-1)
Presentation Skills	5	Contents of the presentations are appropriate and well delivered. (4-5)	Contents of the presentations are appropriate but not well delivered. (2-3)	Contents of the presentations are not appropriate and not well delivered. (0-1)

Marks Distribution for Phase I, Review 2: 70 Marks				
(Evaluated jointly by a committee comprising Guide and other designated members)				
Parameters	Allocated Marks	HIGH	MEDIUM	LOW
Extended Literature Survey	10	An extensive extended literature survey was conducted and collected good information about the existing system. (8-10)	A moderate extended literature survey was made and collected some basic information about the existing system. (3-7)	Inadequate extended literature survey was made and not collected basic information about the existing system. (0-2)
Proposed Methodology & Expected Outcomes	20	Detailed explanation of the proposed methodology and expected outcomes are well defined. (15-20)	Brief explanation of proposed methodology and expected outcomes not well defined. (6-14)	Methodology & outcomes are not defined. (0-5)
Presentation Skills	10	Contents of the presentations are appropriate and well delivered. (8-10)	Contents of the presentations are appropriate but not well delivered. (3-7)	Contents of the presentations are not appropriate and not well delivered. (0-2)
Report	20	The report is structured and well prepared as per format. (15-20)	The report is not well structured, but as per format. (6-14)	Report is not well structured and not as per format. (0-5)
Ethics	5	Project bibliography was complete and flawlessly formatted. All sources were cited in the presentation. Reports to the guide regularly and consistent in work. (4-5)	Project bibliography was moderate and not properly formatted. A few of the sources were only cited during the presentation. Not very regular but consistent at work. (2-3)	Project bibliography was incomplete. None of the sources were cited during the presentation. Irregular attendance and inconsistency at work. (0-1)

Working in a group	5	Collaborates and communicates well in a group situation and is sensitive to the views of others. (4-5)	Exchanges some views but requires guidance to collaborate with others. (2-3)	Makes little or no attempt to collaborate in a group situation. (0-1)
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**Rubrics for Project work Phase II**

- Review 1: Methodology, Analysis, Design, Presentation Evaluation
- Review 2: Implementation, Testing, Results & Report Evaluation

Total CIE Marks: 100

<b>Marks Distribution for Phase II, Review 1 : 30 Marks</b>				
<i>(Evaluated jointly by a committee comprising Guide and other designated members)</i>				
Parameters	Allocated Marks	HIGH	MEDIUM	LOW
Methodology		Methodology being thoroughly explained with minor or no changes. (8-10)	Methodology is being changed slightly but acceptable. (3-7)	Methodology is poorly defined. (0-2)
(Technical aspects/Experimental observations/Fabrication)	10			
Results and Discussions	10	Results are well documented, and discussion is thorough. (8-10)	Results are documented but discussion is incomplete. (3-7)	No results documented or poor presentation of discussion. (0-2)
Presentation Skills	10	Excellent presentation. (8-10)	Presentation is average. (3-7)	Presentation is poor. (0-2)

Marks Distribution for Phase II, Review 2 – 70 Marks				
<i>(Evaluated jointly by a committee comprising Guide and other designated members)</i>				
Parameter	Allocated Marks	HIGH	MEDIUM	LOW
Methodology (Theoretical analysis/ Experimental observations/ Fabrication / Testing)	10	Implementation methodology of each of the objectives is very well defined. Well-planned methodology. (8-10)	Implementation methodology of each of the objectives is moderately done. Moderately planned methodology. (3-7)	The defined objectives are not implemented properly. Poor planning was observed. (0-2)

Results, Discussions, and Conclusions	10	All the results obtained are well presented and discussed. The conclusions drawn are justifiable. (8-10)	All the results obtained are moderately presented and discussed. The conclusions drawn are moderately justifiable. (3-7)	Poor presentation of the results. Discussion was not proper, and conclusions are not valid. (0-2)
Presentation Skills and Viva Voce	10	Contents of the presentations are appropriate and well delivered. (8-10)	Contents of the presentations are appropriate but not well delivered. (3-7)	Contents of the presentations are not appropriate and not well delivered. (0-2)
Report	20	The report is structured and well prepared as per format. (15-20)	The report is not well structured but as per format. (6-14)	Report is not well structured and not as per format. (0-5)
Ethics	5	Project bibliography was complete and flawlessly formatted. All sources were cited in the presentation. Reports to the guide regularly and consistent in work. (4-5)	Project bibliography was moderate and not properly formatted. A few of the sources were only cited during the presentation. Not very regular but consistent at work. (2-3)	Project bibliography was incomplete. None of the sources were cited during the presentation. Irregular attendance and inconsistency at work. (0-1)
Working in a group	5	Collaborates and communicates well in a group situation and integrates the views of others. (4-5)	Exchanges some views but requires guidance to collaborate with others. (2-3)	Make little or no attempt to collaborate in a group situation. (0-1)
Research Publications	10	Paper accepted/published in an indexed Journal/Conference s (8-10)	Paper submitted in an indexed Journal/Conference s (1-7)	Not prepared and Not submitted paper (0)

Marks Distribution for Phase II SEE Evaluation: 100 Marks  (Marks distribution for Internal and External Examiners)				
Parameters	Allocated Marks	HIGH	MEDIUM	LOW
Literature Survey & Relevance to Present Context	10	Extensive survey, good info on existing system (8-10)	Moderate survey, basic info collected (4-7)	Inadequate survey, no basic info (0-3)
Problem Identification & Objectives	10	Detailed and extensive explanation (8-10)	Brief explanation (4-7)	Problem not clearly identified (0-3)

Methodology (Theory/Experiment/Fabrication/ Testing)	15	Very well-defined and well-planned methodology (10– 15)	Moderately planned and done (5–9)	Poor planning and implementation (0–4)
Results, Discussions, and Conclusions	20	Results well- presented and discussed. Justifiable conclusions (15– 20)	Moderately presented and discussed (8– 14)	Poor presentation, invalid conclusions (0–7)
Presentation Skills and Viva Voce	10	Appropriate and well-delivered (8– 10)	Appropriate but not well- delivered (4– 7)	Not appropriate or not well- delivered (0– 3)
Report	25	Well-structured and prepared as per format (20– 25)	Not well- structured but as per format (10–19)	Not well- structured and not as per format (0– 9)
Research Publications	10	Accepted/publish ed in indexed journal/conferenc e (8–10)	Submitted to indexed journal/confer ence (1–7)	Not prepared or not submitted (0)

**Table 2.9 Types and relevance of the capstone/major project and their contribution towards the attainment of POs and PSOs**

Sl. No	Title	Description	Type of the project - Application/ Product/ Research/ Review	PO	PSO
1	Legal Insight Engine	AI-based tool to simplify legal research and generate insights from case documents.	Product/Research	1–11	1, 2
2	Auto Comment Generator	NLP tool to auto- generate contextual code/document comments.	Application	1–11	1, 2
3	Blockchain Enabled Medicine Supply Chain	Blockchain-secured tracking for precursor chemicals in the pharma supply chain.	Application	1–11	1, 2
4	SecureJury	Secure platform for remote jury trials and confidential deliberations.	Application	1–11	1, 2
5	AutodocX	Blockchain-based automated documentation platform.	Application	1–11	1, 2

6	AquaVigil	IoT-based water pipeline monitoring system.	Application	1-11	1, 2
7	Ship Routing Algorithm	Hybrid algorithm for optimal ship routing in the Indian Ocean.	Research	1-11	1, 2
8	Safeguarding Government Issued PIIIs	Encryption and secure storage of government-issued digital IDs and data.	Product/Research	1-11	1, 2
9	Forensic-Trust	Blockchain-enabled forensic investigation framework.	Research	1-11	1, 2
10	Counterfeit Product ID using Blockchain	Product validation using blockchain and QR verification.	Product	1-11	1, 2
11	Authentication of Documents with Biometrics	Biometric and blockchain integrated official document authentication.	Product	1-11	1, 2
12	Flask on AKS	Deployment of Flask web apps on Azure Kubernetes Service.	Application	1-11	1, 2
13	RSVYNet	Real-time network of surveillance vehicles using IoT and AI.	Product	1-11	1, 2
14	Women Safety Alert System	IoT -based safety alert devices for women.	Product	1-11	1, 2
15	Next Gen Smart Parking Automation	IoT-enabled smart parking management system.	Product	1-11	1, 2
16	Technopired	Educational software for dyslexic students with AI reading aid.	Application	1-11	1, 2
17	Living Layers	AR tool to visualize and interact with 3D human anatomy models.	Application	1-11	1, 2
18	IoT Safe stride	IoT-enabled smart footwear for women's safety.	Product	1-11	1, 2
19	Alzheimer's Detection using CNN	AI-based tool for early detection of Alzheimer's from brain scans.	Research	1-11	1, 2
20	PresencePro	Classroom attendance system with facial recognition and location clustering.	Product/Application	1-11	1, 2
21	Rentafield	Sports venue digital booking and management platform.	Application	1-11	1, 2

22	Project Security	Web security platform with anti-spam and firewall integration.	Application	1-11	1, 2
23	Underwater Image Enhancement	Image processing using PCA and Gray world algorithms to enhance underwater images.	Application	1-11	1, 2
24	Airwave: Hands-Free Cursor Navigation using Face and Voice	Enables hands-free computer interaction using facial and voice recognition for accessibility.	Application	1-11	1, 2
25	PHARMATRACK: Real-Time Drug Inventory and Analytics	Provides real-time monitoring and analytics of pharmaceutical inventories to prevent shortages.	Application	1-11	1, 2
26	Job Sync AI	Uses AI to match job seekers with suitable roles based on skill and role compatibility.	Application	1-11	1, 2
27	Interactive Education Platform using AR	Enhances learning by integrating augmented reality for immersive educational experiences.	Application	1-11	1, 2
28	Smart Doorbell	Provides video-enabled, IoT-based door access control for home security.	Product	1-11	1, 2
29	Forensic Face Sketch Construction and Recognition	Aids criminal investigations by generating and recognizing face sketches using AI.	Application	1-11	1, 2
30	Application Development	Builds a practical software solution tailored to a real-world user problem.	Application	1-11	1, 2
31	Detection of Vulnerabilities in Blockchain Smart Contracts using Deep Learning	Leverages deep learning to detect flaws in blockchain smart contracts for secure execution.	Application	1-11	1, 2
32	Application-Based Project	Focuses on solving a domain-specific issue through a functional application.	Application	1-11	1, 2
33	Women Safety Alert System using IoT	Offers real-time alerts and tracking for women's safety through IoT devices.	Product	1-11	1, 2

34	Adaptive Traffic Light System for Emergency Vehicles	Prioritizes emergency vehicle movement with smart adaptive signal controls.	Product	1-11	1, 2
35	Seamless Deployment: A CI/CD Pipeline Journey	Demonstrates DevOps concepts by building an automated CI/CD pipeline for deployment.	Application	1-11	1, 2
36	Sign Language for Solving Complex Math Problems	Uses sign language recognition to help hearing-impaired users interact with math problems.	Product/Application	1-11	1, 2
37	Aqua-Air Health Guard	Monitors water and air quality using sensors for health and environmental safety.	Application	1-11	1, 2
38	Network Crime Detection	Detects cyber threats and network-based crimes using anomaly detection techniques.	Research	1-11	1, 2
39	Attendance Marking by Providing 3-Layer Authentication	Ensures secure attendance marking using multi-layer authentication techniques.	Application	1-11	1, 2
40	Network Intrusion System on Ensemble Machine Learning	Detects malicious activity in networks using ensemble-based machine learning models.	Research	1-11	1, 2
41	MRI Investigation of Neurodevelopmental Anomalies in Autism Spectrum Disorder	Analyzes MRI data to identify patterns associated with autism-related brain anomalies.	Application	1-11	1, 2
42	Air Canvas	Allows users to draw in air using gesture recognition for digital sketching.	Application	1-11	1, 2
43	Attendance Marking System	Automates attendance tracking using biometric or digital verification methods.	Application	1-11	1, 2
44	Street Violence Anomaly Detection using CNN	Detects unusual or violent activities in public areas using deep learning (CNN).	Research/Application	1-11	1, 2
45	Adaptive Signal: Deep Reinforcement Learning for Real-Time Traffic Control	Optimizes traffic light control using deep reinforcement learning for real-time decisions.	Application	1-11	1, 2

46	Agris	Provides smart agriculture solutions using data-driven and IoT-enabled systems.	Product	1-11	1, 2
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**Table 2.10 List Of Projects submitted To KSCST for sponsorship/funding**

SL No	Title of the Project	Branch	Degree	Name of the College	Name of the Guide	Email ID/Mobile No of the Guide	Student 1 & Team Leader	Email ID/Mobile No of the Student 1/Team Leader	College UID No/ USN
1	Women's safety device with fingerprint authentication, real time alerts and vulnerability mapping	CSE	BE	BMSIT & M	Dr. Aril G N	<a href="mailto:anilgn@bmsit.in">anilgn@bmsit.in</a>	Shreya Patil	<a href="mailto:shreya.sp494@gmail.com">shreya.sp494@gmail.com</a>	1BY21CS174
2	AquaBot: Smart Robotics for Pipeline Health				Dr. Ambika G.N	<a href="mailto:ambikagn@bmsit.in">ambikagn@bmsit.in</a> 9902323632	Visha R Shetty	<a href="mailto:C61@bmsit.in">C61@bmsit.in</a>	1BY21CS213
3	Smart Doorbell System with 2-Factor biometric authentication				Dr.Nagabhushan.S. V	<a href="mailto:nagabhushansv@bmsit.in">nagabhushansv@bmsit.in</a>	B.V.S Nikhil	<a href="mailto:Venkatasainikhil2134@gmail.com">Venkatasainikhil2134@gmail.com</a> 7989015565	1BY21CS032
4	Adaptive traffic light system for emergency vehicles				Dr.Shankar.R	<a href="mailto:Shankar@bmsit.in">Shankar@bmsit.in</a>	Akhila S	<a href="mailto:a12bmsit.in">a12bmsit.in</a> 8618134348	1BY21CS012
5	Smart GasGuru The Genius Behind your Cylinder using IOT				Dr. Usha B A	9880788509	K S Sreelikith	<a href="mailto:a58@bmsit.in">a58@bmsit.in</a> 7815818517	1BY21CS076
6	Environment compliance on land registration using blockchain and iot technologies				Prof. Soujanya SD	8660907167	Rudra Reddy N	<a href="mailto:rudrareddy123098@gmail.com">rudrareddy123098@gmail.com</a> 7795199392	1BY22CS410
	Detection vulnerabilities							<a href="mailto:Mahadeshwara.pra">Mahadeshwara.pra</a>	

7	Blockchain smart contract using deep learning			Dr. Lakshmi B N	8310211556	Mana de swara Prasad	sad07@gmail.com	1BY21CS086
							8431139556	
8	Aqua-Air Health Guard			Durga Bhavani A	Durga842004@bmritin	Ananya Dassi	dassiananya@gmail.com	1BY21CS018
					8951440755		6360206861	

**List of Student Project Proposals Approved for Sponsorship****KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY**

Indian Institute of Science Campus, Bengaluru – 560 012  
 Website: [www.kscst.org.in](http://www.kscst.org.in), <https://kscst.karnataka.gov.in> || Email: spp@kscst.org.in || Tel: 080-2334 1652, 2334 8848/49/40

**48<sup>th</sup> series of Student Project Programme (SPP): 2024-25****List of Student Project Proposals Approved for Sponsorship****23. B.M.S. INSTITUTE OF TECHNOLOGY AND MANAGEMENT, YELAHANKA, BENGALURU**

Sl. No.	PROPOSAL REFERENCE NO.	PROJECT TITLE	COURSE	BRANCH	NAME OF THE GUIDE(S)	NAME OF THE STUDENT(S)	AMOUNT SANCTIONED (Rs.)
222.	48S_BE_2770	DEVELOPMENT OF GRAPHENE ENHANCED MORTAR FOR IRRIGATION CANAL LINING TO MINIMIZE SEEPAGE AND IMPROVE IRRIGATION EFFICIENCY	B.E.	CIVIL ENGINEERING	Prof. ARCHANA K	Mr. SUHAS N Mr. SHASHANK K Ms. ANJUSHA K A	5,000.00
223.	48S_MCA_0042	PREGNANCY TRACKING JOURNEY APPLICATION (MAMACADO)	M.C.A.	COMPUTER APPLICATIONS	Prof. DWARAKANATH G V	Ms. NISHA A N Ms. NIHILA REDDY	4,500.00
224.	48S_MCA_0046	AUTOMATED INVENTORY MANAGEMENT SYSTEM FOR REFRIGERATOR USING IOT	M.C.A.	COMPUTER APPLICATIONS	Mr. DWARAKANATH G V	Ms. POOJA K Ms. P PERSI PRISCILLA	5,000.00
225.	48S_MCA_0060	INTELLIGENT SLEEP TRACKING SYSTEM	M.C.A.	COMPUTER APPLICATIONS	Dr. M SRIDEVI	Ms. AFREEN TAJ Mr. ABHISHEK	3,500.00
226.	48S_BE_2131	ENVIRONMENT COMPLIANCE ON LAND REGISTRATION USING BLOCK-CHAIN AND IOT	B.E.	COMPUTER SCIENCE AND ENGINEERING	Prof. SOUJANYA -SD	Mr. RUDRA REDDY-N Mr. MANJUNATHA-KB Mr. SANDEEP Ms. MONIKA- K	4,500.00



## KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science Campus, Bengaluru – 560 012  
 Website: [www.kscst.org.in](http://www.kscst.org.in), <https://kscst.karnataka.gov.in> || Email: spp@kscst.org.in || Tel: 080-2334 1652, 2334 8848/49/40

### 48<sup>th</sup> series of Student Project Programme (SPP): 2024-25

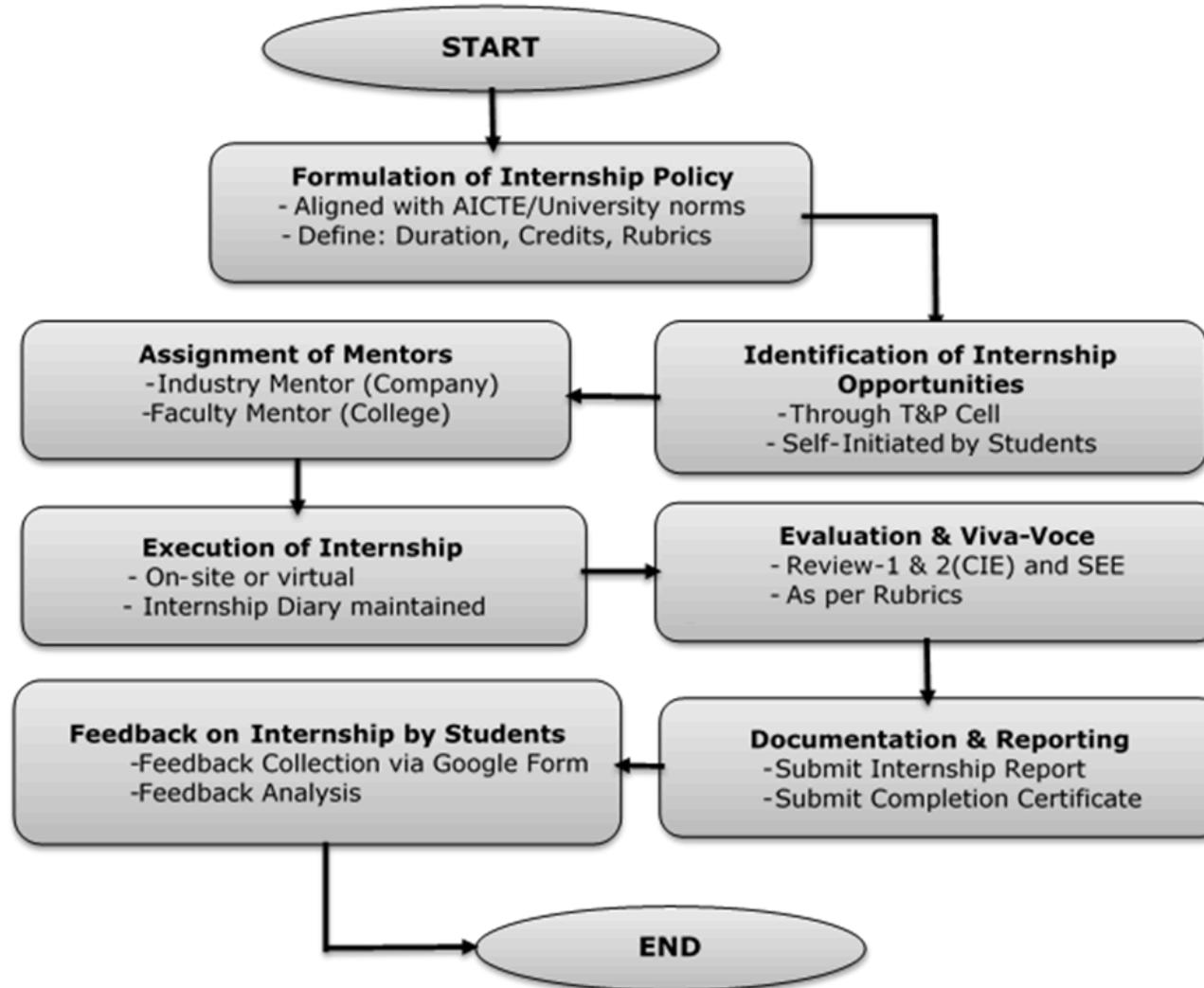
#### List of Student Project Proposals Approved for Sponsorship

227.	485_BE_2407	WOMEN'S SAFETY DEVICE WITH FINGERPRINT AUTHENTICATION, REAL-TIME ALERTS, AND VULNERABILITY MAPPING	B.E.	COMPUTER SCIENCE AND ENGINEERING	Dr. ANIL G N	Ms. SHREYA PATIL Ms. B S SRIVIDYA Ms. LASSIKA AGARWAL Ms. RHEYAJ	4,500.00
228.	485_BE_2763	QUANTUM COMPUTING FOR NETWORK TRAFFIC ANALYSIS	B.E.	COMPUTER SCIENCE AND ENGINEERING	Prof. ARPITHA SHIVANNA	Mr. ANISH RAJU Mr. ABHISHEK KUMAR Mr. ADBHUT SHUKLA Mr. ARJUN P	2,000.00
229.	485_BE_2793	SMART DOORBELL SYSTEM WITH 2-FACTOR BIOMETRIC AUTHENTICATION	B.E.	COMPUTER SCIENCE AND ENGINEERING	Dr. NAGABHUSHAN SV	Mr. B.V.SNIKHIL Mr. HEMAANG SOOD Ms. PALAK DENGLA Ms. SANYA SAEED	4,500.00
230.	485_BE_2814	AQUABOT: SMART ROBOTICS FOR PIPELINE HEALTH	B.E.	COMPUTER SCIENCE AND ENGINEERING	Dr. AMBIKA G.N	Mr. VISHAL R SETTY Mr. V.VAMSHI KRISHNA Mr. VILLURI VIVEK Mr. Y. VISHNU REDDY	4,500.00
231.	485_BE_2921	DETECTION OF VUNERABILITIES IN BLOCKCHAIN SMART CONTRACT USING DEEP LEARNING	B.E.	COMPUTER SCIENCE AND ENGINEERING	Dr. ARUN KUMAR B R Dr. LAKSHMI B N	Mr. MAHADESHWARA PRASAD Mr. AKSHITH GOWDA Mr. DHARSHAN B SANGOLI Mr. LIKHITH Y V	3,500.00
232.	485_BE_2776	MULTI AXIS ROBOTIC ARM	B.E.	ELECTRICAL AND ELECTRONICS ENGINEERING	Prof. NAGARAJ DC	Mr. SHREYAS C KARANTH Ms. PRIYANKA RAO Mr. MAHANTH GM Ms. RHEA RENNY SAMUEL	5,000.00



**Preamble:**

The Department of Computer Science and Engineering at BMSIT&M is committed to nurturing industry-ready graduates through experiential learning. As part of this vision, the student internship program aims to bridge academic concepts with real-world applications. Internships provide opportunities for students to gain hands-on experience, apply theoretical knowledge, develop professional skills, and understand industry standards and practices. This structured engagement with reputed organizations enhances their problem-solving abilities, teamwork, and adaptability, thereby fostering holistic development. The program aligns with the AICTE and VTU guidelines, ensuring relevance, rigor, and alignment with contemporary technological trends and industry expectations.

**Process of Internship/Industrial training for students****INDUSTRY / RESEARCH INTERNSHIP****RUBRICS FOR INDUSTRY INTERNSHIP (CIE)**

**Review 1****TO BE EVALUATED BY THE INTERNAL COMMITTEE for 20 Marks**

(Committee consisting of the Head of the concerned department and THREE faculty members of the Department, one of whom shall be the Guide)

Performance Indicator	Maximum Marks	HIGH	MODERATE	LOW
Industry Internship daily report (PO 9)	10	The diary is exceptionally detailed, well-organized, and comprehensive. Entries are consistently on time, with complete details of the industry internship, clear documentation of tasks, and use of relevant evidence (e.g., visuals, charts).  (7-10)	The diary is adequately detailed but may lack consistency. Details of the industry internship and documentation are present but somewhat incomplete. Evidence is limited.  (4-6)	The diary is missing significant content, disorganized, and poorly written. Details of the internships are absent or irrelevant, with no evidence provided.  (0-3)
Presentation Skills (PO 9)	10	Contents of the presentations are appropriate and well delivered.  (7-10)	Contents of the presentations are appropriate but not well delivered.  (4-6)	Contents of the presentations are not appropriate and not well delivered.  (0-3)

**RUBRICS FOR INDUSTRY INTERNSHIP (CIE)****Review 2****TO BE EVALUATED BY THE INTERNAL COMMITTEE for 30 Marks**

(Committee consisting of the Head of the concerned department and THREE faculty members of the Department, one of whom shall be the Guide)

Performance Indicator	Maximum Marks	HIGH	MODERATE	LOW
Industry Internship daily report (PO 9)	5	The diary is exceptionally detailed, well-organized, and comprehensive. Entries are consistently on time, with complete details of the industry internship, clear documentation of tasks, and use of relevant evidence (e.g., visuals, charts).  (4-5)	The diary is adequately detailed but may lack consistency. Details of the industry internship and documentation are present but somewhat incomplete. Evidence is limited.  (2-3)	The diary is missing significant content, disorganized, and poorly written. Details of the internships are absent or irrelevant, with no evidence provided.  (0-1)

Presentation Skills (PO 9)	5	Contents of the presentations are appropriate and well delivered. (4-5)	Contents of the presentations are appropriate but not well delivered. (2-3)	Contents of the presentations are not appropriate and not well delivered. (0-1)
Industry Internship Final documentation (PO 9)	10	The documentation is exceptionally well-structured and comprehensive. It includes clear objectives, detailed task descriptions, robust analysis, and well-documented outcomes. The language is professional and error-free. (7-10)	The documentation is adequately structured but lacks depth in some sections. Objectives and tasks are documented but with limited analysis. Language is clear but contains noticeable grammatical or formatting issues. (4-6)	The documentation lacks structure with little to no documentation of tasks or outcomes. Analysis is absent or irrelevant, and the language contains numerous errors. (0-3)
Relevance of the Industry internship activities towards Environment, Sustainability and Innovation (PO 6)	10	Internship activities are highly relevant and impactful, with clear contributions to environmental protection, sustainable practices, and innovative solutions. Demonstrates a comprehensive understanding of sustainability challenges. (7-10)	Activities are moderately relevant to environmental and sustainability goals. Contributions are basic or indirect, with limited innovation. (4-6)	Internship activities lack relevance to environmental protection, sustainability, or innovation. No evidence of efforts to address sustainability challenges or promote innovative solutions. (0-3)

**RUBRICS FOR INDUSTRY INTERNSHIP (CIE)****Review 2****TO BE EVALUATED BY THE EXTERNAL GUIDE for 50 marks**

\*\*\* Internal guide is required to send a mail to the external guide and to obtain the marks. Required to keep the mail copy received from the External guide.

Performance Indicator	Maximum Marks	HIGH	MODERATE	LOW
Technical Knowledge (PO 1 & PO 2)	10	Demonstrates in-depth understanding and exceeds expectations. (7-10)	Demonstrates adequate knowledge but requires moderate guidance. (4-6)	Lacks understanding and fails to contribute meaningfully. (0-3)

Deliverables and Outcomes (PO 3, PO4 & PO 5)	10	Deliverables exceed expectations and provide significant value. (7-10)	Deliverables are completed but with limited impact or quality. (4-6)	Fails to deliver tasks or creates no measurable outcomes. (0-3)
Communication Skills (PO 9)	10	Communicates clearly, effectively, and appropriately. (7-10)	Communication is adequate but occasionally unclear or inappropriate. (4-6)	Communication is unclear, incomplete, or inappropriate. (0-3)
Work Ethics (PO 7)	5	Consistently exceeds expectations in punctuality, reliability, and professionalism. (4-5)	Occasionally falls short of expectations in punctuality or reliability. (2-3)	Consistently fails to demonstrate professionalism or reliability. (0-1)
Individual / Working in a group (PO 8)	5	Function effectively as an individual. Collaborates and communicates well in a group situation and integrates the views of others. (4-5)	Moderately active as an individual and Exchanges some views but requires guidance to collaborate with others. (2-3)	No individual contribution and Make little or no attempt to collaborate in a group situation. (0-1)
Project Management and Finance (PO 10)	5	Well-structured project with effective planning, task execution, and time management. Cost analysis of the project was done effectively and well documented. (4-5)	Moderate project planning and management. Tasks and finances are somewhat managed. Cost analysis of the project was average and not very well documented. (2-3)	Poor project planning, ineffective task and time management. Cost analysis was not done, and financial documentation is inadequate. (0-1)
Ability to learn independently, adapt to new and emerging technologies, and exhibit critical thinking (PO 11)	5	Consistently demonstrates independent learning, adapts quickly to new technologies, and applies critical thinking to solve problems. (4-5)	Sometimes demonstrates independent learning and adaptability; applies basic critical thinking in familiar contexts. (2-3)	Rarely demonstrates independent learning; struggles to adapt or think critically without direct instruction. (0-1)

**Total Maximum Marks from both Internal Committee and External Guide is for 100.**

**The obtained marks will be reduced to 50 marks which will be the CIE marks.**

#### **RUBRICS FOR INDUSTRY INTERNSHIP (SEE)**

**Evaluation to be done jointly by the Internal and External Examiners****Total Maximum Marks is 100. The obtained marks will be reduced to 50 marks which will be the SEE marks.**

<b>Performance Indicator</b>	<b>Maximum Marks</b>	<b>HIGH</b>	<b>Moderate</b>	<b>LOW</b>
Technical Knowledge (PO 1 & PO 2)	20	Demonstrates in-depth understanding and exceeds expectations. (14-20)	Demonstrates adequate knowledge but requires moderate guidance. (8-13)	Lacks understanding and fails to contribute meaningfully. (0-7)
Deliverables and Outcomes (PO 3, PO4 & PO 5)	20	Deliverables exceed expectations and provide significant value. (14-20)	Deliverables are completed but with limited impact or quality. (8-13)	Fails to deliver tasks or creates no measurable outcomes. (0-7)
Industry Internship Final documentation (PO 9)	15	The documentation is exceptionally well-structured and comprehensive. It includes clear objectives, detailed task descriptions, robust analysis, and well-documented outcomes. The language is professional and error-free. (11-15)	The documentation is adequately structured but lacks depth in some sections. Objectives and tasks are documented but with limited analysis. Language is clear but contains noticeable grammatical or formatting issues. (5-10)	The documentation lacks structure with little to no documentation of tasks or outcomes. Analysis is absent or irrelevant, and the language contains numerous errors. (0-4)
Presentation Skills (PO 9)	15	Communicates clearly, effectively, and appropriately for the audience. (11-15)	Communication is adequate but occasionally unclear or inappropriate. (5-10)	Communication is unclear, incomplete, or inappropriate. (0-4)

Relevance of the Industry internship activities towards Environment, Sustainability and Innovation  (PO 6)	10	Internship activities are highly relevant and impactful, with clear contributions to environmental protection, sustainable practices, and innovative solutions. Demonstrates a comprehensive understanding of sustainability challenges.  (7-10)	Activities are moderately relevant to environmental and sustainability goals. Contributions are basic or indirect, with limited innovation.  (4-6)	Internship activities lack relevance to environmental protection, sustainability, or innovation. No evidence of efforts to address sustainability challenges or promote innovative solutions. (0-3)
Individual / Working in a group  (PO 8)	10	Function effectively as an individual. Collaborates and communicates well in a group situation and integrates the views of others.  (7-10)	Moderately active as an individual and Exchanges some views but requires guidance to collaborate with others.  (4-6)	No individual contribution and Make little or no attempt to collaborate in a group situation.  (0-3)
Project Management and Finance  (PO 10)	5	Well-structured project with effective planning, task execution, and time management. Cost analysis of the project was done effectively and well documented.  (4-5)	Moderate project planning and management. Tasks and finances are somewhat managed. Cost analysis of the project was average and not very well documented.  (2-3)	Poor project planning, ineffective task and time management. Cost analysis was not done, and financial documentation is inadequate.  (0-1)
Ability to learn independently, adapt to new and emerging technologies, and exhibit critical thinking  (PO 11)	5	Consistently demonstrates independent learning, adapts quickly to new technologies, and applies critical thinking to solve problems.  (4-5)	Sometimes demonstrates independent learning and adaptability; applies basic critical thinking in familiar contexts.  (2-3)	Rarely demonstrates independent learning; struggles to adapt or think critically without direct instruction.  (0-1)

Table 2.11: Student Internships (Sample)

Batch	AY	No. of students	Type of Internship	Duration of Internship

VTU	2023-24	229	Industry	Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.
Autonomous	2024-25	241	Industry/Research	15 weeks

**Table 2.12: Mapping of Industrial training/internships with POs / PSOs**

Sl. No.	Assessment Parameters	Mapped POs
1	Technical knowledge, objectives, and problem identification	PO 1, PO 2
2	Literature review and contextual relevance	PO 1, PO 2
3	Research publications and critical thinking	PO 4, PO 11
4	Results analysis, conclusions, deliverables, and outcomes	PO 3, PO 4, PO 5
5	Implementation and project execution	PO 1, PO 11
6	Environmental relevance, sustainability, and innovation	PO 6
7	Professional ethics and teamwork	PO 7, PO 8
8	Communication, reporting, and presentation skills	PO 9
9	Project management and finance	PO 10
10	Independent learning, adaptability, and emerging technology awareness	PO 11

**Student feedback on training/internships and its analysis**

Preamble : The internship model bridges the gap between theoretical knowledge and practical experience. It enhances student employability, promotes critical thinking, and fosters collaboration between academia and industry. A sample internship feedback is shown below :

Internship Feedback Form Based on Engineering Program Outcomes (For Computer Science Engineering Students – Scale 1 to 5)

Scale Definition:

1 – Strongly Disagree

2 – Disagree

3 – Neutral

4 – Agree

5 – Strongly Agree

- I was able to apply engineering knowledge and computing fundamentals effectively during the internship. (PO1: Engineering knowledge).

2. The Internship helped me identify, formulate, and solve engineering or computing-related problems. (PO2: Problem analysis & PO4: Conduct investigations of complex problems).
3. I learned to design or develop system components/processes to meet project requirements. (PO3: Design/development of solutions).
4. I was exposed to real-world problems and used modern tools and techniques to address them. (PO5: Modern tool usage).
5. The Internship helped me understand professional, ethical, and societal responsibilities in a real workplace. (PO6: The engineer and society, PO7:Environment and sustainability & PO8: Ethics and societal context).
6. I was able to work effectively as an individual and as a member of a team. (PO9: Individual and teamwork).
7. My communication skills improved through regular interaction with industry professionals. (PO10: Communication).
8. I observed how project and financial management concepts are applied in the real-world industry. (PO11: Project management and finance).
9. The internship experience has positively contributed to my professional development and career goals. (General Outcome / Career readiness).

**Sample Student Feedback Responses**

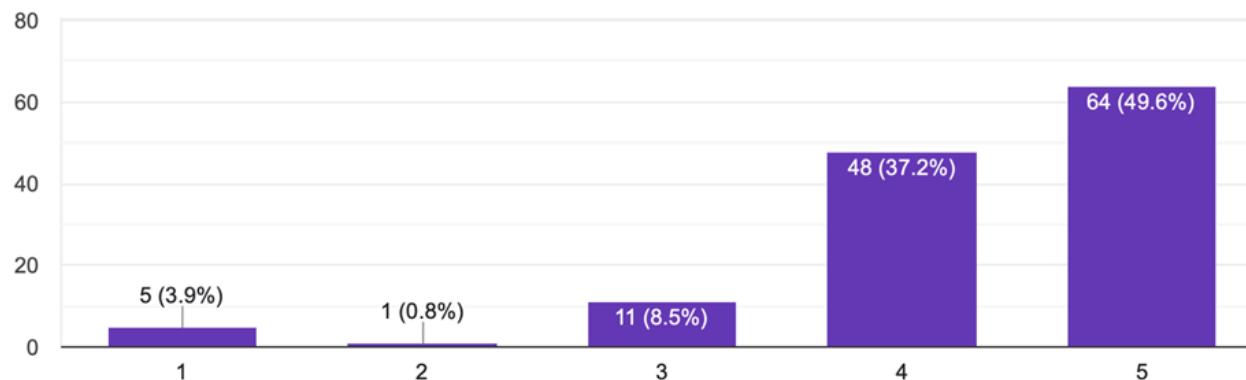
Where:

X→ Total number of students

Y→ Scale (1. Strongly Disagree, 2. Disagree, 3. Neutral, 4. Agree, 5. Strongly Agree)

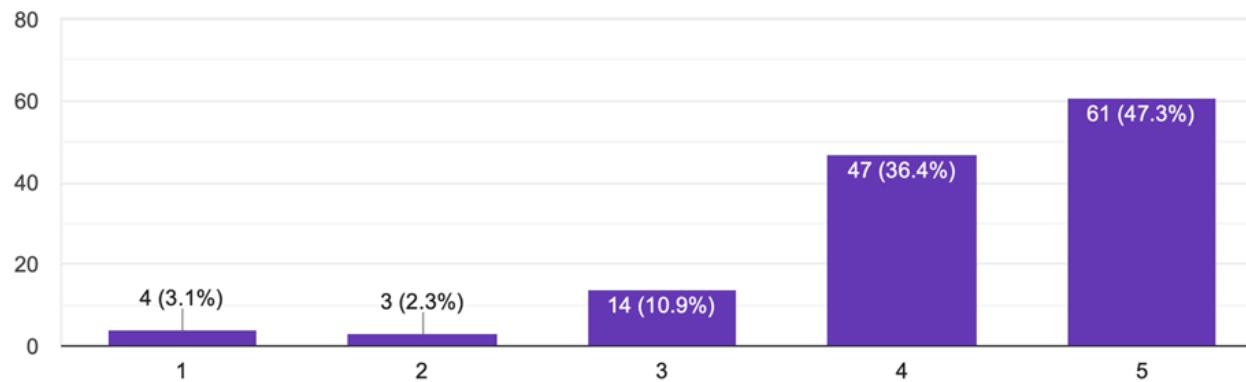
The Internship helped me identify, formulate, and solve engineering or computing- related problems. (PO2: Problem analysis & PO4: Conduct investigations of complex problems)

129 responses



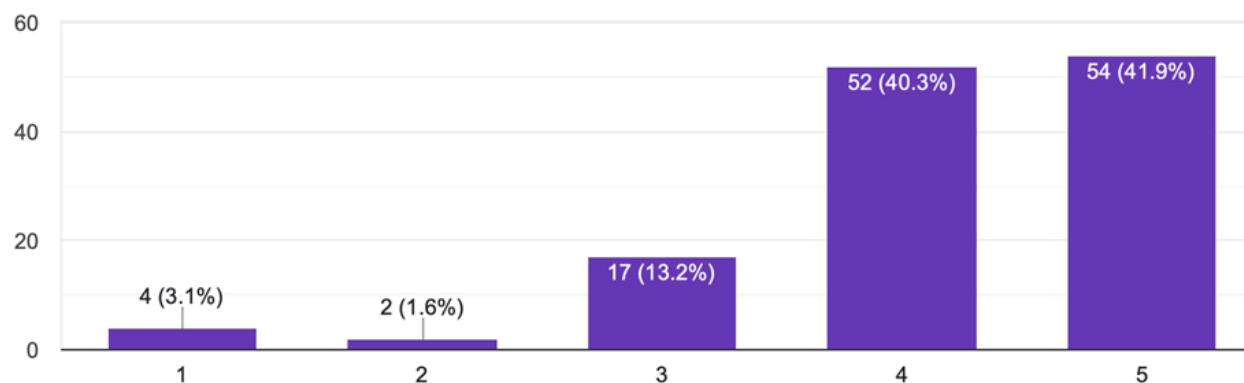
I was able to apply engineering knowledge and computing fundamentals effectively during the Internship. (PO1: Engineering knowledge)

129 responses



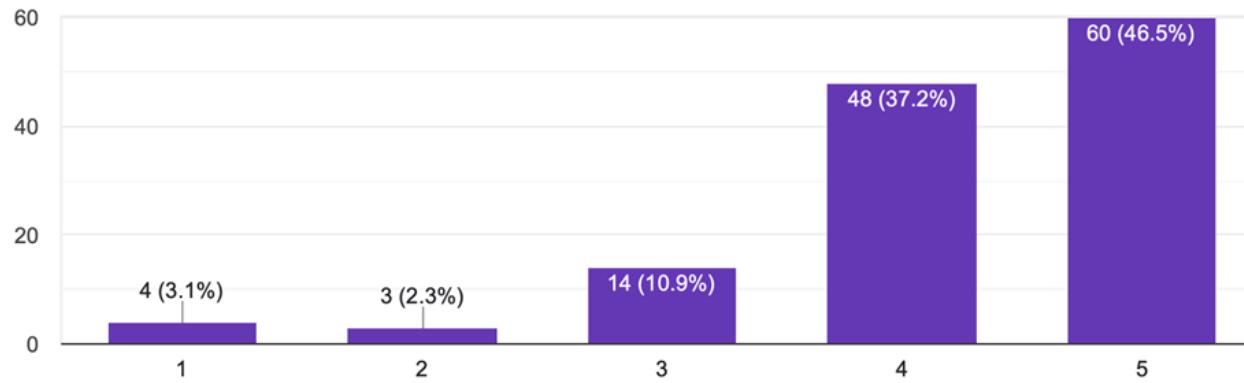
I learned to design or develop system components/processes to meet project requirements. (PO3:  
Design/development of solutions)

129 responses

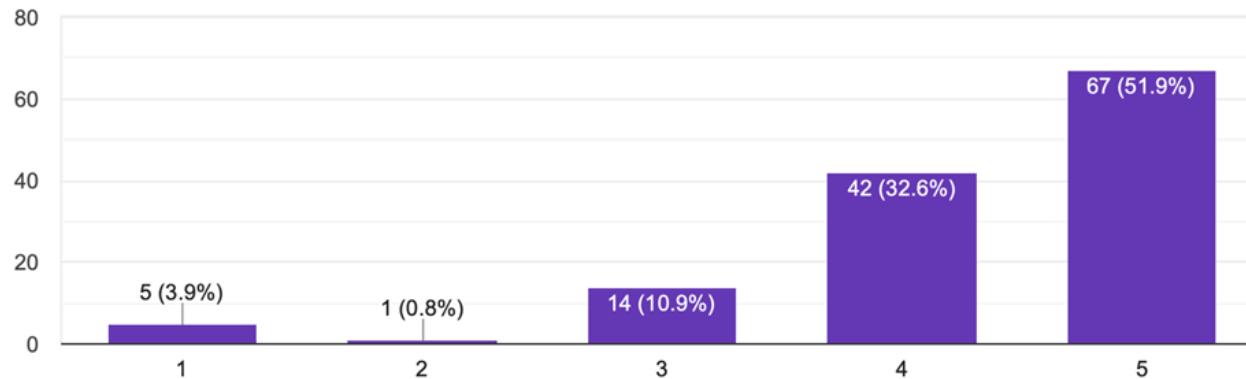


I was exposed to real-world problems and used modern tools and techniques to address them. (PO5: Modern tool usage)

129 responses

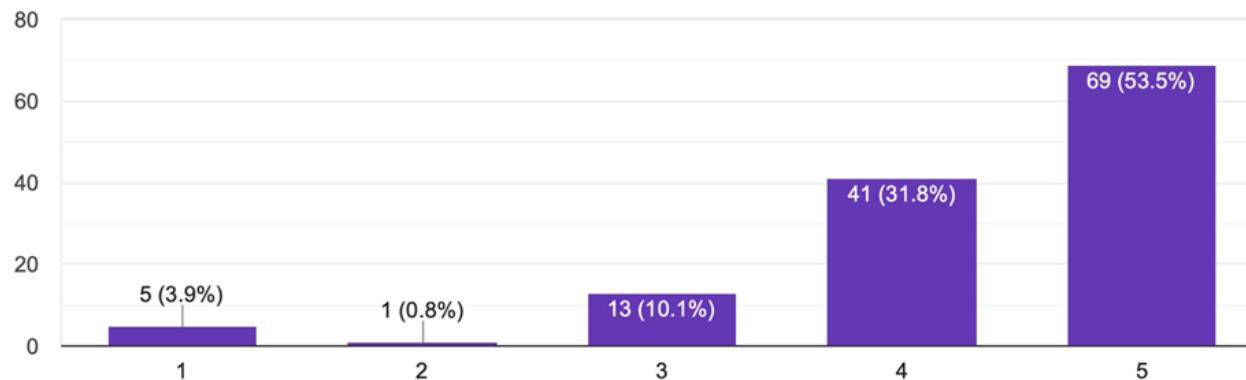


The Internship helped me understand professional, ethical, and societal responsibilities in a real workplace. (PO6: The engineer and society, PO7: Environmental sustainability & PO8: Ethics and societal context)  
129 responses



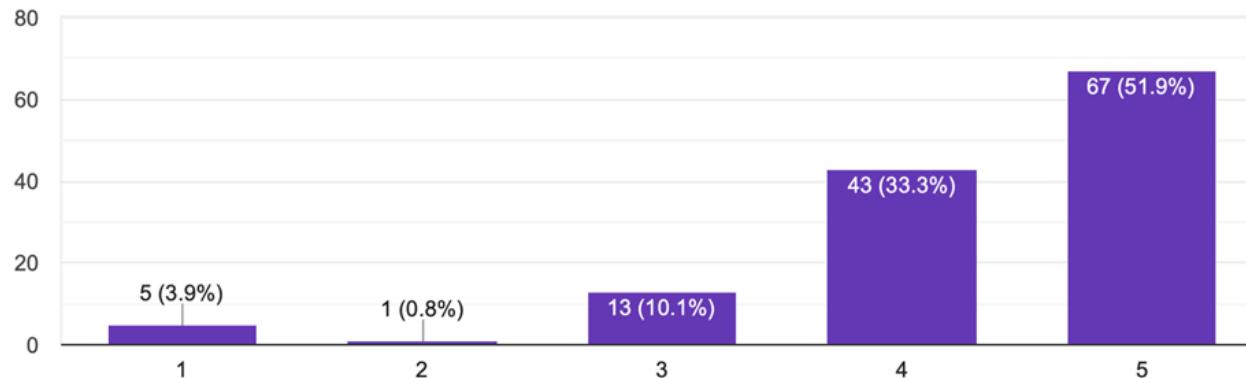
I was able to work effectively as an individual and as a member of a team. (PO9: Individual and teamwork)

129 responses



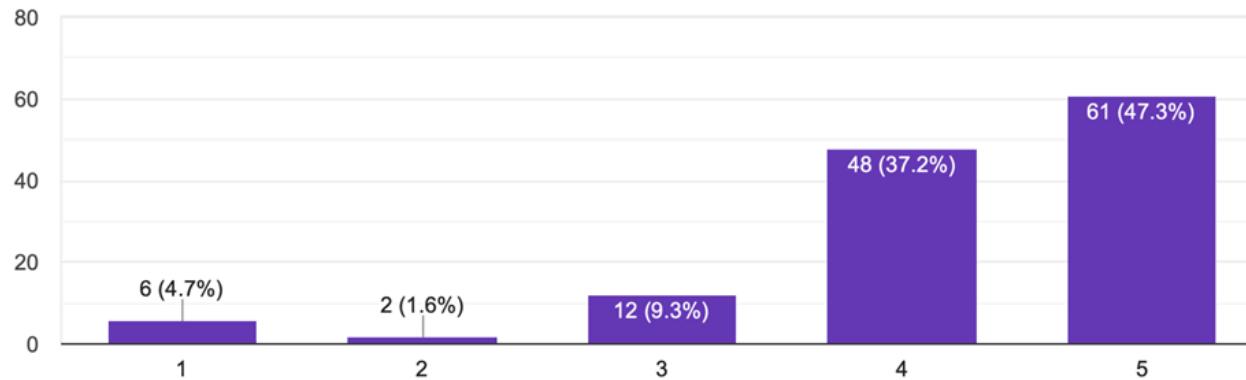
My communication skills improved through regular interaction with industry professionals. (PO10: Communication)

129 responses



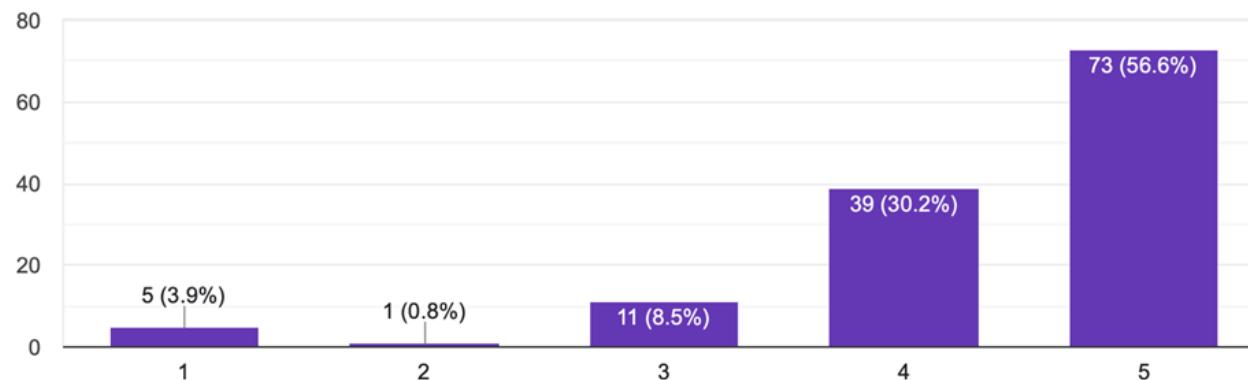
I observed how project and financial management concepts are applied in the real-world industry. (PO11: Project management and finance)

129 responses



The Internship experience has positively contributed to my professional development and career goals. (General Outcome / Career readiness)

129 responses



**Student feedback on training/internships analysis:** The Department of Computer Science and Engineering at BMSIT&M emphasizes continuous quality improvement through systematic feedback and evaluation. As part of the Student Internship Program, structured feedback is collected from students, faculty mentors, and industry supervisors to assess the effectiveness of the internship experience. This feedback focuses on the relevance of tasks assigned, the application of academic knowledge, skill enhancement, mentorship quality, and overall learning outcomes. The data is analyzed to identify strengths, gaps, and areas of improvement, enabling the department to refine internship processes, strengthen industry partnerships, and align future internships with evolving technological and professional expectations.

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2.4 Seminar and Mini/Micro Projects (10)

Total Marks 10.00



The seminars or Poster presentations or Literature reviews are designed to enhance students technical knowledge, research abilities, and presentation skills. Students select a topic relevant to their field of study, conduct in-depth research, and present their findings in a seminar.

**Topic Selection:** Students choose a seminar topic or project idea based on current trends, industry relevance, and faculty guidance.

1. **Proposal Submission:** A brief proposal outlining the objectives, methodology, and expected outcomes is submitted for approval.
2. **Research & Development:** Students conduct literature reviews, collect data, and develop their mini/micro projects under faculty supervision.
3. **Implementation & Analysis:** Hands-on work is carried out, followed by testing and evaluation of the project outcomes.

**Presentation & Evaluation:** Students present their findings or project results through a seminar or demonstration, which is assessed based on predefined rubrics

**Table 2.13 List of Seminar (Cyber Security - BCS604A)**

Sl. No	Seminar Title	Description
1	Network Intrusion Detection and Analysis (Snort)	To detect and analyse malicious network activities using signature and anomaly-based detection.
2	Event Log Aggregation, Correlation, and Analysis (Splunk/QRadar)	To gather and correlate logs from multiple sources for effective threat detection and response.
3	Web Proxies (Squid)	To filter, monitor, and cache web traffic to enhance network performance and security.
4	Traffic Analysis (Wireshark)	To inspect and analyse network traffic for troubleshooting and forensic purposes.
5	Vulnerability Scanning & Management (Nessus, Burp Suite)	To identify, prioritize, and mitigate security vulnerabilities in systems and applications.
6	Server Configuration (DHCP, Name Servers, Firewalls, etc.)	To securely configure essential network services and enforce traffic control policies.
7	SMTP, Phishing Email Analysis (MXToolbox, VirusTotal, OpenVAS)	To detect phishing and malware in emails using advanced scanning and analysis tools.
8	Incident Response Management, Cyber Kill Chain, MITRE ATT&CK	To understand, document, and break the lifecycle of cyberattacks using structured frameworks.
9	AI-driven Cyberattacks, Zero Trust, Blockchain, Deepfakes	To explore emerging threats and modern security paradigms in evolving tech ecosystems.
10	Penetration Testing, Ethical Hacking (Metasploit, Nmap, Aircrack-ng)	To evaluate system security through simulated attacks and identify exploitable weaknesses.
11	Cyber Laws & Compliance (GDPR, HIPAA, IT Act)	To understand legal frameworks and regulations governing data privacy and cybersecurity.
12	Incident Response Lifecycle & Forensics (NIST SP 800-61, Autopsy, FTK)	To manage cyber incidents systematically and extract digital evidence effectively.
13	Risk Management (ISO 27001, NIST CSF)	To identify, assess, and mitigate risks through structured frameworks and controls.

14	Automated Vulnerability Scanning using OpenVAS and Custom Scripts	To automate the detection of vulnerabilities using OpenVAS and extend capabilities via scripting.
15	Types of Cyber Attacks	To categorize and understand different cyberattack methods and their mitigation strategies.
16	Social Engineering	To study psychological manipulation techniques used to exploit human behavior in cyberattacks.
17	Emerging Technologies and Threats	To explore how new technologies bring novel cybersecurity challenges and potential solutions.
18	Privacy and Data Protection	To ensure personal and organizational data is kept confidential, secure, and legally compliant.
19	Network Security Basics	To learn foundational concepts of securing a network against various threats.
20	Cybersecurity Tools	To familiarize students with essential tools used in real-world cybersecurity operations.
21	Cryptography Basics	To understand basic encryption and decryption techniques for securing digital information.
22	Cloud Security	To study the principles and challenges of securing cloud infrastructure and data.
23	Malware Types	To analyze different kinds of malware and their impact on systems.
24	Mobile Security	To protect mobile devices and apps from threats such as malware, theft, and data leaks.
25	IoT Security	To secure IoT devices from vulnerabilities due to limited hardware and diverse protocols.
26	Security in Software Development	To integrate security practices throughout the software development lifecycle (SDLC).
27	Cybersecurity Fundamentals	To provide a comprehensive introduction to cybersecurity principles, practices, and frameworks.
28	Security Awareness Training	To educate users on recognizing threats and adopting secure behaviors to prevent breaches.
29	Threat Landscape	To analyze the global scope and evolution of cyber threats across different sectors.

**Table 2.14 List of Seminar - Management and Entrepreneurship ( 21HSS51)**

S.No.	Title	Description
1	Entrepreneurial Strategic Management	Explores strategic thinking in entrepreneurship. Covers vision setting, opportunity analysis, competitive advantage, and long-term business sustainability.

2	Management - Strategic Marketing by NPTELHRD	Teaches strategic marketing frameworks including segmentation, targeting, positioning (STP), branding, and customer-centric decision-making.
3	Strategic Marketing	Focuses on marketing strategies that drive business growth. Includes market analysis, consumer behavior, and digital marketing alignment.
4	Business Strategy	Explains how businesses formulate and implement competitive strategies. Includes SWOT, BCG matrix, and real-world case studies.
5	Management - Business Analysis for Engineers	Designed for technical professionals to understand business problem-solving using models like BPMN, gap analysis, and value chain analysis.
6	Entrepreneurial Management	Covers the lifecycle of entrepreneurship: idea generation, funding, team building, and business model development.
7	Startup Secrets by Harvard Innovation Labs	A comprehensive series on launching startups, featuring insights on founding teams, product-market fit, pitching, and scaling businesses.
8	Principles of Management	Offers core concepts in management including planning, organizing, leading, and controlling across business environments.
9	Finance for Startups	Teaches entrepreneurs how to manage finances, attract investors, create projections, and understand startup valuation.
10	Foundation of Entrepreneurship by FreeCodeCamp.org	Introduces beginners to entrepreneurial fundamentals including lean startup methods, MVP, and market research.
11	Managerial Accounting	Focuses on internal accounting used in management decision-making, including cost control and budgeting.
12	Business Ethics	Provides insights into ethical decision-making, corporate governance, social responsibility, and ethical challenges in global business.
13	Business Analysis & Process Management	Covers the fundamentals of analyzing and improving business processes using modeling tools and performance metrics.
14	Project Charter	Teaches how to define a project's goals, scope, stakeholders, and deliverables to set the foundation for project success.
15	Management - Strategic Planning	Explores long-term goal setting, environmental scanning, strategy formulation, implementation, and evaluation frameworks in business contexts.

**Table 2.15 POs and PSOs Mapped With Above listed Seminar**

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
✓	✓				✓	✓	✓	✓	✓			✓

**Overview of Mini and Micro Projects**

A mini or micro project typically involves the practical implementation of a concept, which may require hardware, software, or a combination of both. These projects are designed to be manageable in scope, allowing individuals or teams to focus on a specific topic or pragmatic implementation without the complexity and extensive requirements often associated with larger projects.

The mini/micro projects allow students to apply theoretical concepts to practical problems, fostering innovation and problem-solving skills. A structured process is followed to ensure effective implementation and learning outcomes.



### **1. Identification and Selection of Projects**

Faculty provide a list of suggested project topics based on CSE domains such as:

- Networking
- IoT (Internet of Things)
- Supervised and Unsupervised Learning
- Deep Learning and Neural Networks
- Natural Language Processing (NLP)
- Computer Vision
- Reinforcement Learning
- Students can choose topics of interest or propose their own project ideas with faculty approval.
- Projects are mapped to Program Outcomes (POs) and Program-Specific Outcomes (PSOs) to align with educational objectives.

### **2. Project Allotment & Team Formation**

- Projects can be done individually or in small groups (2-4 students) based on complexity.
- Faculty mentors are assigned to guide students through problem formulation, methodology, and implementation strategies.
- Students submit an initial project proposal, including:
  - Problem Statement
  - Objective & Scope
  - Dataset Selection (if applicable)
  - Expected Outcomes
  - Tools & Technologies to be Used (Python, TensorFlow, PyTorch, etc.)

### **3. Research & Planning**

- Students conduct a literature survey to understand existing work and identify gaps.

A project roadmap and timeline are prepared, dividing tasks into phases:

1. Data Collection & Preprocessing
  2. Model Selection & Implementation
  3. Testing & Evaluation
  4. Result Analysis & Documentation
- Faculty review the plan and suggest improvements.

### **4. Project Development & Implementation**

Students design, develop, and train using tools such as:

- Python (NumPy, Pandas, Scikit-learn, etc.)
- Deep Learning frameworks (TensorFlow, PyTorch)
- Data visualization libraries (Matplotlib, Seaborn)

- Faculty and lab instructors provide periodic technical guidance and troubleshooting assistance.
- Students maintain a progress logbook to document implementation details and challenges faced.

## **5. Testing, Evaluation, and Validation**

Projects are evaluated based on:

- Model accuracy and performance metrics (Precision, Recall, F1-score, RMSE, etc.)
- Data-driven insights and visualizations
- Code efficiency and optimization
- Scalability and deployment feasibility (if applicable)
- Faculty conduct a mid-project review, providing feedback on improvements.
- Students perform error analysis, hyperparameter tuning, and result validation.

## **6. Documentation & Report Submission**

Students prepare a structured project report, including:

- Introduction & Problem Statement
- Literature Review
- Methodology & Model Development
- Implementation & Results
- Conclusion & Future Scope
- Reports follow institutional formatting guidelines and include proper citations

## **7. Project Presentation & Demonstration**

- Students present their projects through:
  - Technical presentations explaining methodology and findings.
  - Live demonstrations showcasing the working model or prototype.
- Faculty panel assesses the projects based on:
  - Understanding of concepts
  - Practical implementation skills
  - Innovative approach & real-world applicability

## **8. Impact Analysis & Continuous Improvement**

Faculty analyse student performance and project outcomes to:

- Identify areas of improvement in project execution.
- Encourage students to publish their work in research conferences/journals.
- Suggest potential extensions for major projects/startup incubation.
- Best projects are showcased in departmental events, hackathons, and competitions.

## **Rubrics for Mini Project**

**Review 1:** Literature Survey, Problem Identification, Objectives and Methodology Evaluation

**Review 2:** Methodology, Implementation, Results, Discussion, Conclusions and Report evaluation

Total Maximum Marks are 100. The marks obtained will be reduced to 50 marks, which will be the CIE marks.

<b>Marks distribution for Review 1 – 40 Marks</b> <b>(Evaluated jointly by a committee comprising Guide and other designated members)</b>				
<b>Parameters</b>	<b>Allocated Marks</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
Literature Survey & Relevance to Present Context	12	An extensive literature survey was conducted and collected good information about the existing system. (9-12)	A moderate literature survey was made and collected some basic information about the existing system. (4-8)	Inadequate literature survey was made and not collected basic information about the existing system. (0-3)
Problem Identification & Objectives	12	Detailed and extensive explanation of the purpose and need of the Project. (9-12)	Brief explanation of the purpose and need of the project. (4-8)	Problem Identification is not clear. (0-3)
Proposed Methodology & Expected Outcomes	8	Detailed explanation of the proposed methodology and expected outcomes are well defined (6-8)	Brief explanation of proposed methodology and expected outcomes not well defined. (3-5)	Methodology & outcomes are not defined. (0-2)
Presentation Skills	8	Contents of the presentations are appropriate and well delivered. (6-8)	The contents of the presentations are appropriate but not well delivered. (3-5)	Contents of the presentations are not appropriate and not well delivered. (0-2)

<b>Marks distribution for Review 2 – 60 Marks</b> <b>(Evaluated jointly by a committee comprising Guide and other designated members)</b>				
<b>Parameters</b>	<b>Allocated Marks</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>LOW</b>
Methodology (Theoretical analysis/ Experimental observations/ Fabrication / Testing)	12	Implementation methodology of each of the objectives are very well defined. Well planned methodology. (9-12)	Implementation methodology of each of the objectives are moderately done. Moderately planned methodology. (4-8)	The defined objectives are not implemented properly. Poor planning was observed. (0-3)

Results, Discussions and Conclusions	12	All the results obtained are well presented and discussed. The conclusions drawn are justifiable. (9-12)	All the results obtained are moderately presented and discussed. The conclusions drawn are moderately justifiable. (4-8)	Poor presentation of the results. Discussion was not proper, and conclusions are not valid. (0-3)
Presentation Skills and Viva Voce	8	Contents of the presentations are appropriate and well delivered. (6-8)	Contents of the presentations are appropriate but not well delivered. (3-5)	Contents of the presentations are not appropriate and not well delivered. (0-2)
Report	8	The report is structured and well prepared as per format. (6-8)	The report is not well structured, but as per format. (3-5)	Report is not well structured and not as performat (0-2)
Ethics	8	Project bibliography was complete and flawlessly formatted. All sources were cited in the presentation. Reports to the guide regularly and consistently in work. (6-8)	Project bibliography was moderate and not properly formatted. A few of the sources were only cited during the presentation. Not very regular but consistent at work. (3-5)	Project bibliography was incomplete. None of the sources were cited during the presentation. Irregular attendance and inconsistency at work. (0-2)
Working in a group	8	Collaborates and communicates well in a group situation and integrates the views of others. (6-8)	Exchanges some views but requires guidance to collaborate with others. (3-5)	Make little or no attempt to collaborate in a group situation. (0-2)
Research Publications	4	Paper accepted/published (3-4)	Paper submitted (1-2)	Not prepared and Not submitted paper (0)

**Table 2.16 Mini Project Sample Data**

Sl. No	Project Title	Description
1	MediConnect - Telemedicine Platform	Facilitates remote healthcare consultations and medical access through a digital platform.
2	Decentralised Land Registry Using Blockchain	Ensures tamper-proof, transparent, and secure land record management using blockchain.

3	SMART EVALUATOR: An NLP-Based System for Automated Student Answer Script Evaluation	Automates answer script grading using natural language processing for efficient assessment.
4	Procurement in Supply Chain Management	Optimizes procurement processes through digital tracking and vendor management tools.
5	Debt Free Website - A Smart Debt Management and Expense Mapping System	Helps users manage debts and expenses through smart budgeting and analytics.
6	Geolocation Based Attendance Tracking Application	Records user attendance by verifying their physical location using GPS.
7	Decentralized Document Encryption and Access Control	Provides secure document access using blockchain and cryptographic techniques.
8	AI-Based Clothing Design And Upcycling System	Uses AI to generate sustainable fashion designs and support garment upcycling.
9	Sentiment Analysis for Stock Prediction	Analyzes public sentiment to predict stock trends using machine learning.
10	Human Scream Detection and Analysis for Controlling Crime Rate	Detects screams in real-time to alert authorities and reduce crime incidents.
11	An Integrated Anime Streaming and Merchandise Platform	Combines anime streaming with merchandise purchases for fan engagement in one place.
12	Wome AI Powered Complaint Generator and Management System	Simplifies women's safety reporting with AI-driven complaint generation and tracking.
13	AI GenderSense	Uses AI to identify gender for tailored user interactions in applications.
14	AI-Powered Cross-Platform Compliance Management System for CIS Benchmark Auditing	Automates auditing and compliance checks across systems using CIS standards.
15	Nutrisnap and Optimal Eats	Recommends healthy meals using food image recognition and nutritional analysis.
16	Cardiac MRI Segmentation for Detecting Myocardial Infarction	Uses MRI image processing to detect and analyze heart attacks accurately.
17	Nourish Now	Encourages healthy eating by tracking nutrition and meal planning through a mobile platform.
18	SmartParkX - The Smart Parking System	Provides real-time parking space availability using IoT and mobile integration.
19	Dynamic Call Engine	Enhances communication systems with flexible, rule-based call routing and handling.
20	Brahmi to Kannada Conversion	Digitally converts ancient Brahmi script into modern Kannada for linguistic preservation.

**Table 2.17 POs and PSOs Mapped With Above listed Mini Projects**

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓

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**2.5 Case Studies and Real-Life Examples (10)**

Total Marks 10.00



These case studies and real-life examples vividly illustrate how student-centered learning approaches, innovative teaching methodologies, and effective evaluation techniques can significantly enhance student engagement, deepen understanding, and improve overall academic outcomes. They serve as powerful evidence of the positive shift in educational practices that prioritize active learning, critical thinking, and continuous feedback.

**Table 2.11- Case Studies/ Real life examples for 2021 Batch**

Sl . N O	Subject Code & Name	Titles of the Case Studies / Real life examples given	Complex ity level (H/M/L)	PO' S addressed PSO 'S addressed	SDG Mappi ng	Impact on Student

					<b>Student Engagement Strategies</b> <ul style="list-style-type: none"> <li>• Conceptual learning with real-world use cases</li> <li>• Problem solving through model-based tasks</li> <li>• Peer discussions and analysis</li> </ul> <p>SDG 4, SDG 7, SDG 9, SDG 11, SDG Learning Outcomes</p> <p>SDG 12, SDG 13, SDG 16</p> <ul style="list-style-type: none"> <li>• Develops logical and analytical thinking</li> <li>• Applies math in real-life systems like energy, cities, security</li> <li>• Enhances research skills with SDG-aligned focus</li> <li>• Promotes ethical and sustainable tech design</li> </ul>
1	21CS37 - Discrete Mathematical Structures	Research article	H	PO1,PO2,PO3,PO4,P08,PO9, PO10,PSO1,PSO2	

					<b>Student Engagement Strategies</b> <ul style="list-style-type: none"> <li>• Algorithm modeling and simulation</li> <li>• Real-life project scheduling case studies</li> <li>• Group activities and peer review</li> </ul>
2	21CS46 - Design and Analysis of Algorithms	Critical Path Analysis in Project Management	M	PO1,PO2,PO3,PO4,PO6,PO7,PO8,PO9,PO10,PO11,PSO1,PS02	<b>SDG 9, SDG 11, SDG 12</b> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Enhances decision-making and project planning skills</li> <li>• Encourages efficient resource and time management</li> <li>• Prepares students to handle industry-level operations and optimization problems aligned with sustainability goals</li> </ul>

						<b>Student Engagement Strategies</b> <ul style="list-style-type: none"> <li>• Real-time simulations with Java threads</li> <li>• Use-case implementation in finance and research domains</li> <li>• Debugging-focused lab tasks</li> </ul>
3	21CSL48 C - Object Oriented Programming using Java Laboratory	Implementation of multithreaded client-server applications and robust exception handling techniques in banking and scientific computing domains.	M	PO1,PO2,PO5,PSO1,PS02	SDG 8, SDG 9, SDG 16	<b>Learning Outcomes</b> <ul style="list-style-type: none"> <li>• Builds ability to design robust, scalable applications</li> <li>• Promotes understanding of concurrent systems and real-world client-server communication</li> <li>• Enhances secure and efficient coding skills for critical sectors like banking and science</li> </ul>

					<b>Student Engagement Strategies</b> <ul style="list-style-type: none"> <li>• Case-based software design</li> <li>• Group-based system modeling</li> <li>• Discussion on risk &amp; safety in critical software</li> </ul>
4	21CS47 - Software Engineering	Case study exploration of real-world systems like insulin pumps (healthcare), net banking (finance), and ATM operations (retail banking).	M	PO1,PO2,PO3, PO6,PO10, PSO1	<b>SDG 3, SDG 8, SDG 9</b> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Enables students to develop safety-critical and user-centric systems</li> <li>• Encourages application of software principles in healthcare and finance</li> <li>• Builds awareness of reliable system design for real-world needs</li> </ul>

5	21CS55 - Database Management System	Case studies on large-scale database systems including airline reservation platforms and university information systems, with a focus on conflict and view serializability in transaction management.	M	PO1,PO2,PO3,PO5,PO10,PO11,PSO1, PSO2	<p><b>Student Engagement Strategies</b></p> <ul style="list-style-type: none"> <li>• Real-time system case analysis</li> <li>• Query optimization tasks</li> <li>• Transaction management experiments</li> </ul> <p><b>Learning Outcomes</b></p> <p>SDG 4, SDG 9, SDG 11</p> <ul style="list-style-type: none"> <li>• Helps students design reliable and scalable database systems</li> <li>• Promotes understanding of concurrency and data consistency in real-world apps</li> <li>• Prepares them for roles in enterprise data systems across education and industry</li> </ul>	

6	21CS56 - Operating Systems	Case study on operating system activities with Android, IOS, Linux etc.	L	PO1,PO2,PSO1	SDG 9, SDG 12	<p><b>Student Engagement Strategies</b></p> <ul style="list-style-type: none"> <li>• Comparative analysis of OS platforms</li> <li>• Practical tasks using emulators and VMs</li> <li>• Case-based assignments on resource management</li> </ul> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Enables understanding of real-time OS behavior and architecture</li> <li>• Promotes efficient design for system-level software</li> <li>• Equips students to optimize resource usage and support sustainable computing</li> </ul>

7	21CS541 - Blockchain Technology	M	Case studies on blockchain challenges including the double-spending problem in Bitcoin, decentralized identity management solutions, and block finalization mechanisms in the Ethereum network.	PO1,PO2,PO3, PO4,PSO1	SDG 9, SDG 16	<p><b>Student Engagement Strategies</b></p> <ul style="list-style-type: none"> <li>• Hands-on exploration using blockchain simulators</li> <li>• Use-case analysis in finance and governance</li> <li>• Discussions on consensus and security</li> </ul> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Builds understanding of decentralized technologies and trust models</li> <li>• Encourages development of secure, transparent systems</li> <li>• Prepares students for ethical innovation in digital finance and identity systems</li> </ul>

8	21CS643 - Robotic Process Automation	Real life example of Data Scraping from amazon.com, flipkart.com.	M	PO1,PO2,PO3, PSO1,PSO2	<p><b>Student Engagement Strategies</b></p> <ul style="list-style-type: none"> <li>• Automation scripts for real e-commerce platforms</li> <li>• Live demos of RPA tools</li> <li>• Case-based tasks on structured data extraction</li> </ul> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Develops skills in automating repetitive business tasks</li> <li>• Encourages efficient data processing for decision-making</li> <li>• Prepares students for RPA roles in digital commerce and business process optimization</li> </ul> <p>SDG 8, SDG 9</p>

9	21CS645 - Big Data Analytics	Case study on software services and product based Companies.	M	PO1,PO2,PO3, PSO1	<p><b>Student Engagement Strategies</b></p> <ul style="list-style-type: none"> <li>• Real-world data analysis using big data tools</li> <li>• Industry-based project case studies</li> <li>• Hands-on sessions with Hadoop/Spark</li> </ul> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Enables students to interpret and manage large-scale data</li> <li>• Encourages data-driven decision-making for innovation</li> <li>• Prepares students for analytics roles in both service and product industries</li> </ul> <p>SDG 8, SDG 9</p>

10	21CS72 - Data Visualization with Python	Tableau Dashboards	M	PO1,PO2,PO3, PSO1,PSO2	SDG 9, SDG 11	<p><b>Student Engagement Strategies</b></p> <ul style="list-style-type: none"> <li>• Hands-on dashboard building with real datasets</li> <li>• Interactive storytelling with visuals</li> <li>• Real-time data tracking use-cases</li> </ul> <p><b>Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Empowers students to convert raw data into visual insights</li> <li>• Enhances data-driven thinking for smart systems</li> <li>• Prepares students to communicate technical insights for decision-making in industry and public systems</li> </ul>

**Impact Analysis & Continuous Improvement**

- Faculty regularly evaluate the success of case-based learning through real-time student feedback, hands-on assessments, and project excellence.
- The curriculum evolves continuously, integrating the latest in AI, data science, and automation to keep students industry-ready and future-focused.
- Outstanding student solutions and innovative case implementations are celebrated, shared, and archived as benchmarks to inspire and elevate upcoming cohorts.
- Industry collaborations, alumni insights, and global tech trends guide the refinement of content and pedagogy, ensuring relevance and cutting-edge delivery.
- Continuous improvement isn't a phase its a culture driven by curiosity, creativity, and the pursuit of real-world impact.



MOOCs (Massive Open Online Courses) and self-learning are vital for engineering students, offering flexible, accessible, and affordable education beyond traditional classrooms. They provide exposure to the latest technologies, global academic resources, and expert instruction from top universities. Self-learning cultivates critical thinking, problem-solving, and lifelong learning habits—essential traits in the fast-evolving engineering field.

By engaging in MOOCs, students can enhance their knowledge, bridge skill gaps, and stay competitive in the job market. These platforms also support personalized learning paths, enabling students to explore their interests deeply and at their own pace, thereby fostering academic and professional growth.

Integration of SWAYAM/NPTEL promotes self-learning, skill enhancement, and flexible education through high-quality online courses, aiding in academic and professional growth.

The NPTEL policy at the institutional level follows a structured approach through initiation, implementation, and impact. Initially, the institution creates awareness among students and faculty by conducting orientation programs and establishing a Local Chapter with a designated SPOC to coordinate activities.

During implementation, relevant NPTEL courses are identified and promoted, with mentoring support provided by faculty, infrastructure arranged for seamless access, and progress tracked regularly. The institution encourages participation by aligning NPTEL courses with the curriculum and academic incentives.

The impact phase reflects improved student understanding, faculty upskilling, increased certification rates, curriculum enrichment, better placement opportunities, and enhanced institutional visibility through NPTEL rankings and recognitions.

**Table 2.19-Summary Table**

Academic Year	No. of Students Registered	No. of Courses Registered	No. of Courses Completed
2024-2025	230	230	165
2023-2024	29	101	82
2022-2023	228	287	280

**Table 2.20- NPTEL - Course Details AY 2024-2025(sample)**

Sl.N O	Courses Offered	Number of Students Registered	POs/PSOs Addressed
1	E-Business	88	PO1,PO2,PSO1
2	Ethical Hacking	44	PO1,PO2,PO5, PSO1
3	Software Testing	36	PO1,PO2,PO5, PSO1
4	Reinforcement Learning	4	PO1,PO2, PSO1
5	Social Network Analysis	14	PO1,PO2,PO6,PO7, PSO1
6	Getting Started with Competitive Programming	11	PO1,PO2,PO5, PSO1
7	Design & Implementation of Human-Computer Interfaces	8	PO1,PO2,PO3,PO5, PSO1
8	Applied Accelerated Artificial Intelligence	2	PO1,PO2, PSO1
9	Introduction to Industry 4.0 and Industrial Internet of Things	1	PO1,PO2,PO5, PSO1

**Table 2.21- MOOCs - Course Details AY 2023-2024(sample)**

SL.N O	Courses Offered	Number of Students Registered	POs/PSOs Addressed
1	Human Computer Interaction	12	PO1,PO2, PSO1

2	Business Fundamentals For Entrepreneurs	5	PO1,PO7,PO9, PSO1
3	AI in Product Management	3	PO1,PO2,PO10, PSO1
4	Leadership and Team Effectiveness	6	PO7,PO8,PO9, PSO1
5	Business Intelligence & Analytics	3	PO1,PO2,PO7, PSO1
6	Programming in java	1	PO1,PO5, PSO1
7	Social Networks	1	PO1,PO2,PO6,PO7, PSO1
8	German - I	1	PO9, PSO1

**Table 2.22 - MOOCs - Course Details AY 2022-2023(sample)**

SL.N O	Courses Offered	Number of Students Registered	POs/PSOs Addressed
1	Management & Leadership	24	PO7,PO8,PO9,PO10, PSO1
2	Engineering Project Management	3	PO1,PO7,PO8,PO9,PO10 , PSO1
3	Entrepreneurial Management	5	PO7,PO8,PO9,PO10, PSO1
4	Product Management	5	PO7,PO8,PO9,PO10, PSO1
5	Business Process Management	1	PO7,PO8,PO9,PO10, PSO1
6	Entrepreneurship	5	PO7,PO8,PO9,PO10, PSO1
7	Leadership and Management	1	PO7,PO8,PO9,PO10, PSO1
8	Human Resource Management	1	PO7,PO8,PO9,PO10, PSO1
9	Principles of Management	3	PO7,PO8,PO9,PO10, PSO1
10	Customer Relationship Management	1	PO7,PO8,PO9,PO10, PSO1
11	Strategic Management	1	PO7,PO8,PO9,PO10, PSO1
12	Marketing Foundations	3	PO7,PO8,PO9,PO10, PSO1



**Elite**  
**NPTEL ONLINE CERTIFICATION**  
(Funded by the MoE, Govt. of India)



This certificate is awarded to

**SHREYAS R**

for successfully completing the course

**E-Business**

with a consolidated score of **86** %

Online Assignments	22.75/25	Proctored Exam	63/75
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Total number of candidates certified in this course: **7175**



**Skill India**  
कौशल भारत - कुशल भारत



**Prof. Haimanti Banerji**  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur



Roll No: NPTEL24MG92S252804432

To verify the certificate



No. of credits recommended: 3 or 4



Elite

# NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

This certificate is awarded to

**SUSHMA B**

for successfully completing the course

**E-Business**with a consolidated score of **73** %

<b>Online Assignments</b>	<b>22.41/25</b>	<b>Proctored Exam</b>	<b>51/75</b>
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Total number of candidates certified in this course: **7175**

कौशल भारत - कुशल भारत


**Prof. Haimanti Banerji**Coordinator, NPTEL  
IIT Kharagpur

Indian Institute of Technology Kharagpur

Roll No: NPTEL24MG92S252802833

To verify the certificate



No. of credits recommended: 3 or 4





**Elite**  
**NPTEL ONLINE CERTIFICATION**  
(Funded by the MoE, Govt. of India)



This certificate is awarded to

**B S SRIVIDYA**

for successfully completing the course

**Ethical Hacking**



with a consolidated score of **80** %

<b>Online Assignments</b>	<b>23.88/25</b>	<b>Proctored Exam</b>	<b>56.25/75</b>
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Total number of candidates certified in this course: **6948**

**Jul-Oct 2024**

(12 week course)

**Prof. Haimanti Banerji**  
Coordinator, NPTEL  
IIT Kharagpur



Indian Institute of Technology Kharagpur

Roll No: NPTEL24CS94S452806208

To verify the certificate



No. of credits recommended: 3 or 4



**Sample Certificate issued by NPTEL.**

2.7 Solving Complex Engineering Problems Incorporating Sustainability Goals (20)

Total Marks 20.00



Solving complex engineering problems requires interdisciplinary knowledge, critical thinking, and collaborative approaches. At BMSIT&M, students are encouraged to address real-world challenges through innovative projects aligned with societal needs. This directly supports **SDG**, which emphasizes global partnerships for sustainable development. By collaborating with industries, research institutions, and community organizations, students learn to co-create solutions that are scalable and impactful. These partnerships foster knowledge exchange, technological advancement, and capacity building, contributing to long-term sustainability goals. Integrating SDG into engineering education cultivates socially responsible engineers equipped to lead in a connected and interdependent world.

Project-based learning (PBL) has often been employed as a comprehensive tool to engage students in the investigation of complex problems. PBL is a comprehensive approach to classroom teaching and learning that is designed to engage students in the investigation of real-world problems that involve students in design, problem solving, decision making, or investigative activities. The projects culminate in realistic products or presentations. Projects have the potential to motivate students and provoke thoughts for deeper learning.

#### **Objectives for Project-based learning (PBL):**

Unlike traditional lecture-based methods, PBL engages students in inquiry, research, and application which also enhances critical thinking and problem-solving abilities. PBL is inherently collaborative, students learn to articulate ideas, negotiate solutions, and work effectively in groups.

Students were asked to form a team of 2-4 members and discuss with course coordinators to formulate the problem statements.

Subsequently, an analysis was carried out based on the curricular course components to mitigate the gaps.

**Table 2.23** Sample PBL /Mini Projects/ Hackathon / Major Projects

AY	No. of PBL	Mini Projects	Major Projects
2024-25	55	60	60
2023-24	50	50	53
2022-23	55	55	55

**Table 2.24** POs and PSOs mapped with Sample PBL /Mini Projects/ Hackathon / Major Projects

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**Table 2.25** List Of PBL (Sample)

SL No.	Project Title	Description	SDG(s)
1	E Mechanic	Online platform to book vehicle mechanic services.	SDG 8: Decent Work and Economic Growth
2	Online Auction System	Real-time product and service auctions.	SDG 9: Industry, Innovation and Infrastructure
3	Data Security by Steganography	Hiding data in multimedia to enhance confidentiality.	SDG 16: Peace, Justice and Strong Institutions
4	Virtual Learning Platform	Interactive online education environment.	SDG 4: Quality Education
5	DigiVote	Secure digital voting system.	SDG 16: Peace, Justice and Strong Institutions
6	SISAC 1.0	Student record & cafeteria management system.	SDG 4: Quality Education, SDG 9
7	Emergency Vehicle Dispatch System	Optimized emergency dispatch system.	SDG 3: Good Health and Well-being
8	Pathfinding Visualizer	Visualization of pathfinding algorithms.	SDG 4: Quality Education
9	Entip	Platform for idea sharing among entrepreneurs.	SDG 8: Decent Work and Economic Growth, SDG 9
10	AI Virtual Assistant	Automates tasks via intelligent interaction.	SDG 9: Industry, Innovation and Infrastructure

<b>11</b>	Codify	Coding practice platform for learners.	SDG 4: Quality Education
<b>12</b>	Vertify	Blockchain-based anti-counterfeit system.	SDG 12: Responsible Consumption and Production
<b>13</b>	Blood Registry Using Blockchain	Blockchain-powered blood donation tracking.	SDG 3: Good Health and Well-being
<b>14</b>	Realtime Collab Tool - "HUDDL"	Real-time team collaboration platform.	SDG 9: Industry, Innovation and Infrastructure
<b>15</b>	JavaCraft	Learning OOP and GUI using Java.	SDG 4: Quality Education
<b>16</b>	Automated Vehicle Storage System	Simulates intelligent parking using C++.	SDG 11: Sustainable Cities and Communities
<b>17</b>	Personal Finance Tracker	Tool for personal expense management.	SDG 1: No Poverty, SDG 8
<b>18</b>	ADS	Real-world algorithm/data structure applications.	SDG 4: Quality Education
<b>19</b>	Task Management System	Organizes and tracks productivity tasks.	SDG 8: Decent Work and Economic Growth
<b>20</b>	A Digital Address Book	Contact management tool in C++.	SDG 9
<b>21</b>	Snake Game Using C++	Classic game project for skill development.	SDG 4: Quality Education
<b>22</b>	Online Shopping App	E-commerce platform with basic features.	SDG 8, SDG 9, SDG 12
<b>23</b>	Attendance Tracker	Digital attendance recording tool.	SDG 4: Quality Education, SDG 9
<b>24</b>	Airlines Management System	Simulates booking and flight management.	SDG 9, SDG 11
<b>25</b>	Music Player	Multimedia player with playlist support.	SDG 9
<b>26</b>	Sudoku Solver	Puzzle-solving application using algorithms.	SDG 4
<b>27</b>	Bank Management System	Simulation of banking operations.	SDG 8, SDG 9
<b>28</b>	Web Application	Demonstration of web integration concepts.	SDG 9
<b>29</b>	Supply Chain Management System	Real-time logistics and supply tracking.	SDG 12, SDG 9
<b>30</b>	Search Engine	Mini search engine for data retrieval.	SDG 9
<b>31</b>	File Compression Tool	Huffman coding-based compression utility.	SDG 9

**Table 2.26 List Of Integrated design Thinking (IDT) projects (Sample)**

Sl. No	Project Title	Description	Mapped SDG(s)

1	Food Waste Management	Reduce food wastage, redirect surplus to those in need, promote sustainability.	SDG 2: Zero Hunger, SDG 12: Responsible Consumption and Production
2	Agriculture Sector Wellbeing	Support farmers through digital tools to improve crop health and livelihoods.	SDG 1: No Poverty, SDG 2: Zero Hunger, SDG 8: Decent Work
3	Permeable Pavement System	Promote groundwater recharge and reduce urban flooding using eco-friendly pavements.	SDG 6: Clean Water, SDG 11: Sustainable Cities
4	Optimizing Water and Fertilizer Usage	Precision farming to reduce waste and improve efficiency.	SDG 2, SDG 6, SDG 12
5	Education Technology for Underprivileged School	Provide quality digital learning tools to underserved schools.	SDG 4: Quality Education, SDG 10: Reduced Inequalities
6	Food Waste Management App (NGOs)	Coordinate NGOs for redistributing surplus food to the needy.	SDG 2, SDG 12, SDG 17: Partnerships
7	SIH: Home Revive	Smart solution for home renovation or safety – possibly energy or safety focused.	SDG 11: Sustainable Cities and Communities
8	SIH	Context-specific smart solution solving real-world national issues.	SDG 9: Industry, Innovation and Infrastructure
9	Water Pipeline Mapping	Efficient maintenance and leak detection using digital mapping.	SDG 6: Clean Water and Sanitation
10	Cross Device Protection	Cybersecurity across smart devices.	SDG 9, SDG 16: Peace, Justice and Strong Institutions
11	Illegal Dumping Action Detector	Detect/report illegal waste dumping with surveillance tech.	SDG 11, SDG 13: Climate Action
12	Smart Helmet	Real-time rider safety features (GPS, alerts, monitoring).	SDG 3: Good Health and Well-being
13	Calorie Tracker (App)	Help users monitor and improve health through mobile app.	SDG 3
14	Water Footprint Calculator	Measure water use and encourage conservation.	SDG 6, SDG 12
15	Solar Tracking System	Improve solar panel efficiency through smart alignment.	SDG 7: Affordable and Clean Energy, SDG 13
16	Smart Water Dam Monitoring	IoT-based dam monitoring for safety and water management.	SDG 6, SDG 9, SDG 11
17	Underprivileged Aid	Digitally coordinate aid/support to marginalized communities.	SDG 1, SDG 10, SDG 17
18	Crop Yield Prediction	AI/ML-based forecasting to enhance agricultural productivity.	SDG 2, SDG 9
19	End-to-End Drug Tracking	Prevent counterfeit drugs through a traceable supply chain.	SDG 3, SDG 9, SDG 16

Mapping the **Computer Science and Engineering (CSE)** curriculum of **BMS Institute of Technology and Management** to the **United Nations Sustainable Development Goals (SDGs)** highlights how technical education can contribute to global sustainability. Below is an alignment of CSE courses of BMSIT&M with relevant SDGs, based on the available Curriculum.

**Table 2.27 Core Courses and Their SDG Alignment**

Course Title	Relevant SDGs
Data Structures with C	SDG 4 (Quality Education) – Enhances problem-solving and algorithmic thinking.
Operating Systems	SDG 9 (Industry, Innovation, and Infrastructure) – Fundamental for understanding system-level operations in computing.
Database Management Systems	SDG 9 (Industry, Innovation, and Infrastructure) – Essential for managing data in various applications.
Computer Networks	SDG 9 (Industry, Innovation, and Infrastructure) – Key to understanding communication systems and network infrastructure.
Software Engineering	SDG 8 (Decent Work and Economic Growth) – Focuses on developing efficient and reliable software systems.
Artificial Intelligence	SDG 9 (Industry, Innovation, and Infrastructure) – Drives innovation in various sectors.
Machine Learning	SDG 9 (Industry, Innovation, and Infrastructure) – Facilitates advancements in automation and data analysis.
Cyber Security	SDG 16 (Peace, Justice, and Strong Institutions) – Ensures the protection of information and systems.
Mobile Computing	SDG 9 (Industry, Innovation, and Infrastructure) – Promotes the development of mobile technologies.
Web Programming	SDG 9 (Industry, Innovation, and Infrastructure) – Supports the creation of web-based applications.

**Table 2.28 Elective Courses and Their SDG Alignment**

Elective Course Title	Relevant SDGs
Green Buildings	SDG 11 (Sustainable Cities and Communities) – Promotes sustainable construction practices.
Renewable Energy Sources	SDG 7 (Affordable and Clean Energy) – Encourages the use of renewable energy technologies.
Waste Management	SDG 12 (Responsible Consumption and Production) – Focuses on efficient waste disposal and recycling methods.
Introduction to Sustainable Engineering	SDG 9 (Industry, Innovation, and Infrastructure) – Integrates sustainability into engineering practices.
Introduction to IoT	SDG 9 (Industry, Innovation, and Infrastructure) – Facilitates the development of interconnected devices for smart solutions.
Introduction to Cyber Security	SDG 16 (Peace, Justice, and Strong Institutions) – Enhances the security of digital systems.
Environmental Studies & E-Waste Management	SDG 12 (Responsible Consumption and Production) – Addresses environmental concerns related to electronic waste.

Universal Human Values	SDG 16 (Peace, Justice, and Strong Institutions) – Promotes ethical values and social responsibility.
Research Methodology and IPR	SDG 9 (Industry, Innovation, and Infrastructure) – Encourages innovation and protects intellectual property rights.
Biology for Information Technology	SDG 3 (Good Health and Well-being) – Provides knowledge on biological systems relevant to health-related technologies.
Sustainable Development Goals	All SDG's are covered in the syllabus

**Table 2.29 List of the Major Projects aligned to SDG (Sample)**

SL No.	Project Title	Description	SDG(s)
1	MediConnect – Telemedicine Platform	To enhance access to healthcare services in remote areas using digital consultations.	SDG 3, SDG 9
2	Decentralised Land Registry Using Blockchain	To provide a tamper-proof, transparent, and efficient land record management system.	SDG 11, SDG 16
3	SMART EVALUATOR: An NLP-Based System for Automated Student Answer Script Evaluation	To automate and improve the accuracy and efficiency of evaluating student exams.	SDG 4, SDG 9
4	Procurement in Supply Chain Management	To streamline and optimize procurement processes for better supply chain efficiency.	SDG 12, SDG 9
5	Debt Free Website – A Smart Debt Management and Expense Mapping System	To help users manage personal finances and reduce debt through smart tracking and analytics.	SDG 1, SDG 8
6	Geolocation-Based Attendance Tracking Application	To ensure accurate and real-time attendance monitoring using location data.	SDG 9
7	Decentralized Document Encryption and Access Control	To ensure secure and private document sharing with decentralized access control.	SDG 9
8	AI-Based Clothing Design and Upcycling System	To promote sustainable fashion by using AI for redesigning and upcycling clothes.	SDG 9, SDG 4
9	Sentiment Analysis for Stock Prediction	To assist investors by analyzing market sentiment from online sources for better stock decisions.	SDG 9

10	Human Scream Detection and Analysis for Controlling Crime Rate	To enhance public safety by detecting distress signals using audio analysis in surveillance.	SDG 9
11	An Integrated Anime Streaming and Merchandise Platform	To provide a unified experience for anime fans by combining content streaming and sales.	SDG 9
12	Wome – AI-Powered Complaint Generator and Management System	To automate the process of filing and tracking complaints, especially for womens safety.	SDG 9, SDG 4
13	AI Gender Sense	To identify and analyze gender from speech or text inputs for personalization and inclusivity.	SDG 9, SDG 4
14	AI-Powered Cross-Platform Compliance Management System for CIS Benchmark Auditing	To automate compliance checks using AI for cybersecurity adherence.	SDG 9, SDG 4
15	NutriSnap and Optimal Eats	To help users track food intake and get personalized nutrition suggestions using image recognition.	SDG 9
16	Cardiac MRI Segmentation for Detecting Myocardial Infarction	To improve early detection of heart attacks using AI-based medical image analysis.	SDG 9
17	Nourish Now	To connect surplus food sources with those in need, reducing waste and hunger.	SDG 9
18	SmartParkX – The Smart Parking System	To solve urban parking problems using sensors and real-time availability updates.	SDG 9
19	Dynamic Call Engine	To optimize and personalize call routing in customer service using dynamic algorithms.	SDG 9
20	Brahmi to Kannada Conversion	To preserve ancient scripts by converting Brahmi text to readable Kannada format.	SDG 9
21	Legal Insight Engine	AI-powered legal research and summarization.	SDG 16
22	Auto Comment Generator	Automate meaningful comment generation using NLP.	SDG 9

23	Blockchain Enabled Medicine Supply Chain With Enhanced Security	Secure tracking of medical chemicals.	SDG 3, SDG 9
24	SecureJury	Secure platform for remote jury deliberation.	SDG 16
25	AutodocX – Automated Documentation Solution Using Blockchain	Tamper-proof documentation through blockchain.	SDG 9
26	AquaVigil: IoT Implementation for Pipeline Health	IoT for detecting water pipeline issues.	SDG 6, SDG 9
27	Ship Routing Algorithm for Indian Ocean Using Hybrid A*	Optimize ship routes with hybrid algorithms.	SDG 9, SDG 13
28	Safeguarding Government Issued PII's in Digital Assets	Protect digital PII using secure methods.	SDG 16
29	Forensic-Trust: Blockchain-Based Forensic Evidence Investigation	Secure forensic evidence handling.	SDG 16
30	Counterfeit Product Identification Using Blockchain	Detect counterfeit products with blockchain.	SDG 9, SDG 12
31	Authentication of Official Documents with Biometrics and Blockchain	Enhanced document security and authenticity.	SDG 16
32	FLask on AKS: Develops Unleashed	Scalable deployment using cloud-native tools.	SDG 9
33	Rapid Surveillance Vehicle Yielding Network (RSVYNet)	Smart mobile surveillance against threats.	SDG 11, SDG 16
34	Women Safety Alert System Using IoT	Alerts and safety for women using IoT.	SDG 5, SDG 11
35	Next Gen Smart Parking Automation	Efficient parking with IoT and sensors.	SDG 11
36	Technopired – Educational Aid for Dyslexic Students	Assistive education tech for dyslexia.	SDG 4, SDG 10
37	Living Layers: Augmented Human Body Insights	AR-based medical learning tool.	SDG 3, SDG 4
38	IoT Safestride: Women's Security Wearable	Wearable IoT safety system for women.	SDG 5, SDG 11

39	Detection of Alzheimer's Using CNN	Early disease detection through AI.	SDG 3
40	PresencePro – Classroom Attendance with Multi-layered Authentication	Secure attendance system with facial and location verification.	SDG 4, SDG 9
41	Rentafield: Sports Venue Booking Platform	Book sports grounds easily online.	SDG 3, SDG 11
42	Project Security – Website Security Suite	Cybersecurity tools for websites.	SDG 9
43	Underwater Image Enhancement Using PCA and Grayworld	Better underwater imagery via algorithms.	SDG 14, SDG 9

**Table 2.30 List Of Hackathon (Sample)****a. Academic Year 2024-2025**

SL. No	Title	Number of Participants	Prize (if any) in Rupees	Financial Assistance	Organized By	Date
1	Advert 2.0	17 Teams	1st: Rs.3000, 2nd: Rs.2000, 3rd: Rs.1000	6000/-	BICEP, BMSIT&M	24.05.2025
2	Pitch Off Competition	20 Teams	Rs.3000/- for 3 teams	3000/-	BICEP, BMSIT&M	27.05.2025
3	Match Quest - Aeroclub	-	1st: Rs.3000, 2nd: Rs.2000, 3rd: Rs.1000	6000/-	BICEP, BMSIT&M	19.05.2025
4	Dronacharya 2.0 – Drone Building Hackathon	1	1st: Rs.8000	6500/-	Vidya Vikas Institute of Engineering and Technology, Mysore	02.04.2025
5	InnovateX 3.0 – Presidency University	1	Team participated	8000/-	Presidency College	15.04.2025 to 17.04.2025
6	9th National Techno-Exhibition	1	Rs.25000 (1st Prize)	-	Ambedkar Institute of Technology, Bengaluru	13.04.2025
7	ANVESHANA 2025 – Prototype Competition	10	Rs.50000/- (1st Prize)	50000/-	BMSIT&M	28.03.2025

8	Department Level Hackathon	-	-	1,50,000/- (Rs.19000/- per department)	BMSIT&M	27.03.2025
9	Anveshana Samsung Science & Engineering Fair	1	Rs.30000/- (3rd Place)	Facilities by Aarohan Lab	Bengaluru	17.02.2025 & 19.02.2025
10	Meraki 14th Edition – International Business Competition	1	-	-	Delhi	15.02.2025
11	Code Red 25hrs Hackathon	-	-	-	BMSIT&M	09.01.2025 & 10.01.2025

**b. Academic Year 2023-2024**

SL. No	Title	Number of Participants	Prize (if any) in Rupees	Financial Assistance	Organized By	Date
12	Hackday Pondy	1	Rs.25000/- (3rd Prize)	14942/-	SMVCE, Pondicherry	28.12.2024
13	SIH competition	4	-	77711/-	Various Centers	11-15 Dec 2024
14	Industry 4.0 Technologies	1	Rs.5,00,000/-	-	Aviratha Digital Lab, Jerbi Foundation	01.10.2024
15	Sparkathon – 24hr Hackathon	1	-	1180/- (Registration)	Rajarajeshwari College	24.10.2024 to 25.10.2024
16	Bootcamp: Innovation, Design & Entrepreneurship	1	-	10214/-	MoE, AICTE, Innovation Cell	23.09.2024 to 27.09.2024
17	Manthan Business Plan Competition	1	Rs.50000/-	-	FKCCI, Bengaluru	11.07.2024
18	ELCIA Tech Summit	1	-	9000/-	IIT Bangalore	06.07.2024 to 25.07.2024
19	Summer of Projects	20	Rs.4500/- Pool	-	IEEE-BICEP, BMSIT&M	29.06.2024
20	Innovation Gauntlet – Squid Game Edition	15	Rs.11000/- Total	-	Innovation Cell, BMSIT&M	25.06.2024
21	Sristi Innovation Challenge	15	Rs.48000/- + Rs.50000/-	16900/-	Atria Institute of Technology	24.05.2024 to 26.05.2024

22	Start Up Premier League 2.0	25	Rs.10000/- (Total)	-	Ecell, BMSIT&M	14.05.2024
23	Control: SIMULINK & IoT Challenge	10	Rs.6000/- (Total)	-	Innovation Cell, BMSIT&M	19.04.2024 & 20.04.2024
24	Carbon Zero Challenge 4.0	1	Rs.5,00,000/- (Seed Fund)	-	IIT Madras	25.04.2024
25	KPIT Sparkle 2024 Finale	1	-	-	Pune	05.03.2024 to 07.03.2024
26	Elevate Call – Dostbin Solutions Pvt Ltd	1	Rs.23,00,000/-	-	Karnataka State	07.03.2024
27	Anveshana National Level Competition	25	Rs.50000/- (3rd + Consolation)	-	Incubation Centre, BMSIT&M	23.02.2024
28	ISBR Business School Competition	1	Rs.25000/- (1st Prize)	-	ISBR Business School	10.02.2024
29	Drone Workshop	1	-	7099/-	BICEP	20.01.2024 to 23.01.2024
30	Code Red 24hrs Hackathon	15	Rs.16000/-	-	E-cell, BMSIT&M	13.01.2024 to 14.01.2024
31	BICEP Logo Competition	15	Rs.3000/-	NIL	Innovation Centre, BMSIT&M	06.01.2024

**2.8 Steps Taken for Enhancing Industry Institute Partnerships (15)**

Total Marks 15.00



### **Steps Taken for Enhancing Industry Institute Partnerships**

The objective of industry interaction is to reduce the gap between industry expectation and academic offerings. The industry academia partnership primarily helps to align the curricula with industry needs and also integrates industrial training and other inputs from industry with the teaching-learning process. Students are encouraged to learn new technologies and methodologies used in the industry during this process.

The objective is achieved with the help of the following modes of interaction:

- Curriculum development
- Professor of Practice
- Industry driven projects
- MoU's with industries
- Expert Talk/ Alumni Interactions
- Industry visits
- Partial Delivery

#### **Curriculum Development:**

Experts from industry in the Board of Studies (BoS) offer useful suggestions for curriculum development. The BoS meets frequently and suggests modifications and upgradation in the curriculum keeping in view the needs of industry and ongoing changes in relevant disciplines.

**Table 2.31: Details of the Industry Expert Involved in Curriculum Development**

Sl. No.	Name of the Industry Expert
1	Dr.Mandar Mutualik Deasi,IBM Bengaluru
2	Mr. Seshadri Srinath, Sr. Director, CISCO, Bengaluru.
3	Mr Srinath Bhat, Senior Manager , IBM

**Table 2.32: Industry involvement in the partial delivery of any regular courses for students**

AY	No. of Partial delivery and Allied activities
2024-25	10
2023-24	18
2022-23	7

**Table 2.33 : Partial Delivery/Expert Talk/Alumni Interactions/Open Courses**

Sl.No	Date	Industry Person	Title of Course	Target Students	Curriculum course/Allied Activity

1.	14/06/2025	Ms. Rubini (Organiser & Host - Speaker - Sppyk Talks, Freelance) Mr. Asif Ali (President, Rotaract Bangalore West, FreelanceRotaract )	Principles of Programming Using C	1 <sup>st</sup> Year	Principles of Programming Using C (BPOP23)
2.	06/06/2025	Mr. Nivin Srinivas (Senior Data Engineer, SurveyMonkey)	Cloud Application Development	3rd Year	Cloud Computing (BCS601)
3.	28/05/2025	Mr. Krishna Chaithanya T (Embedded Developer, Stellantis)	Microcontroller	2nd Year	Microcontroller (BCS402)
4.	23.05.2025 -24.05.2025	Dr. Shreekant Jere (Associate Manager, Accenture AI)	Generative AI and Agentic Workflows	3rd Year	Generative AI (BCS608A)
5.	07/12/2024	Mr. Ravi Singh (Software Developer, Commenda)	Python	1st Year and 2nd Year Diploma / COB	Introduction to Python Programming (BPLCK205B/) BPLCK105B
6.	07/12/2024	Mr. Sudarshan V. (Cloud Support Engineer-AWS) Mr. Tarun Tain (Software Developer-SAP Labs)	Cloud Computing	4th Year	Cloud Computing (21CS742)

7.	07/12/2024	Mr. Harshit Chowdhary (Professional, Morgan Stanley)	Full Stack Development Hands-On Session	3rd Year	Full Stack Development (BCS604C)
8.	07/12/2024	Mr. Amogh G (Senior Software Engineer-Open Text)	Object Oriented Programming with JAVA	2nd Year	OOPS with Java (BCS306A)
9.	21/09/2024	Ms. Afra Zaib Fayaz (Staff Consultant - Oracle)  Mr. Kunaal Shivakumar (Associate Software Developer in Test) and Mr. Kevin Mathew (Associate Engineer atPolaris)	As part of First Year Inauguration Function and Induction programme	1st Year	 A photograph of a vertical poster or banner. The text on the poster reads: "Welcome to our college, Andhra University", "BMS School of Engineering & Technology", "Dept. of Computer Science and Engineering", "First Year Student Induction Programme 2024", "Date: 21st September 2024", "Time: 10 AM - 4:00 PM", "Guest of Honour: Dr. S. Venkateswaran, Vice Chancellor, Andhra University". Below the text are several small portraits of people.
10.	19/6/2024 -21/6/2024	Mr. Vijaya Murugan, ICT Academy, Chennai	Programming Essentials in Python	1st Year	Introduction to Python Programming (BPLCK205B/) BPLCK105B

		Gowthami Gowda J S – Cloud Solution Engineer, Oracle  Angeline Hilda W – Cloud Solution Engineer, Oracle  Kamalesh Jayapandiaraj Arumugam – Cloud Solution Engineer, Oracle  Dr. Kamal Peter – Principal Specialist, Oracle Volunteering & CSR India Dr. Ajay Ahuja – Senior Director, Solution Engineering Programs, Oracle JAPAC  Mr. Sai Chaduvula, Regional Account Manager- South India, ORACLE NetSuite Cloud ERP  Archana Perumal, IT Consultant, Oracle Application Lab			
11.	25/04/2024	APEX, Oracle's Low Code Application Development platform	3rd Year	Cloud Computing (21CS742)	
12.	22/01/2024 to 27/01/2024	Mr. Srinivas and Ms. Pragathi, Senior Software Engineers	WEB VR	2nd and 3rd Year	Augmented and Virtual Reality (21CS644)  Introduction to AR/VR (21CS752)

13.	23/12/2023	Mr. Sridhar C (Building Management System Operator, Mphasis)	Series of Dus-min talk by Alumni	2nd Year	
14.	19/12/2023	Mr. P.N. Santosh, CEO & Co-Founder, of CareerLabs	Career Guidance	3rd Year	
15.	09/09/2023	Mr. Vishnuvardhan Y Founder at Exposys Data Labs	Career Guidance	1st Year	
16.	09/09/2023	Mr. Chethan Patel, Associate Software Engineer, Mobileum	Alumni Interaction	1st Year	
17.	22/07/2023	Mr. Ruchir Dubey, Software Development Engineer 3, Whatfix Pvt. Ltd and Mr. Nitin Jain , Senior Engineering Manager Nutanix Pvt. Ltd	Learn Git and Version Control	2nd Year	Version controller with GiT (BCS358C)
18.	12/06/2023 - 16/06/2023	Mr. Majid Shaikh (Technical Director, Zeta coding Innovative solutions)	AI Applications Using R Programming	4th Year	Artificial Intelligence (21CS744) Data Analytics with R (BCS358B)
19.	12/06/2023 - 16/06/2023	Mr. Kushal Lokesh (CTO, NFThing), and Mr. Poorvik D (Blockchain Developer, NFThing)	Ethical Hacking, Blockchain & Web3 Technologies	4th Year	Cyber Security (21CS743) Blockchain Technology (21CS541)

20.	12/06/2023 - 16/06/2023	Mr. Prashanth Kumar (Product Engineer, Kampd Pvt Ltd), Mr. Chethan Patel S N (Intern & Upcoming Software Engineer, Mobileum), Mr. Asif Ali Ahmed R (Software Development Engineer, Money View), and Ms. Roshni Anand (Associate Solutions Engineer, SAP labs)	Machine Learning with Python	2nd & 3rd Year	Data Science and Machine Learning (21CS67)  Data Science and Machine Learning Laboratory (21CSL69A)
21..	12/06/2023 - 16/06/2023	Mr. Kevin Philip (Designer, Mindtree)	Start Earning! - VFX Unleashed: Mastering the Art of Video Editing, 3D Rendering and Visual Effects in 5 days	4th Year	Augmented and Virtual Reality (21CS644)  Introduction to AR/VR (21CS752)
22.	12/06/2023 - 16/06/2023	Mr. Rishav Vishen (Senior Designer, Fundamento)	Gaming and AR/VR Model Designing: A Metaverse	4th Year	Augmented and Virtual Reality (21CS644)  Introduction to AR/VR (21CS752)
23.	27/05/2023	Mr. Ranjith Govindraj, SAP Basis & Net weaver Consultant, HCL Pvt Ltd	Industry Level Intelligence	1st Year	Introduction to Internet of Things (IoT) (BETCK205H) and  Introduction to Cyber Security (BETCK205I)
24.	27/05/2023	Mr. Ramesh Lakshmana, Technical Lead, Rockwell Automation Pvt. Ltd.	Part of Induction Programme	1st Year	

					Indian Knowledge System
25.	07/12/2022	Ms. Divyatha S Prabhu, Software Development Engineer (Ethical Hacking) , Cognizant - Google	Soft Skills For Successful Engineering	3rd Year	Constitution of India and Professional Ethics (21CIP32)
					Universal Human Values I (21UHV33)
					Universal Human Values I (21UHV43)
					Management and Entrepreneurship (21HSS51)
					Project and Finance Management (21HSS61)

					Artificial Intelligence (21CS744)
					Data Science and Machine Learning (21CS67)
26.	07/12/ 2022	Mr. Mayur Vastari, Tech sales manager at Opsramp	Cognitive application of engineering concepts	3rd Year	Data Science and Machine Learning Laboratory (21CSL69A)
					Natural Language Processing (21CS545)
					Deep Learning (21CS731)
					Innovation and Design Thinking (BIDTK158)

					Artificial Intelligence (21CS744)
					Data Science and Machine Learning (21CS67)
27.	07/12/2022	Ms. Divyatha S Prabhu, Software Development Engineer (Ethical Hacking), Cognizant - Google	Cognitive Application of Engineering Concepts	2nd Year	Data Science and Machine Learning Laboratory (21CSL69A)
					Natural Language Processing (21CS545)
					Deep Learning (21CS731)
					Innovation and Design Thinking (BIDTK158)
28.	27/08/2022	Mr. Suresh Bavihalli , Sr Product Engineer , Consilio eDiscovery GmbH, Frankfurt, Germany and Ms. Netravati Patil , Software Developer , Sofha GmbH, Berlin	CAREER IN C PROGRAMMING EXPERT TALK	1st Year	Principles of Programming in C (BPOPS103)

29.	30/07/2022	MR. NAVEEN KUMAR RUKKANNA, Technical Consultant. SENIOR SOFTWARE ENGINEER, Princeton IT SERVICES, Cambridge Technologies	Programming Technology using Computer Language	1st Year	PLC-I and PLC-II  Programming Languages Courses
30.	29/07/2022	MS. PRIYA BHATIA , Data Scientist,iNeuron	APPLICATIONS OF ML IN HEALTH CARE	2nd year	Data Science and Machine Learning (21CS67)  Data Science and Machine Learning Laboratory (21CSL69A)
31.	28/07/2022	Mr. Jawed Raza, Director, Airbizz Solutions	Building on Innovation/Product fit for Market	3rd year	Innovation and Design Thinking (BIDTK158)
32.	16/07/2022	MR. VINAY BHARDWAJ, Software Engineer. CISCO,	Making Successful Career Path in IT industry	2nd Year	Software Engineering (21CS47)  Management and Entrepreneurship (21HSS51)  Agile Technologies and DevOp (21CS642)  Innovation and Design Thinking (BIDTK158)
33.	16/07/2022	Ms. Chaithanya Kumar M, Software consultant, Infinion software solutions	Agile process in IT industry	2nd Year	Agile Technologies and DevOp (21CS642)

34.	12/06/2022 - 16/06/2022	Mr. S N Shashank (Associate Software Engineer, Informatica)	Hands-on Robotics with ROS	4th Year	Robotic Process Automation (21CS643)
35.	13/06/2022 - 17/06/2022	Mr. Saravana K, and Mr. Vishwanath (Web Developer, Bitstreamio Technologies)	Java for Placements	4th Year	Advanced Java (21CS733)

#### Industry offered courses/training

Industry-offered courses and training to enhance curriculum relevance and bridge the skill gap, aligning with outcome-based education criteria by fostering industry readiness, practical knowledge, and employability among students.

#### Professor of Practice

**Bridging Academia and Industry:** To strengthen industry-academia collaboration and promote outcome-based education, the Institute has appointed seasoned industry professionals as **Professors of Practice**. These experts bring cutting-edge industry experience directly into the classroom, enhancing the relevance of academic programs and preparing students for real-world challenges.

**Mr. Harsh Singhal:** Appointed in the Department of Artificial Intelligence and Machine Learning (AIML) / Computer Science and Engineering (CSE), Mr. Singhal brings over 16 years of global experience in Machine Learning (ML), Data Science, and Artificial Intelligence (AI). He has delivered impactful data-driven solutions for top-tier companies like Adobe, Netflix, Glean, Palo Alto Networks, and LinkedIn. His core expertise includes Natural Language Processing (NLP), Computer Vision, and MLOps, with hands-on proficiency in tools such as Python, PyTorch, Keras, Spark, AWS, GCP, Azure, MLFlow, BentoML, Ludwig, ONNX, and Milvus. Mr. Singhal's work spans diverse business domains—fraud detection, recommendation systems, and spam/bot prevention—directly aligning theoretical learning with real-world applications. His mentorship bridges academic rigor with practical implementation, significantly enhancing student readiness for industry roles.

**Dr. Uday Shankar Puranik:** Appointed in the Department of Computer Science and Engineering (CSE). Dr. Puranik serving as Director of AI and Cybersecurity at Theta Dynamics, a global technology firm operating in over 65 countries, Dr. Puranik is a distinguished academic and industry expert. His guest lecture on "Cyber Security: Opportunities and Challenges" was an insightful deep dive into the evolving cybersecurity landscape.

He presented the topic through modular, well-structured segments, integrating real-life case studies, industry best practices, and engaging analogies, effectively blending academic depth with practical relevance. His session helped students gain a holistic understanding of cybersecurity challenges and global opportunities, particularly in the context of emerging technologies.

These appointments reflect the institute's commitment to experiential learning, skill-based education, and continuous industry engagement, ensuring that students are equipped with both foundational knowledge and future-ready competencies.

#### Industry-supported laboratories

Industry-supported laboratories focus on outcome-based education by providing hands-on experience with real-world tools and technologies, fostering innovation, and enhancing students practical and problem-solving skills

Table 2.34 : Industry-supported laboratories

Sl. No.	Lab Name	Supported by	Focus Area	Est. Year
1	SISA Lab	SISA Inc.,	Cyber Security	2025

2	B.S. Narayan Center of Excellence in AI and ML	NVIDIA	AI & ML, Deep Learning	30-9-2022
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**Impact analysis and actions taken thereof****Table 2.35: Impact analysis and actions taken thereof**

Parameters	2024-25	2023-24	2022-23	Impact
Industry Internships	241	229	201	There is a steady increase in the number of industry internships year-over-year. This reflects stronger industry collaboration, enhanced employability focus, and growing trust from industries in student capabilities.
Expert Talk/Partial Delivery/Alumni Interactions	10	18	7	These sessions enriched students' exposure to current practices, technologies, and professional ethics, supporting domain knowledge, problem-solving, and lifelong learning. Partial delivery by experts further ensured curriculum relevance and practical orientation, bridging classroom concepts with real-world applications.
Industry Visits	3	3	3	The number of industry visits has been consistent over three years, indicating a stable effort to provide students with industrial exposure. These visits help students understand real-world work environments, processes, and technologies, complementing classroom learning.
Open Courses	-	9	3	Converted into full curriculum modules, providing flexibility and hands-on skill development opportunities
MoU	4	2	2	The number of MoUs doubled compared to previous years. Reflects active institutional efforts to formalize partnerships that can lead to more internships, projects, and research collaborations.

BOS	2	2	1	BOS participation has been maintained at a higher level since 2023-24. This shows sustained focus on academic governance and curriculum improvement with industry inputs.
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## Student Development

Impact Area	Description
Skill Development	Frequent sessions by industry professionals provide insights beyond textbooks. Over 40 industry sessions, workshops, and expert talks were conducted, featuring professionals from leading companies. These sessions covered key topics like Full Stack Development, Cloud Computing, Web VR, Git, Python, and Agile Methodologies, ensuring that students gained practical, industry-relevant skills.
Improved Employability	Continuous industry engagement—through initiatives such as industry expert talks, alumni interactions, career guidance sessions, and soft skills training—helped students develop a clearer understanding of career pathways, current industry trends, and employer expectations. Sessions like "Soft Skills for Successful Engineering" and logical reasoning training further enhanced students aptitude and interpersonal skills, both of which are essential for successful placements.

## Curriculum Enrichment

Impact Area	Description
Curriculum Revision Input	Industry experts in BOS have provided inputs to update syllabi with emerging technologies and practices resulting in a enriched curriculum.
Industry Projects	Exposure to industry projects have made students more confident about their learnings. Students have gained experience in collaborative project development with industry mentorship and have had opportunities to present their work at industry forums, increasing confidence and visibility.

## Faculty Competence Enhancement through Faculty Industry Internship

Impact Area	Description

Faculty Internships	Most of the Faculty have got opportunities to do Internships in industries which have helped them to be updated on current trends, certifications, and industrial practices.
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## Institutional Development

Impact Area	Description
MoUs, Collaborations and Industry Associated Labs	Formal agreements with industries have led to long-term cooperation and mutual benefits. Few industries have come forward to set up labs in campus. Currently SISA lab is established benefitting students to work in domain of cyber security.

## 3 OUTCOME-BASED ASSESSMENT (120)

Total Marks 120.00

## 3.1 Evaluation of Continuous Assessment: Assignments, Unit Tests, Mid-Term, etc. (10)

Total Marks 10.00



**Continuous Internal Evaluation (CIE)** is designed to assess theoretical knowledge, practical skills, and competencies through two types of assessment methods. They are Internal Assessments (IA) and Comprehensive Continuous Assessment (CCA).

#### Internal assessments

We conduct two Internal Assessment tests. This assessment is 90 minutes written exam that is coordinated by the department on the dates as per calendar of events approved throughout the institute.

BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT																				
(An Autonomous Institute under VTU, Belagavi) Avalahalli, Doddaballapur Road, Yelahanka, Bangalore - 560064																				
Tentative Calendar of Events (CoE) of B.E. IV Semester 2023-24 (EVEN)																				
<b>VISION OF THE INSTITUTE</b>						<b>MISSION OF THE INSTITUTE</b>														
To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.						Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.														
Month	Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Working Days	EVENTS										
APRIL	W-01	14	15	16	17	18	19	20	6	15 Apr.: Commencement of BE IV Semester classes										
	W-02	21	22	23	24	25	26	27	5	15-16 Apr.: Course Registration for IVSemester										
	W-03	28	29	30					2	17 Apr.: Submission of student list to CoE and Dean(A)										
	W-04	5	6	7	8	9	10	11	4	01 May.: May Day										
	W-05	12	13	14	15	16	17	18	6	10 May.: Basava Jayanthi										
	W-06	19	20	21	22	23	24	25	5	15 May.: Announcement of Continuous Comprehensive Assessment(CCA) - CCA1 and CCA2										
	W-07	26	27	28	29	30	31		5	24 May.: IA 1 QPs Scrutiny										
MAY		29-31 May.: Internal Assessment 1																		
	W-08	2	3	4	5	6	7	8	5	03-05 Jun.:Evaluation of CCA1										
	W-09	9	10	11	12	13	14	15	6	07 Jun.: SMS Dispatch of Attendance status and IA-1 Marks										
	W-10	16	17	18	19	20	21	22	4	10 Jun.:Finalization of CCA1										
	W-11	23	24	25	26	27	28	29	6	10 Jun.:Faculty Feedback-1 by Students										
	W-12	30							0	14-15 Jun.: Utsaha										
	W-13	1	2	3	4	5	6	7	6	17 Jun.: Bakrid										
	W-14	8	9	10	11	12	13	14	5	24-26 Jun.:Evaluation of CCA2										
	W-15	15	16	17	18	19	20	21	5	01 Jul.:Finalization of CCA2										
		08-12 Jul.: Conduction of Lab Internals in regular Lab slots									10 Jul. : IA 2 QPs Scrutiny									
		15-18 Jul.: Internal Assessment 2									15-18 Jul.: Internal Assessment 2									
		24 Jul.: SMS Dispatch of Attendance status and IA-2 Marks									17 Jul.: Muharram									
SEMESTER END EXAMINATIONS																				
TENTATIVELY FROM 03-08-2024 ONWARDS																				
Variations in dates of events if any for valid reasons will be notified by the concerned																				
COE-COORDINATOR			CONTROLLER OF EXAMINATIONS			DEAN ACADEMICS			PRINCIPAL											
BMS Inst. of Tech. & Mgmt Doddaballapur Main Road, Avalahalli, Yelahanka, Bengaluru-560064			BMS Inst of Technology & Mgmt. BMS Institute of Technology & Management Avalahalli, Yelahanka, Bengaluru - 560 064 Doddaballapur Main Road Avalahalli, Yelahanka, Bengaluru-560064			Professor & Dean - Academics BMS Inst of Technology & Mgmt. BMS Institute of Technology & Management Avalahalli, Yelahanka, Bengaluru - 560 064 Doddaballapur Main Road Avalahalli, Yelahanka, Bengaluru-560064			PRINCIPAL											

Fig 3.1.1: Calender of Events

Internal question paper setting will be done by the course coordinators who are handling the courses. Since the department of CSE has more than one section, the course coordinators of all the sections will discuss the portion coverage and modules from which the questions can be asked. Based on this one course coordinator will prepare the question paper which will be submitted to other course coordinators for verification. Each question is designed with explicit mapping to Course Outcomes (COs). Questions are also framed to reflect varying cognitive levels as per Bloom's taxonomy. While preparing the questions course coordinator will ensure that the choice-based questions are mapped to the same course outcomes.

Once the question paper is verified by all the course coordinators, the question paper will be submitted to the internal scrutiny committee. This committee comprises the head of the department, programme coordinator and module coordinators. The scrutiny committee will check the question paper for its adherence to the guidelines. If there is any variation in the course outcomes or Blooms levels and in framing the questions, the scrutiny committee will give the question paper back to the course coordinator for incorporating the correction. Once again, the corrected question paper will be verified by the committee before sending for final printing of the question paper.



**Programme: B E – Computer Science and Engineering**

Term :	2023-24 Even semester	Course Name:	Theory of Computation
DATE :	09 /07/2024 Time: 9.30 AM – 11.00 AM	Course Code:	21CS68
Semester: VI	Max Marks: 40	Course Coordinators:	<ul style="list-style-type: none"> <li>▪ Prof. Brunda S</li> <li>▪ Dr. HemaMalini B H</li> <li>▪ Dr. Thippeswamy G</li> </ul>

**Internal Assessment – II**

*Draft - I*

Max. Marks: 40

Q. No.	Questions	Blooms Levels (L1 to L6)*	CO	Marks																														
1.	Prove Kleene's theorem - Any language that can be defined with a regular expression can be accepted by some FA and so is regular. OR	L2	CO1	10																														
2.	Construct the e-NFA for the regular expression: a) $0 + 01^*$ b) $10 + (0+11) 0^*$	L3	CO2	10																														
3.	State and prove Pumping Lemma for regular languages. <i>change the question</i>	L2	CO2	10																														
4.	Prove that $L = \{a^n b^n \mid n \geq 0\}$ is not regular.	L2	CO3	10																														
5.	Minimize the following DFA by applying the Table Filling algorithm where A is the start state. The states C, F and I are the final states.  <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>δ</td><td>0</td><td>1</td></tr> <tr> <td>→A</td><td>B</td><td>E</td></tr> <tr> <td>B</td><td>C</td><td>F</td></tr> <tr> <td>*C</td><td>D</td><td>H</td></tr> <tr> <td>D</td><td>E</td><td>H</td></tr> <tr> <td>E</td><td>F</td><td>I</td></tr> <tr> <td>*F</td><td>G</td><td>B</td></tr> <tr> <td>G</td><td>H</td><td>B</td></tr> <tr> <td>H</td><td>I</td><td>C</td></tr> <tr> <td>*I</td><td>A</td><td>E</td></tr> </table> OR	δ	0	1	→A	B	E	B	C	F	*C	D	H	D	E	H	E	F	I	*F	G	B	G	H	B	H	I	C	*I	A	E	L3	CO2	10
δ	0	1																																
→A	B	E																																
B	C	F																																
*C	D	H																																
D	E	H																																
E	F	I																																
*F	G	B																																
G	H	B																																
H	I	C																																
*I	A	E																																

**Fig 3.3.1: Scrutiny of CIE Question Paper (Page-1)**

6.	Define CFG with CFG to specify: <i>Design CFG following</i> for the a) $L = \{a^n b^m \mid n \geq 0\}$ b) All strings over $\{a, b\}$ that are even and odd palindromes.	L3	CO3 <del>✓✓✓</del>	10
7.	Define Leftmost derivation, Rightmost derivation and parse tree. Consider the grammar: $S \rightarrow AbB$ $A \rightarrow aA \mid \epsilon$ $B \rightarrow aB \mid bB \mid \epsilon$ $D \rightarrow a \mid \epsilon$ Obtain LMD, RMD and parse tree for the string "aabab". OR	L3	CO3 <del>✓✓✓</del>	10
8.	Define ambiguity. Consider the grammar $E \rightarrow E+E \mid E^*E \mid (E) \mid id$ Find leftmost, rightmost derivations and parse tree for the string $id+id^*id$ , show that the grammar is ambiguous. Build the parse trees.	L3	CO3 <del>✓✓✓</del>	10
<b>Course Outcomes (COs)</b>				
CO1:	Understand the concept of abstract machines and their power to recognize the languages.			
CO2:	Apply the finite state machines for modelling and solving computing problems.			
CO3:	Design context free grammars for formal languages.			
CO4:	Analyze difference between decidability and undecidability.			
CO5:	Achieve the proficiency with mathematical tools and formal methods.			
<b>Bloom's Level</b>				
Remember (L1)	Understand (L2)	Apply (L3)	Analyze (L4)	Evaluate (L5)
1. <i>B. Srinivas</i>	2. <i>H. B.</i>	3. <i>T. Sathish</i>	4. <i>W.T. 2024</i>	5. <i>BoE Chairman</i>
Course Coordinator (s)	Module Coordinator (s)	Program Coordinator (s)	BoE Chairman	
3. <i>John Jacob</i>				

Fig 3.3.2: Scrutiny of CIE Question Paper (Page-2)



JA -2

CIE Question Paper Review FormatCourse Name: TOCCourse Code: S1C268

1. Is the mapping of question to the Bloom's level specified in the question paper correct? If not, suggest the appropriate Bloom's level.

Question No	1a	1b	2a	2b	3a	3b	4a	4b	5a
If not correct, specify L1/L2/L3/L4/L5/L6	L2	L3	L3	L2	L2	L3			

5b	6a	6b	7a	7b	8a	8b
	L3		L3		L3	

2. Is the mapping of question to the CO specified correct or not? If not, suggest the modifications, in mapping to correct CO

Question No	1a	1b	2a	2b	3a	3b	4a	4b	5a
If not correct, specify the correct CO	CO1		CO1		CO1		CO1		

5b	6a	6b	7a	7b	8a	8b

Comment on CO Coverage: CO1, CO2 & CO3 Covered.

3. Your comment on coverage of Bloom's Level in the CIEs

Most of the Bloom's level are L3 - L2  
It is fine for this course.

4. Grade the overall quality of the question paper on a scale of 1 - 5 (1 being the minimum and

Fig 3.3.3: Scrutiny Review form for CIE Question Paper (page-1)



5. Overall Suggestion: Bloom's level & Course Outcomes to be changed as per the discussion.

Dr. S. S. Kumar  
Name & Signature of  
Reviewer-1  
3/7/2024

V. R. P. R.  
Name & Signature of  
Reviewer-2  
Dr. Vidya R.

Signature of the BOE Chairman

3/7/2024  
Date of Review: 3/7/2024

Fig 3.3.4: Scrutiny Review form for CIE Question Paper (page-2)

The second component of the continuous internal assessment is the comprehensive continuous assessment (CCA) that is carried out through various alternate assessment tools and is done throughout the semester. The various alternate assessment tools used in the department are:

- Course Projects
- Simulation using modern tools
- Poster Presentation
- Case Study Analysis
- Tool Exploration
- Assignments
- Internal Hackathon
- MOOC Courses
- Paper writing (Research/Review)

For each assessment tools there is a guideline provided by the institute and the course coordinator follows the guidelines and prepare a rubric for evaluation. The evaluation rubrics will be presented to the programme assessment committee (PAC). The PAC will suggest any modification if required.

Apart from the regular IA Tests and CCAs, IPCC courses have practical components and will be conducted through dedicated laboratory sessions on a weekly basis. The internal evaluation of these practical components will be done through continuous internal evaluation through tools such as write up in the record book, execution of experiment etc on a weekly basis. These marks will be recorded weekly in the practical lab record. After completing all the experiments course coordinator will conduct a CIE practical test. The weighted sum of CIE practical and CIE practical test will be added to the theory component for overall internal evaluation.

The distribution of marks for CIE and the weightage for each component varies for different types of courses, such as Integrated Professional Core Courses (IPCC) which includes theory and laboratory components, Professional Core Courses, Engineering Science Courses etc. The CIE and CCA Pattern of each type of course is indicated in the table below.

#### Weightage of marks for each component of Integrated Professional Core Courses (IPCC)

Evaluation Type		Internal Assessments	Marks	Evaluation Details
Theory Component	CIE- IA Tests	CIE-Test-1 (1.5 hr)	40	The sum of the two internal assessment tests will be 80 Marks and the same will be scaled down to 20 Marks.
		CIE-Test-2 (1.5hr)	40	
	CIE-CCA (Comprehensive Continuous Assessment)	CCA	10	Any one assessment method can be used from the list appended below. This marks is scaled down to 5
	Total CIE Theory		25	

Practical Component	CIE - Practical	30	15		
	CIE Practical Test	20	10		
	Total CIE Practical		25		
Total CIE			50		

**Weightage of marks for each component of Professional Core Courses (PCC) / Engineering Science Courses (ESC) that may carry 04, 03 and 02 Credit**

Evaluation Type		Internal Assessments (IAs)	Test/ Exam Marks Conducted for	Marks to be scaled down to	Evaluation Details
Theory Component		CIE-IA Tests	CIE-Test 1 (1.5 hr)	40	The sum of the two internal assessment tests will be 80 Marks and the same will be scaled down to 30 Marks.
			CIE-Test 2 (1.5 hr)	40	
		CIE - CCAs	CCA	20	Any Two assessment methods can be used from the list. If it is project-based, one CCA shall be given.
		Total CIE Theory		50	

**Weightage of marks for each component of Non IPC Courses that carries one Credit and question are of MCQ type**

Evaluation Type	Marks	Evaluation Details
CIE-Test 1 (1 hr)	40	
		The question paper pattern for this course shall be an MCQ of 1 or 2 Marks (s). The questions with 2 Marks can be framed based on a higher Blooms level. The sum of the two internal assessment tests will be 80 Marks, and the same will be scaled down to 40 Marks.
CIE-Test 2 (1 hr)	40	
CCA	10	
Total CIE		50

**Weightage of marks for each component of Professional Core Course Laboratory (PCCL) / Ability Enhancement Course Laboratory (AEC) that carries one credit.**

Evaluation Type		Internal Assessments (IAs)	Test/ Exam Marks Conducted for	Marks to be scaled down to	Evaluation Details
Continuous Internal Evaluation		CIE - Practical	30	30	Each laboratory experiment is to be evaluated for 30 Marks using appropriate rubrics.
		CIE - Practical Test	50	20	One test after all experiments is to be conducted for 50 Marks and to be scaled down to 20 Marks.
		Total CIE		50	

To ensure the quality of the questions and the appropriateness of mapping with course outcomes, a rigorous end to end quality assurance process is adopted at the institution level. The correctness of the course outcome statements with respect to the course structure and its objectives is clearly monitored by the PAC committee. An approved set of CO statements will be published in the syllabus. In the question paper, the course coordinator ensures that each question is directly maps to anyone of course outcomes.

For example, COs defined for the course **Theory of Computation(21CS68)** is

<b>CO1:</b>	Understand the concept of abstract machines and their power to recognize the languages.
<b>CO2:</b>	Apply the finite state machines for modelling and solving computing problems.
<b>CO3:</b>	Design grammars, PDA, Turing machines for formal languages.
<b>CO4:</b>	Analyze the relationship of language classes, grammar and automata

Below we have provided two questions from IA 3. Question 6 (Q.No a and b) are mapped to CO2 and CO3 respectively, as one question is at application level to construct the Finite State Machines and another is to design the languages. Same with the Question No 7.

<b>6.a</b>	State pumping lemma for regular language. Validate that the language $\{a^n b^n   n > m\}$ is a non regular language.	L3	CO2	4M
<b>b</b>	Construct $\epsilon$ -NFA for the regular expression $(a^* + b^* + c^*)$ .	L3	CO3	6M
<b>7.a</b>	Write CFG for the following languages: i) $L = \{\text{set of all non-palindromes over } \{a,b\}\}$ ii) $L = \{w : w \in \{a,b\}^*\text{ with } N_a(w) = N_b(w)\}$	L3	CO3	4M
<b>b</b>	Consider the following grammar G, $S \rightarrow A B$ $A \rightarrow aA \epsilon$ $B \rightarrow bB B \epsilon$ Obtain: i) LMD ii) RMD for string "00101"	L4	CO3	6M

Every question in internal question papers has direct mapping which follows a similar process as explained in the example above. This ensures the appropriateness of the CO mapping with each question. This will help course coordinator to evaluate course outcomes through the marks awarded for the answers in IA tests. We will ensure that all the course outcomes are mapped to at least one question in first or second internals as well as through AATs. An assessment of COs through IA marks and CCA marks will give the direct attainment of the COs and the appropriate CO-PO-PSO mapping matrix will provide each CO's contribution to attainment of POs and PSOs.

Some of the PO-PSO mapping through COs are not directly assessed through IA question papers but through CCAs. For example for the course Theory of Computation the CO-PO-PSO mapping is shown below:

Department of Computer Science and Engineering, BMSIT & M, Bengaluru 21CS68-Theory of Computation	Course Type:				PCC									
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
<b>CO1</b> Make use of the concept of abstract machines and their power to recognize the languages.	2	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>CO2</b> Apply the finite state machines for modelling and solving computing problems.	2	0	1	0	1	0	0	0	0	0	0	0	1	0
<b>CO3</b> Design context free grammars for formal languages.	2	0	0	0	1	0	0	0	0	0	0	0	1	0
<b>CO4</b> Analyse difference between decidability and undecidability.	2	0	0	0	0	0	0	0	0	2	2	0	0	0
<b>CO5</b> Design the automata using the JFLAP Tool	0	0	0	0	3	0	0	0	0	0	0	0	1	0

Apart from department level mechanism to assess the quality of the question papers, we also ensure institute level Internal Quality Assurance Cell (IQAC) conducts academic audits twice an academic year with internal evaluators and external evaluators. IQAC designated members which includes internal and external members also reviews course files bi-annually to ensure quality.

The CIE – IAs which are conducted as per the calendar of events will be evaluated post examination within the timelines as prescribed in the calendar of events. Course coordinator will prepare a scheme and solution for the evaluation of the answer scripts. A screen shot of sample scheme is shown here:

<b>6</b>	<p>Step 1: Remove <math>\epsilon</math>-productions</p> <ul style="list-style-type: none"> <li>Replace nullable variables in productions.</li> </ul> <p>Step 2: Remove unit productions</p> <ul style="list-style-type: none"> <li>Convert <math>A \rightarrow B</math> into direct mappings.</li> </ul> <p>Step 3: Convert rules to binary form</p> <ul style="list-style-type: none"> <li>Ensure all right-hand sides have at most <b>two non-terminals</b>.</li> </ul> <p><b>Example Conversion:</b> Given:  <math>S \rightarrow ASB   \epsilon</math>  <math>A \rightarrow aAS   a</math>  <math>B \rightarrow SbS   A   bb</math></p> <p>By using the procedural steps ,we obtain the CNF:</p> <p><math>S \rightarrow ASB</math>  <math>A \rightarrow aX</math>  <math>X \rightarrow AS   \epsilon</math>  <math>B \rightarrow YS   bb</math>  <math>V \rightarrow S   A</math></p>	03
		07

The scheme and solutions will be discussed with students prior to awarding the marks. Students will also be informed to check the distributions of the marks as per the scheme post giving the answer scripts. This process will ensure a fair and unbiased evaluation process. Post evaluation the course coordinator will inform the students how to write the answers to gain the maximum marks

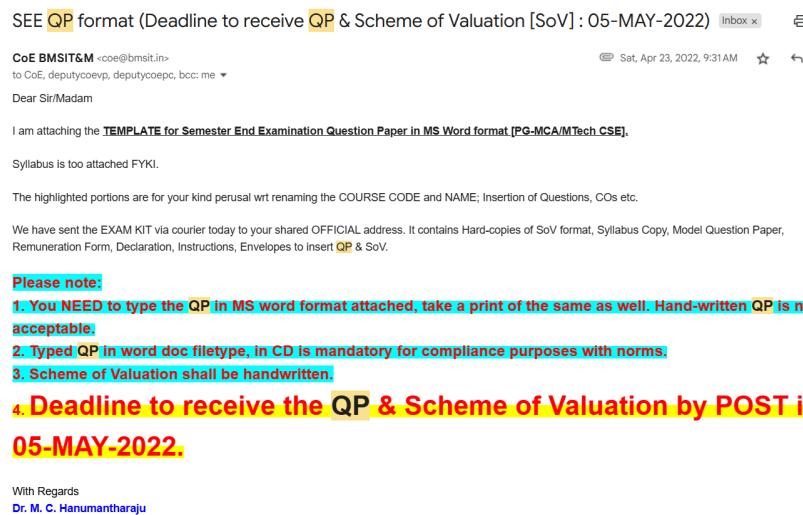
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**3.2 Evaluation of the Semester End Exam (SEE) Question Paper (10)**

Total Marks 10.00



The Semester End Exam (SEE) is a multi-stage process coordinated and controlled by the Controller of Examinations (CoE). The SEE process involves the planning stage, conduction stage, valuation and publication of results and post publication activities. In the planning stage the Board of Studies (BoS) will select and approve the Board of Examiners (BoE). Once BoE members are finalized, the BoE will identify the internal and external question paper setters. From CoE, directions will be sent to both internal faculty members and faculty members from other institutions. Paper setters receive directions from CoE specifying CO-wise weightage, Bloom's taxonomy distribution, Formatting rules etc along with Syllabus of the course.



**Fig: 3.2.1: Copy of the mail indicating the QP submission Deadline**

To maintain the confidentiality of the question paper, the soft copy of the QP is encrypted with passwords and the hardcopy of the papers are directly mailed to the CoE. The BoE committee (BOE Chairman, external and internal reviewers) review the papers for various factors such as Constructive Alignment to COs, Bloom's levels, ambiguous language, typos etc. The BoE will be planned on a specific day in a dedicated room, preferably examination control room where members together will scrutinize the question papers and make necessary corrections. If the quality of the paper is below certain standards, the question paper will be rejected. The thoroughly proof read QPs will be stored in the strong room for delivery on the day of examination. For one course at least five QPs will be collected as per above procedure.

The conduction of the examination includes setting the timetable and assigning the duties of room superintendent, deputy chief superintendent (DCS), QPDS coordinators etc. During the day of examination, the chief superintendent (CS) of the examination will pick one among these five QPs and send for printing in a confidential Question paper Delivery System (QPDS) room. QP will be printed by the QPDS coordinators in the presence of CoE and chief superintendent. Once paper is printed, it will be handed to the deputy chief superintendent for giving to the room superintendent. Once the examination is completed the answer scripts will be collected by the relieving superintendents and they will check for all completeness of the student information, course related information etc on the answer script. The collected scripts are packed and bundled in a sealed cover and will be kept in the strong room. Later this will be sent for the valuation section.

The valuation section will scan the answer scripts and remove the identity of the student and give a specific coding for each script. The scanned answer script is uploaded to digital valuation system. The scheme of evaluation will be prepared by one of the course coordinators and will be sent to the BoE chairman for approval. The BoE will select evaluators. The valuation will be done in a specific place where all the evaluators will assemble. For a particular course, all the evaluators will sit on the first day for checking appropriateness in the scheme. Once agreed upon the scheme, the evaluation will be done, and the marks will be entered directly into the software of the digital valuation system. The entry into the system would avoid any human error related to totalling of the marks, picking the highest marks if student answered both choices etc. In the valuation, the answer scripts are grouped into packets that contains 10 scripts. From each packet, few of the scripts will be sent for moderation. Moderation will be done by faculty members who handled the course multiple times and who has long years of experience. If there is a major difference in the marks by valuator and moderator, the script will be sent for third valuation.

	<b>USN</b> <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr><td>I</td><td>B</td><td>Y</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>	I	B	Y									
I	B	Y											
<b>BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT</b> <small>(An Autonomous Institute affiliated to Visvesvaraya Technological University, Belagavi)</small>													
<b>SEMESTER END EXAMINATION QUESTION PAPER</b>													
<b>Fourth Semester B.E. Degree Examination</b> <small>Regular / Make-up / Arrears / Supplementary</small> <b>DESIGN AND ANALYSIS OF ALGORITHM</b>													
Time: 3 hrs. <span style="margin-left: 100px;">Max. Marks: 100</span>													
<i>Note:</i> <ol style="list-style-type: none"> <li>1. Part A carries 20 marks. Answer all TWENTY full questions, by choosing ONE Correct option.</li> <li>2. The correct option is to be shaded in the OMR sheet provided within the Booklet.</li> <li>3. There is no Negative Marking, but Shading more than 1 option, will lead to rejection of the particular question for scoring.</li> <li>4. Part B carries 80 Marks. Answer FIVE full questions, choosing ONE full question from each module.</li> </ol>													
<b>Q. No</b>	<b>PART- A Multiple Choice Questions</b>			<b>Marks</b>									
<b>01</b>	Floyd Warshall Algorithm can be used for finding _____ a) Transitive closure b) Minimum spanning tree c) Topological sort d) Single source shortest path			<b>01</b>	<b>CO1, K1</b>								
<b>02</b>	Bellmann ford algorithm provides solution for _____ problems. a) Network flow b) Single source shortest path c) All pair shortest path d) Sorting			<b>01</b>	<b>CO1, K1</b>								
<b>03</b>	What approach is being followed in Floyd Warshall Algorithm? a) Linear Programming b) Backtracking c) Greedy technique d) Dynamic Programming			<b>01</b>	<b>CO1, K1</b>								
<b>04</b>	Which of the following sorting algorithms is the fastest for sorting small arrays? a) Quick sort b) Shell sort c) Insertion sort d) Heap sort			<b>01</b>	<b>CO1, K1</b>								
<b>05</b>	What is the advantage of selection sort over other sorting techniques? a) It is faster than any other sorting technique b) It is scalable c) It works best for inputs which are already sorted d) It requires no additional storage space			<b>01</b>	<b>CO2, K1</b>								
<b>06</b>	Which of the following method is used for sorting in merge sort? a) partitioning b) merging c) exchanging d) selection			<b>01</b>	<b>CO2, K1</b>								

Page 1 of 5

**Fig: 3.2.2: Copy of Scrutinized SEE Question Paper (page-1)**

	elements in the array are unique and analyse the algorithm using the steps followed in the general plan.		
<b>OR</b>			
2a.	Narrate the steps for the general plan of mathematical analysis of recursive algorithms with an example. <b>Illustrate</b> the algorithm to compute number of digits in a binary number and analyse the algorithm using the steps followed in the general plan.	8	CO1, K2
2b.	Define algorithm. There are limitless sea of problems one encounters in computing, <b>explain</b> the important problems types that are encountered while designing algorithms.	8	CO1, K2
<b>Module - 2</b>			
3a.	<b>W.P. Demonstrate</b> Build an algorithm to search a key element in an array using divide and conquer method by taking a suitable example. Analyse the algorithm and write its time complexities.	8	CO2, K3
3b.	<b>Apply</b> merge Sort algorithm to sort the following elements: 8, 3, 2, 9, 7, 1, 5, 4. With a neat diagram, show how the elements are sorted. Write the merge sort algorithm and give its best-case, average-case and worst-case time complexities.	8	CO2, K3
<b>OR</b>			
4a.	Consider the following array of integers: 65, 70, 75, 80, 85, 60, 55, 50, 45. Apply Quick sort method to sort these elements. Write an algorithm using divide and conquer technique to implement Quick Sort. <b>Analyze</b> the algorithm, use asymptotic notations to derive its average-case time complexities	8	CO2 K4
4b.	Define topological sorting. <b>Construct</b> source removal algorithm and identify the topological ordering for the given DAG.	8	CO2, K3
<b>Module - 3</b>			
5a.	<b>Solve</b> the Greedy Knapsack problem where M=10, n=4, P={40,42, 25,12}, W={4,7,5,3}. Discuss its time complexity.	8	CO2, K3
5b.	Using Kruskal's algorithm, <b>construct</b> the minimum cost spanning tree for the graph given in the below graph. Show every step in constructing the MCST.	8	CO2, K3
6a.	<b>W.P. Demonstrate</b> OR <b>Build</b> Prims's algorithm to Compute the minimum cost spanning tree for the graph given below. Show every step in constructing the MCST.	8	CO3, K3

Fig: 3.2.3: Copy of Scrutinized SEE Question Paper (page-3)



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT  
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Phone: 080-28561576  
Email: principal@bmsit.in

Date: 20/7/23

**FORM-1**

**SEMESTER END EXAMINATION QUESTION PAPER SCRUTINY**  
July/ August - 2023

Dept of ....CSE/ISE/ATML.....

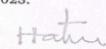
Course Code KCS46..... Course Name DAA.....

The meeting of Board of Examiners for the above mentioned course was scheduled on 20/7/23.....at BMS Institute of Technology and Management, Bengaluru - 560064 and details of BoE members are as follows:

The Board of Examiners meeting will be held in CIE Room.

Sl. No.	Person	Designation	Signature
1.	Dr. Pushpa SK.	Prof & HOD	SKP
2.	Dr. Kumaraswamy	Prof & HOD.	SKumaraswamy
3.	Dr. Sudarshanam P	Assistant Prof.	P Sudarshanam
4.			
5.			
6.			

Date : 20/7/23  
Time : 8:30 AM  
Agenda: Scrutinizing the Question papers of SEE July/ August - 2023.

   
BoE Chairman CoE

**Fig: 3.2.4: Copy of Scrutinized SEE Question Paper Form**



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT  
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Phone: 080-28561576  
Email: principal@bmsit.in

Date: 20/7/23

**FORM-3**

**SEMESTER END EXAMINATION QUESTION PAPER SCRUTINY**  
July/ August - 2023

CHECK LIST AFTER SCRUTINY OF QUESTION PAPER						
Sl. No.	Scheme and Structure If Yes, Please specify General or Detailed	QP Accepted without any correction (✓)	QP Accepted with minor Correction (✓)	QP Accepted with major Correction (✓)	QP Rejected with Reasons	Rating of Quality of Question Papers
1	Detailed			✓		3
2	✓		✓			4
3	✓		✓			4
4	✓		✓			4
5	✓			✓		3

RATING : 5-VERY GOOD, 4-GOOD, 3-AVERAGE, 2-POOR

    
BoE Internal BoE External BoE Chairman

**Fig: 3.2.5: Copy of the checklist for Scrutinizing SEE question paper**

Post valuation, the results are announced, semester wise. The students will be given a chance for revaluation or photocopy with revaluation to improve his/her results. This ensures the transparency and fairness of the SEE process.

---

**3.3 Evaluation of Laboratory Work and Workshop (Continuous and SEE) (10)**

Total Marks 10.00



The laboratory course assessment is divided into two components

- 1. Continuous Internal Evaluation (CIE)**
- 2. Semester End Examination (SEE).**

### **1. Continuous Internal Evaluation (CIE)**

In CIE, there are two components, one is **weekly assessment** of the students' performance in the laboratory and the second component is the **Internal Assessment Test**.

#### **a. The weekly assessment**

carried out during the assigned laboratory hours as per the time table and will be done by course coordinators in the lab. Typically for every lab session there will be two course coordinators assigned. Every week the student will be prepared to conduct at least one experiment as per syllabus and as directed by the course coordinator. In the weekly assessment there are four components, they are **conduction, observation, lab record and viva**. In the conduction stage a student is evaluated for writing the logic of the program, execution of the program successfully with varied input, analysis of the results etc.,

The results of experiments are initially noted in the **observation book**. This will be signed by the course coordinators on a weekly basis. Further this will be used for recording the results in the **laboratory record book**. Student will also be asked for their knowledge on the experiment through **viva voce**. Apart from the regular experiments as prescribed by the syllabus, students are also given the opportunity to conduct an open-end experiment to promote critical thinking, creativity, and independent problem-solving. Open-ended experiments provide students with a problem statement or objective and allow them to explore multiple methods to achieve a solution. Student will perform such experiments by themselves either in the lab or using simulation tools and record the results in the laboratory record book. All the experiments are evaluated weekly and the general rubric for evaluation is indicated in the below table.

The rubrics for evaluation of laboratory experiments:

Parameter	Excellent	Very Good	Good	Satisfactory
Fundamental Knowledge (4) (PO1)	The student has well depth knowledge of the topics related to the experiment (4)	Student has good knowledge of some of the topics related to experiment (3)	Student is capable of narrating the answer but not capable to show in depth knowledge(2)	Student has not understood the concepts clearly (1)
Design Of Experiment (5) (PO2 & PO3)	Student is capable of discussing more than one design for his/her problem statement and capable of proving the best suitable design with proper reason (5)	Student is capable of discussing few designs for his/her problem statement but not capable of selecting best(4)	Student is capable of discussing single design with its merits and de-merits(3)	Student is capable of explaining the design (1-2)
Implementation (8) (PO3 & PO8)	Student is capable of implementing the design with best suitable algorithm considering optimal solution. (7-8)	Student is capable of implementing the design with best suitable algorithm and should be capable of explaining it (5-6)	Student is capable of implementing the design with proper explanation.(3-4)	Student is capable of implementing the design. (1-2)
Result &Analysis (5) (PO4)	Student is able to run the program on various cases and compare the result with proper analysis. (5)	Student will be able to run the program for all the cases.(4)	Student will be able to run the code for few cases and analyze the output.(3)	Student will be able to run the program but not able to analyze the output.(1-2)
Demonstration (8) (PO9)	The lab record is well-organized, with clear sections (e.g., Introduction, Method, Results, Conclusion). Transitions between sections are smooth. (7-8)	The lab record is organized, with clear sections, but some sections are not well-defined. (5-6)	The lab record lacks clear organization or structure. Some sections are unclear or incomplete. (3-4)	The lab record is poorly organized, with missing or unclear sections. (1-2)

#### **b. The internal assessment test**

carried out towards the end of the semester after students complete all the experiments as per the syllabus. Internal assessment will be conducted for each student for a prescribed time of two to three hours. During this test, students will submit the lab record and observation book for the final verification. A set of experiments will be kept as questions for the IA test. Students will randomly pick one of the experiments. The department will provide the answer booklet for the students, and they are expected to write the following.

1. Title of the experiment

2. Aim of the experiment
3. Algorithm
4. Circuit Diagram/Programs etc
5. Output

The marks will be awarded to three different components such as writeup, conduction and viva-voce. The usual pattern of marks assigned to each component is 15% of the marks for writeup, 70% of the marks for conduction and 15% of the marks for viva-voce.

## **2. The Semester End Examination (SEE)**

for the laboratory course will be conducted according to the timetable issued by the Controller of Examinations. The duration of the examination is typically three hours, with a maximum of 12 students per batch. Up to three such batches may be scheduled in a single day. The examination will be evaluated by two examiners—one internal and one external. The SEE process is like that of the Internal Assessment (IA) test. A set of experiments will be provided as questions, from which each student will randomly select one. The institute will supply the answer booklet, and students are required to document the experiment title, objective, Algorithm or program, expected outcome, and actual results.

The marks are also awarded like IA test pattern i.e. 15% of the marks for write-up, 70% of the marks for conduction and 15% of the marks for viva-voce.

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### **3.4 Evaluation of Industrial Training/ Internship (Continuous and SEE) (10)**

Total Marks 10.00



In our curriculum, internships serve as a critical bridge between academic theory and professional practice. The evolving demands of the global workforce highlight the need for engineers to be not only technically proficient but also prepared for industry challenges. Mandated by the affiliated university, internships are an essential component of experiential learning designed to expose students to real-world engineering environments beyond classroom simulations. They help sharpen practical skills, familiarize students with industrial protocols, ethics, and practices, and enhance employability by developing professional behaviour, interdisciplinary collaboration, and technical communication.

In the curriculum, we have two types of internships, they are Research Internship and Industry Internship which needs to be carried out for 24 weeks during their final year. Internship process follows the implementation and assessment as prescribed by the university. The overall process includes the allocation of a faculty guide to each student, who is responsible for supervising and evaluating the internship. The internship is executed in an industry or research setting. Students are required to maintain documentation in the form of a daily diary, recording tasks performed, skills acquired, and observations made, as well as an internship report that provides a comprehensive summary of the work completed, learning outcomes, and industry relevance. Evaluation is conducted using predefined rubrics and is based on the student diary, internship report, and final presentation.

The internship assessment is conducted in two phases and each with defined components and evaluation criteria.:

**1. Continuous Internal Evaluation (CIE)**

**2. Semester End Examination (SEE)**

**1. Continuous Internal Evaluation (CIE)**

The guide along with internal assessment team will do **Continuous Internal Evaluation (CIE)**. The guide supervises and evaluates the student's internship activities throughout the internship period. Students are required to maintain a daily work diary, recording tasks, skills acquired, and observations, and submit weekly entries to the guide. The guide must verify and sign the diary at least once a week. The CIE includes a mid-term review that evaluates the work diary for technical depth, problem-solving ability, and application of skills. Additionally, feedback from the industry mentor is collected, assessing the student's professionalism, initiative, and technical competence. The overall evaluation during CIE is based on qualitative criteria including professional behavior, punctuality, technical knowledge, innovation mindset, communication skills, teamwork, ethical conduct, leadership, and commitment to lifelong learning. Evaluation follows a rubric provided by the academic authorities. For industry internships, adherence to safety regulations of the host organization is mandatory. Internships must be carried out in reputed companies, MSME-registered organizations, government or industry bodies, R&D institutions, or research/startup centers with national or international recognition. Students unable to secure internships must complete Skill Enhancement Courses, equivalent in credits, through the university portal. Students placed through campus recruitment must undergo mandatory organizational training, which will be treated as an internship.

The evaluation is done in three phases:

- **Internal Review 1**
- **Internal Review 2**
- **External Review 2**
  
- **Internal Review 1**

The rubrics for evaluation are indicated below:

**INDUSTRY / RESEARCH INTERNSHIP (21INT82)**

**RUBRICS FOR INDUSTRY INTERNSHIP (CIE)**

**Review 1**

**TO BE EVALUATED BY THE INTERNAL COMMITTEE for 20 Marks**

(Committee consisting of the Head of the concerned department and THREE faculty members of the Department,  
one of whom shall be the Guide)

Performance Indicator	Maximum Marks	HIGH	MODERATE	LOW
Industry Internship daily report (PO 9)	10	The diary is exceptionally detailed, well-organized, and comprehensive. Entries are consistently on time, with complete details of the industry internship, clear documentation of tasks, and use of relevant evidence (e.g., visuals, charts). (7-10)	The diary is adequately detailed but may lack consistency. Details of the industry internship and documentation are present but somewhat incomplete. Evidence is limited. (4-6)	The diary is missing significant content, disorganized, and poorly written. Details of the internships are absent or irrelevant, with no evidence provided. (0-3)
Presentation Skills (PO 9)	10	Contents of the presentations are appropriate and well delivered. (7-10)	Contents of the presentations are appropriate but not well delivered. (4-6)	Contents of the presentations are not appropriate and not well delivered. (0-3)

- Internal Review 2**

The rubrics for evaluation are indicated below:

<u>RUBRICS FOR INDUSTRY INTERNSHIP (CIE)</u>				
<u>Review 2</u>				
<u>TO BE EVALUATED BY THE INTERNAL COMMITTEE for 30 Marks</u>				
(Committee consisting of the Head of the concerned department and THREE faculty members of the Department, one of whom shall be the Guide)				
Performance Indicator	Maximum Marks	HIGH	MODERATE	LOW
Industry Internship daily report (PO 9)	5	The diary is exceptionally detailed, well-organized, and comprehensive. Entries are consistently on time, with complete details of the industry internship, clear documentation of tasks, and use of relevant evidence (e.g., visuals, charts). (4-5)	The diary is adequately detailed but may lack consistency. Details of the industry internship and documentation are present but somewhat incomplete. Evidence is limited. (2-3)	The diary is missing significant content, disorganized, and poorly written. Details of the internships are absent or irrelevant, with no evidence provided. (0-1)
Presentation Skills (PO 9)	5	Contents of the presentations are appropriate and well delivered. (4-5)	Contents of the presentations are appropriate but not well delivered. (2-3)	Contents of the presentations are not appropriate and not well delivered. (0-1)
Industry Internship Final documentation (PO 9)	10	The documentation is exceptionally well-structured and comprehensive. It includes clear objectives, detailed task descriptions, robust analysis, and well-documented outcomes. The language is professional and error free. (7-10)	The documentation is adequately structured but lacks depth in some sections. Objectives and tasks are documented but with limited analysis. Language is clear but contains noticeable grammatical or formatting issues. (4-6)	The documentation lacks structure with little to no documentation of tasks or outcomes. Analysis is absent or irrelevant, and the language contains numerous errors. (0-3)
Relevance of the Industry Internship activities towards Environment, Sustainability and Innovation (PO 6)	10	Internship activities are highly relevant and impactful, with clear contributions to environmental protection, sustainability goals. Contributions are basic or indirect, with limited innovation. (7-10)	Activities are moderately relevant to environmental protection, sustainability goals. Contributions are basic or indirect, with limited innovation. (4-6)	Internship activities lack relevance to environmental protection, sustainability or innovation. No evidence of efforts to address sustainability challenges or promote innovative solutions. (0-3)

- External Review 2**

The rubrics for evaluation are indicated below:

<u>RUBRICS FOR INDUSTRY INTERNSHIP (CIE)</u>				
<u>Review 2</u>				
<u>TO BE EVALUATED BY THE EXTERNAL GUIDE for 50 marks</u>				
*** Internal guide is required to send a mail to the external guide and to obtain the marks. Required to keep the mail copy received from the External guide.				
Performance Indicator	Maximum Marks	HIGH	Moderate	LOW
Technical Knowledge (PO 1 & PO 2)	10	Demonstrates in-depth understanding and exceeds expectations. (7-10)	Demonstrates adequate knowledge but requires moderate guidance. (4-6)	Lacks understanding and fails to contribute meaningfully. (0-3)
Deliverables and Outcomes (PO 3, PO4 & PO 5)	10	Deliverables exceed expectations and provide significant value. (7-10)	Deliverables are completed but with limited impact or quality. (4-6)	Fails to deliver tasks or creates no measurable outcomes. (0-3)
Communication Skills (PO 9)	10	Communicates clearly, effectively, and appropriately. (7-10)	Communication is adequate but occasionally unclear or inappropriate. (4-6)	Communication is unclear, incomplete, or inappropriate. (0-3)
Work Ethics (PO 7)	5	Consistently exceeds expectations in punctuality, reliability, and professionalism. (4-5)	Occasionally falls short of expectations in punctuality or reliability. (2-3)	Consistently fails to demonstrate professionalism or reliability. (0-1)
Individual / Working in a group (PO 8)	5	Function effectively as an individual. Collaborates and communicates well in a group situation and integrates the views of others. (4-5)	Moderately active as an individual and exchanges some views but requires guidance to collaborate with others. (2-3)	No individual contribution and makes little or no attempt to collaborate in a group situation. (0-1)
Project Management and Finance (PO 10)	5	Well-structured project with effective planning, task execution, and time management. Cost analysis of the project was done effectively and well documented. (4-5)	Moderate project planning and management. Tasks and finances are somewhat managed. Cost analysis of the project was average and not very well documented. (2-3)	Poor project planning, ineffective task and time management. Cost analysis was not done, and financial documentation is inadequate. (0-1)
Ability to learn independently, adapt to new and emerging technologies, and exhibit critical thinking (PO 11)	5	Consistently demonstrates independent learning, adapts quickly to new technologies, and applies critical thinking to solve problems. (4-5)	Sometimes demonstrates independent learning and adaptability; applies basic critical thinking in familiar contexts. (2-3)	Rarely demonstrates independent learning; struggles to adapt or think critically without direct instruction. (0-1)

Total Maximum Marks from both Internal Committee and External Guide is for 100.

The obtained marks will be reduced to 50 marks which will be the CIE marks.

## 2. Semester End Examination (SEE)

Conducted at the end of the internship period and follows the same rubric-based structure as the CIE. It is organized departmentally, with evaluation carried out by a committee that may include external experts. Students must submit a final internship report summarizing their work, learning outcomes, and relevance to industry. The SEE includes a final presentation and viva, assessed by a panel comprising one internal faculty and an external faculty member. The rubrics for evaluation is indicated in the table below.

#### RUBRICS FOR INDUSTRY INTERNSHIP (SEE)

Evaluation to be done jointly by the Internal and External Examiners  
Total Maximum Marks is 100. The obtained marks will be reduced to 50 marks which will be the SEE marks.

Performance Indicator	Maximum Marks	HIGH	Moderate	LOW
Technical Knowledge (PO 1 & PO 2)	20	Demonstrates in-depth understanding and exceeds expectations. (14-20)	Demonstrates adequate knowledge but requires moderate guidance. (8-13)	Lacks understanding and fails to contribute meaningfully. (0-7)
Deliverables and Outcomes (PO 3, PO 4 & PO 5)	20	Deliverables exceed expectations and provide significant value. (14-20)	Deliverables are completed but with limited impact or quality. (8-13)	Fails to deliver tasks or creates no measurable outcomes. (0-7)
Industry Internship Final documentation (PO 9)	15	The documentation is exceptionally well-structured and comprehensive. It includes clear objectives, detailed task descriptions, robust analysis, and well-documented outcomes. The language is professional and error-free. (11-15)	The documentation is adequately prepared but lacks depth in certain areas. Objectives and tasks are described but with limited analysis. Language is clear but contains noticeable grammatical or formatting issues. (5-10)	The documentation lacks structure with little to no documentation of tasks or outcomes. Content is absent or irrelevant, and the language contains numerous errors. (0-4)
Presentation Skills (PO 9)	15	Communicates clearly, effectively, and appropriately for the audience. (11-15)	Communication is adequate but occasionally unclear or inappropriate. (5-10)	Communication is unclear, incomplete, or inappropriate. (0-4)
Relevance of the Industry internship activities towards Environment, Sustainability and Innovation (PO 6)	10	Internship activities are highly relevant and impactful, with clear contributions to environmental protection, sustainable practices, and innovative solutions. Demonstrates a comprehensive understanding of sustainability challenges. (7-10)	Activities are moderately relevant to environmental and sustainability goals. Contributions are basic or indirect, with limited innovation. (4-6)	Internship activities lack relevance to environmental protection, sustainability, or innovation. No evidence of efforts to address sustainability challenges or promote innovative solutions. (0-3)
Individual / Working in a group (PO 8)	10	Functions effectively as an individual. Collaborates and communicates well in a group situation and integrates the views of others. (7-10)	Moderately active as an individual and exchanges some views but requires guidance to collaborate with others. (4-6)	No individual contribution and makes little or no attempt to collaborate in a group situation. (0-3)
Project Management and Finance (PO 10)	5	Well-structured project with effective planning, task execution, and time management. Cost analysis of the project was done effectively and well documented. (4-5)	Moderate project planning and management. Tasks and finances are somewhat managed. Cost analysis of the project was average and not very well documented. (2-3)	Poor project planning, ineffective task and time management. Cost analysis was not done, and financial documentation is inadequate. (0-1)
Ability to learn independently, adapt to new and emerging technologies, and exhibit critical thinking (PO 11)	5	Consistently demonstrates independent learning, adapts quickly to new technologies, and applies critical thinking to solve problems. (4-5)	Sometimes demonstrates independent learning and adaptability; applies basic critical thinking in familiar contexts. (2-3)	Only demonstrates independent learning strategies to adapt or think critically without direct instruction. (0-1)

#### 3.5 Evaluation of Projects (20)

Total Marks 20.00



The aim of the project work is to give students the opportunity to apply the Theoretical knowledge that they have gained while studying to solve practical engineering problems. By doing so, it is hoped that the students will gain knowledge and experience in solving problems systematically. In order to ensure that the students acquire skill sets through the execution of the project, the Project will be carried out in one complete year as Major Project Phase I and Major Project Phase II. The project carries five credits in the seventh semester and ten credits in the eighth semester. The problem statement will form a critical component of a project. A well-defined problem statement ensures that the project remains focused, relevant, and effective in addressing the identified issue. The Problem statements are identified by the students from the following sources:

- Industry driven problem statements
- Smart India Hackathon 2024 problem statements
- Research projects with the faculty
- Projects with Alumni
- faculty members domains

Departments collects the students preferences for their project choice. Guides will be assigned according to the willingness of students choice. Interdisciplinary projects are also encouraged among the students.

#### **Various stages of the project**

It includes

##### 1. Phase-1

- Project team formation and allotment of Guide
- Submission of the synopsis formed project team of their choice of project
- Approval of the synopsis by the review committee : Review 0
- Major Project Phase I:
  - Review I
  - Review II

##### 2. Phase - 2

- Review I
- Review II
- Final presentation : review and evaluation

To ensure rigorous and transparent evaluation of student projects, **we follow a structured process** guided by the *Student Project Review and Assessment Committee (SPARC)*, with rubrics explicitly linked to Program Outcomes (POs) and Program-Specific Outcomes (PSOs). The process spans two semesters (Phase I and II) and integrates continuous monitoring, standardized assessments, and industry-aligned deliverables. Below is the detailed framework:

#### **Components of Project Evaluation**

The project evaluation has two components:

- a. **Continuous Internal Evaluation (CIE)** for Phase - 1 and Phase - 2
- b. **Semester End Examination (SEE)** for Phase - 2

#### **a. Continuous Internal Evaluation (CIE)**

It has three phases:

- **Phase 0**

During **Phase 0**, students come up with project ideas and write a synopsis to explain them after discussing with their allotted project guide. This phase is like a first check to see if the ideas are practical, original, and useful. Based on this check, the ideas will either be accepted to move forward or sent back with feedback for improvement.

Students must prepare a detailed synopsis that includes:

- The project title
- The problem statement
- Objectives
- Methodology
- Expected outcomes

- A rough timeline showing how they will complete the project

Guides will review each synopsis for its relevance, originality, whether it can realistically be done, how clearly everything is explained etc. After reviewing, the project will be either accepted or accepted with modifications or will be asked for resubmission. There will be no awarding of marks during phase 0.

- **Phase 1**

During phase 1, there will be two reviews. During Review 1 the evaluation committee which includes guide, and two evaluators will evaluate various aspects such as literature survey, problem identification, detailed analysis of the objectives and study of existing methodologies etc. This will be done for 30 marks.

The rubrics for phase 1, review 1 is as indicated in the table below.

<b>Marks distribution for Phase I, Review 1 – 30 Marks</b> <b>(Evaluated jointly by a committee comprising Guide and other designated members)</b>				
Parameters	Mark s	HIGH	MEDIUM	LOW
Literature Survey & Relevance to Present Context	10	An extensive literature survey was conducted and collected a good information about the existing system. (8-10)	A moderate literature survey was made and collected some basic information about the existing system. (4-7)	Inadequate literature survey was made and not collected basic information about the existing system. (0-3)
Problem Identification & Objectives	10	Detailed and extensive explanation of the purpose and need of the Project. (8-10)	Brief explanation of the purpose and need of the project. (4-7)	Problem Identification is not clear. (0-3)
Study of existing Methodology	5	Detailed study of the existing methodologies was made. (4-5)	Moderate study of the existing methodologies was made. (2-3)	Little study of the existing methodologies was made. (0-1)
Presentation Skills	5	Contents of the presentations are appropriate and well delivered. (4-5)	Contents of the presentations are appropriate but not well delivered. (2-3)	Contents of the presentations are not appropriate and not well delivered. (0-1)

During review 2 of phase 1, the evaluation committee will evaluate aspects such as detailed methodology, expected deliverables, presentation skills and project report. This will be done for 70 marks. The rubrics for phase 1, review 2 is as indicated in the table below:

<b>Marks distribution for Phase I, Review 2 – 70 Marks (Evaluated jointly by a committee comprising Guide and other designated members)</b>				
Parameter s	Mark s	HIGH	MEDIUM	LOW
Extended Literature Survey	10	An extensive extended literature survey was conducted and collected a good information about the existing system. (8-10)	A moderate extended literature survey was made and collected some basic information about the existing system. (3-7)	Inadequate extended literature survey was made and not collected basic information about the existing system. (0-2)
Proposed Methodology & Expected Outcomes	20	Detailed explanation of the proposed methodology and expected outcomes are well defined. (15-20)	Brief explanation of proposed methodology and expected outcomes not well defined. (6-14)	Methodology & outcomes are not defined. (0-5)
Presentation Skills	10	Contents of the presentations are appropriate and well delivered. (8-10)	Contents of presentations are appropriate but not well delivered. (3-7)	Contents of presentations are not appropriate and not well delivered. (0-2)
Report	20	The report is structured and well prepared as per format. (15-20)	The report is not well structured, but as per format. (6-14)	Report is not well structured and not as per format (0-5)
Ethics	5	Project bibliography was complete and flawlessly formatted. All sources were cited in the presentation. Reports to the guide regularly and consistent in work. (4-5)	Project bibliography was moderate and not properly formatted. A few of the sources were only cited during the presentation. Not very regular but consistent at the work. (2-3)	Project bibliography was incomplete. None of the sources were cited during the presentation. Irregular attendance and inconsistency at work. (0-1)
Working in a group	5	Collaborates and communicates well in a group situation and integrates the views of others. (4-5)	Exchanges some views but requires guidance to collaborate with others. (2-3)	Make little or no attempt to collaborate in a group situation. (0-1)

- Phase 2

During phase 2, there will be two reviews. During Review 1 the evaluation committee will evaluate various aspects such as methodology, analysis, design and presentation skills. This will be done for 30 marks. The rubrics for phase 2, review 1 is as indicated in the table below.

<b>Marks distribution for Phase II, Review 1 – 30 Marks</b> <b>(Evaluated jointly by a committee comprising Guide and other designated members)</b>				
Parameter	Mar ks	HIGH	MEDIUM	LOW
Methodology (Theoretical analysis/ Experimental observations/ Fabrication / Testing)	10	Methodology being implemented are strongly in line with the objectives defined. (8-10)	Methodology being implemented are moderately in line with the objectives defined. (3-7)	Methodology being implemented are slightly in line with the objectives defined. (0-2)
Results and Discussions	10	All the results obtained are well presented and discussed. (8-10)	All the results obtained are moderately presented and discussed. (3-7)	Poor presentation of the results. Discussion was not proper. (0-2)
Presentation Skills	10	Excellent Presentation (8-10)	Moderate Presentation (3-7)	Poor Presentation (0-2)

During phase 2, review 2 the evaluation committee will evaluate various aspects such as implementation, testing, results and project report. This will be done for 70 marks. The rubrics for phase 2, review 2 is as indicated in the table below.

<b>Marks distribution for Phase II, Review 2 – 70 Marks</b> <b>(Evaluated jointly by a committee comprising Guide and other designated members)</b>				
Parameter	Mar	HIGH	MEDIUM	LOW
Methodology (Theoretical analysis/ Experimental observations/ Fabrication / Testing)	10	Implementation methodology of each of the objectives are very well defined. Well planned methodology. (8-10)	Implementation methodology of each of the objectives are moderately done. Moderately planned methodology. (3-7)	The defined objectives are not implemented properly. Poor planning was observed. (0-2)
Results, Discussions and Conclusions	10	All the results obtained are well presented and discussed. The conclusions drawn are justifiable. (8-10)	All the results obtained are moderately presented and discussed. The conclusions drawn are moderately justifiable. (3-7)	Poor presentation of the results. Discussion was not proper, and conclusions are not valid. (0-2)
Presentation Skills and Viva Voce	10	Contents of the presentations are appropriate and well delivered. (8-10)	Contents of the presentations are appropriate but not well delivered. (3-7)	Contents of the presentations are not appropriate and not well delivered. (0-2)
Report	20	The report is structured and well prepared as per format. (15-20)	The report is not well structured, but as per format. (6-14)	Report is not well structured and not as per format(0-5)

Ethics	5	Project bibliography was complete and flawlessly formatted. All sources were cited in the presentation. Reports to the guide regularly and consistent in work. (4-5)	Project bibliography was moderate and not properly formatted. A few of the sources were only cited during the presentation. Not very regular but consistent at the work. (2-3)	Project bibliography was incomplete. None of the sources were cited during the presentation. Irregular attendance and inconsistency at work. (0-1)
Working in a group	5	Collaborates and communicates well in a group situation and integrates the views of others. (4-5)	Exchanges some views but requires guidance to collaborate with others. (2-3)	Make little or no attempt to collaborate in a group situation. (0-1)
Research Publications	10	Paper accepted/published in an indexed Journal / Conferences (8-10)	Paper submitted in an indexed Journal / Conferences (1-7)	Not prepared and Not submitted paper (0)

**b. Semester End Examination (SEE)**

After the Continuous Internal Evaluation the Semester End Exam will be conducted and the evaluators will be one of the experienced internal faculty member and one examiner from out side the institution (external examiner). The SEE includes a final presentation and viva, assessed by a panel comprising internal faculty and an external faculty member. The rubrics for evaluation is indicated in the table below.

SEE Evaluation to be done jointly by the Internal and External Examiners				
Parameters	Allocated Marks	HIGH	MEDIUM	LOW
Literature Survey & Relevance to Present Context (PO2, PO 4)	10	An extensive literature survey was conducted and collected a good information about the existing system. (8-10)	A moderate literature survey was made and collected some basic information about the existing system. (4-7)	Inadequate literature survey was made and not collected basic information about the existing system. (0-3)
Problem Identification (PO2)	10	Detailed and extensive explanation of the purpose of the Project. (8-10)	Brief explanation of the purpose of the project. (4-7)	Problem Identification is not clear. (0-3)

Objectives (PO1)	5	Objectives are clear, specific, measurable, and aligned with the project's purpose. They effectively guide the project's direction.  (4-5)	Objectives are somewhat clear and relevant but may lack specificity, measurability, or full alignment with the project's purpose.  (2-3)	Objectives are vague, lack focus, or do not align well with the project's purpose. They fail to provide a clear direction.  (0-1)
Implementation  (Theoretical analysis/ Experimental observations/ Fabrication / Testing)  (PO1, PO2, PO3, PO4, PO5, PO10)	15	Implementation methodology of each of the objectives are very well defined. Well planned methodology.  (10-15)	Implementation methodology of each of the objectives are moderately done. Moderately planned methodology.  (5-9)	The defined objectives are not implemented properly. Poor planning was observed.  (0-4)
Results, Analysis and Conclusions (PO4)	10	All the results obtained are well presented and analyzed. The conclusions drawn are justifiable.  (8-10)	All the results obtained are moderately presented and analyzed. The conclusions drawn are moderately justifiable.  (3-7)	Poor presentation of the results. Analysis of the result was not proper, and conclusions are not valid.  (0-2)

Ability to assess the societal, environmental, safety and standards relevant to demonstrate responsibility for sustainable development (PO6)	10	<p>Clearly identifies and critically analyzes societal, environmental, and safety concerns in engineering projects.</p> <p>Demonstrates a strong understanding of relevant standards and applies sustainable development principles effectively.</p> <p>Provides well-justified recommendations for improvement.</p> <p>(8-10)</p>	<p>Identifies societal, environmental, and safety concerns with some analysis. Shows a moderate understanding of relevant standards but struggles to integrate sustainable practices effectively.</p> <p>Recommendations may lack depth or justification.</p> <p>(3-7)</p>	<p>Demonstrates limited awareness of societal, environmental, and safety issues.</p> <p>Shows little understanding of relevant standards and sustainability principles. Unable to provide meaningful recommendations for improvement.</p> <p>(0-2)</p>
Ethics (PO7)	5	<p>Project bibliography was complete and flawlessly formatted. All sources were cited in the presentation / document.</p> <p>Reports to the guide regularly and consistent in work.</p> <p>(4-5)</p>	<p>Project bibliography was moderate and not properly formatted. A few of the sources were only cited during the presentation / document. Not very regular but consistent at the work.</p> <p>(2-3)</p>	<p>Project bibliography was incomplete. None of the sources were cited during the presentation / document.</p> <p>Irregular attendance and inconsistency at work.</p> <p>(0-1)</p>
Individual / Working in a group (PO8)	5	<p>Function effectively as an individual.</p> <p>Collaborates and communicates well in a group situation and integrates the views of others.</p> <p>(4-5)</p>	<p>Moderately active as an individual and exchanges some views but requires guidance to collaborate with others.</p> <p>(2-3)</p>	<p>No individual contribution and make little or no attempt to collaborate in a group situation.</p> <p>(0-1)</p>
Presentation Skills (PO9)	10	<p>Contents of the presentations are appropriate and well delivered.</p> <p>(8-10)</p>	<p>The contents of the presentations are appropriate but not well delivered.</p> <p>(4-7)</p>	<p>The Contents of the presentations are not appropriate and not well delivered.</p> <p>(0-3)</p>

Documentation (PO9)	10	The documentation of the project report is structured and well prepared as per format.  (8-10)	The documentation of the project report is not well structured, but as per format.  (3-7)	The documentation of the project report is not well structured and not as per format.  (0-2)
Project Management and Finance (PO10)	5	Well-structured project with effective planning, task execution, and time management. Cost analysis of the project was done effectively and well documented.  (4-5)	Moderate project planning and management. Tasks and finances are somewhat managed. Cost analysis of the project was average and not very well documented.  (2-3)	Poor project planning, ineffective task and time management. Cost analysis was not done and financial documentation is inadequate.  (0-1)
Research Publications (PO11)	5	Paper accepted/published in an indexed Journal / Conferences  (4-5)	Paper submitted in an indexed Journal / Conferences  (1-3)	Not prepared and Not submitted paper  (0)

**3.6 Evidence of Addressing Sustainable Development Goals (SDG) (10)**

Total Marks 10.00



The program integrates sustainability goals into the curriculum through various student **activities such as project work, AATs, skill courses, and co-curricular activities**. Such activities help students develop the skills needed to tackle real-world engineering problems while contributing to key Sustainable Development Goals (SDGs). Furthermore, the **department level clubs** and **institute level clubs and technical societies** such as IEEE student branch and various IEEE technical societies, student clubs such as E-Yantra, Prime, OKIOS etc play an active role by organizing events, workshops, and activities that also support and promote sustainability-focused learning and innovation.



#### A. Courses with Project-Based Learning or other activities aligned to SDGs

As part of the curriculum, several core courses integrate project-based and problem-based learning activities that directly support the achievement of Sustainable Development Goals (SDGs). Below are some examples:

##### 1. Introduction to IoT (2<sup>nd</sup> Semester)

Students were motivated to work on IoT platform simulations, which enabled them to grasp the real-world applications of IoT. The table below presents the projects undertaken by students as part of the **Introduction to IoT** course, along with their mapping to relevant Sustainable Development Goals (SDGs).

Sl. No	Title	SDG
1	Adaptive airbag system	3
2	Smart Cities: Integrating Technology for Urban Transformation	11
3	Data Storage in Cloud: case study in the human biometeorology	3, 9, 11
4	Smart gas leakage detector bot	3, 9, 11
5	A Case Study on the Implementation of IoT for Smart Healthcare Monitoring	3
6	IoT connected trains in Japan	9, 11, 13
7	Vehicular IoT	9, 11
8	Home Automation	7, 9, 11
9	smart traffic management system	9, 11, 13

10	Air quality monitoring system	3, 11, 13
11	Healthcare IOT(Smartwatch)	3, 9
12	Amazon fresh Smart Inventory Management: Transforming Retail with IoT Technology	9, 12
13	Smart City	11
14	Smart irrigation and soil nutrients detection system using IoT	2, 9, 12, 13
15	smart Room	7, 9, 11
16	Remote controlled medicine dispenser	3, 9
17	Crime assistance in a smart IOT transportation system	11, 16

## 2. Research Methodology (7th Semester)

- As an alternate assessment activity, students were asked to draft research papers on topics of their interest. Depending on the chosen subject, this activity aligned with various SDGs.
- The table below presents the literature survey conducted on various topics to support student research projects as part of the CCA for the Research Methodology course.

Sl. No	Title	SDG mapping
1	Votereum : Blockchain-Based Voting System	16, 9
2	Impact of Blockchain in supply chain system	9, 12
3	Auto- comment generator	4 , 9
4	Street violence anomaly detection using cnn	16, 11
5	Comparative Analysis of Logistic Regression and Decision Trees to Monitor Bridge Health	9, 11
6	Cloud-Based Data Warehouses - Amazon Redshift vs. Google BigQuery	9
7	Reliability of Renewable Energy Forecasting via Machine Learning	7, 13
8	Analysis of a real-world breach, its impact on organizations, and lessons learned for mitigation strategies.	16, 9
9	The Quantum Shift in Cryptography	9, 16
10	Serverless Computing: Revolutionizing Cloud Architectures	9, 13
11	Comparative Analysis of Machine Learning and Deep Learning	9
12	Comparison of Random Forest Algorithm and Artificial neural network	9

Sl. No	Title	SDG mapping
13	Harnessing Predictive Analytics in Healthcare: A Data Mining Perspective	3, 9
14	Neuromorphic Computing: An Overview of Architectures, Applications, and Future Prospects	9
15	Quantum computing in healthcare	3, 9
16	Data Mining in Education: Identifying Patterns in Student Behavior and Improving E-Learning Systems	4, 9
17	Optical character recognition	4, 9
18	Task Failure Prediction and Migration in Cloud Environment	9
19	Zero-ETL Data Warehousing Systems: Redefining Data Integration	9
20	End-to-end Kubernetes Cluster Load Balancing	9

### 3. Social Connect and Responsibility (3<sup>rd</sup> Semester)

Social Connect and Responsibility is a third-semester course in which students undertook mini projects as part of the CCA. The table below lists the projects done by the students along with their mapping to the Sustainable Development Goals (SDGs):

Sl. No	Title	SDGs
1	Impact connect	17
2	Food waste and management	2, 12
3	Disease prediction using machine learning	3, 9
4	Crisis Response Apps	11, 13
5	Skill sharing platform	4, 8
6	Confidential legal assistance	16
7	Health data information and management system mobile application	3, 9
8	Innovative chatbot for medical purpose	3, 9
9	mental wellbeing	3
10	Local Blood Donation Drive Info Hub	3
11	An application to repurpose leftover food and reduce wastage	2, 12
12	AI driven multiplatform social media data extraction and evidence management tool	16
13	Drugs price comparison and delivery app	3
14	Medicine delivery and aid in rural areas	3, 10

Sl. No	Title	SDGs
15	College Ride Sharing	11, 13
16	AI - Powered Learning Platforms	4, 9
17	Digital Literacy Website	4, 10
18	Water Quality Challenges and Impact	6, 13
19	Career Spark: Interested based career exploration tool	4, 8
20	Local Service Marketplace	8, 9

### B. Projects Incorporating Sustainability Goals

Projects that focus on real-world industry problems, environmental challenges, and societal issues are aligned with various Sustainable Development Goals (SDGs), helping students understand how technology can be used to support sustainable development.

The table below show the projects done by students and its alignment towards SDGs:

SL no.	Project titles	SDGs
1	· Debt Free Website - A Smart Debt Management and Expense Mapping System.	1
2	· Good Health and Well-being.	3
3	· SMART EVALUATOR: An NLP-Based System for Automated Student Answer Script Evaluation. · AI-Based Clothing Design and Upcycling System. · Women-ai powered complaint generator and management system. · AI Gender Sense. · AI-Powered Cross-Platform Compliance Management System for CIS Benchmark Auditing.	4
4	· Debt Free Website - A Smart Debt Management and Expense Mapping System.	8

SL no.	Project titles	SDGs
5	<ul style="list-style-type: none"> <li>· Geolocation-based attendance tracking application.</li> <li>· Ai-based clothing design and upcycling system.</li> <li>· Decentralized document encryption and access control.</li> <li>· Sentiment analysis for stock prediction.</li> <li>· Human scream detection and analysis for controlling crime rate.</li> <li>· Ai-powered cross-platform compliance management system for cis benchmark auditing.</li> <li>· Nutrisnap and optimal eats.</li> <li>· Cardiac mri segmentation for detecting myocardial Infarction.</li> <li>· Nourish now.</li> <li>· Smartparkx: the smart parking system.</li> <li>· Dynamic call engine.</li> <li>· Brahmi to kannada conversion.</li> </ul>	9
6	<ul style="list-style-type: none"> <li>· Decentralised Land Registry Using Blockchain.</li> </ul>	11
7	<ul style="list-style-type: none"> <li>· Procurement in supply chain management.</li> </ul>	12
8	<ul style="list-style-type: none"> <li>· Decentralised Land Registry Using Blockchain.</li> </ul>	16

- As a part of curriculum, the AICTE Activity Point System is an initiative by the All India Council for Technical Education to promote the holistic development of students beyond the classroom. This system mandates participation in extracurricular, co-curricular, and socially responsible activities, thereby cultivating leadership, teamwork, and civic engagement skills alongside academic learning.
- Students actively participate in socially relevant initiatives such as the Swachh Bharat Abhiyan (Clean India Mission), Stem Cell Awareness Programs, Tobacco and Cancer Awareness Campaigns, Blood Donation Camps at BMSIT&M, Cybercrime Awareness Programs, and outreach activities like visiting and educating students in government schools.
- SDG's addressed: SDG 3(Good Health and well being) SDG4 : Quality Education SDG6: clean water and sanitation, SDG 11: Sustainable cities and communities, SDG 12: Responsible consumption and production, SDG13: Climate action
- Apart from the regular curriculum-based projects, our students actively participate in national-level hackathons and competitions. Below is a list of such projects in which students have participated and won, along with their alignment to the Sustainable Development Goals (SDGs):
  - The students of CSE department participated and became winners and received a prize money of Rs.51,000- in the Hackathon held at "Scalar School of Technology" by solving a real-world industrial problem with a sustainability-driven solution. The problem statement was: "AI personalized Interview platform"
  - SDG 9: Industry Innovation and Infrastructure: The project directly contributes to innovation by developing a platform to using AI for conduction of interview.
  - Team INFINITECH from CSE secured 1st place at Hackathon 2025, organized by Nagarjuna College of Engineering & Technology. The winning team members: Nithin Reddy PN, Sai Mohith, Sanath R . Their project, NexWatt – an innovative wireless EV charging solution integrating both hardware and software – was recognized as the best among several top-notch entries.

This aligns with the following SDGs: SDG11, SDG12

#### C. Activities under IEEE Student Branch

The IEEE Student Branch at BMS Institute of Technology & Management (BMSIT&M) functions as a dynamic platform fostering student excellence, technical innovation, and leadership. With 13 technical societies and one affinity group, the branch engages students across disciplines through meaningful events, projects, and collaborations. These activities are consciously mapped to the United Nations Sustainable Development Goals (SDGs), ensuring that the technical efforts are aligned with global developmental priorities such as quality education, industry innovation, health, sustainability, and inclusion.

List of Technical Societies and Affinity Group:

1. IEEE Signal Processing Society (SPS)
2. IEEE Communication Society (ComSoc)
3. IEEE Antennas and Propagation Society (APS)
4. IEEE Microwave Theory and Techniques Society (MTT-S)
5. IEEE Aerospace and Electronic Systems Society (AESS)
6. IEEE Circuits and Systems Society (CAS)
7. IEEE Photonics Society
8. IEEE Engineering in Medicine and Biology Society (EMBS)
9. IEEE Robotics and Automation Society (RAS)
10. IEEE Power and Energy Society (PES)
11. IEEE Computer Society (CS)
12. IEEE Information Theory Society (ITS)
13. IEEE Computational Intelligence Society (CIS)
14. IEEE Women in Engineering (WiE) Affinity Group

All these societies has active participation from CSE students. The list of events conducted by various IEEE technical societies and its alignment towards SDGs are listed below.

Society / Societies Involved	Event Title	Relevant SDGs	Justification
Signal Processing Society	Falling Sticks Game	SDG 3 – Good Health and Well-being SDG 4 – Quality Education	Boosted cognitive engagement and technical reflex learning
Signal Processing Society	Summer of Projects	SDG 4 – Quality Education SDG 9 – Industry, Innovation and Infrastructure	Focused on robotics and IoT training for experiential learning
Signal Processing Society	Rocket League	SDG 4 – Quality Education SDG 9 – Industry, Innovation and Infrastructure	Encouraged creativity through tech-based competitions
Signal Processing Society	Grid Wars	SDG 4 – Quality Education SDG 8 – Decent Work and Economic Growth	Gamified platform for critical thinking and logic-building

Signal Processing Society	Insight Hub / Insight Hub 2.0	SDG 4 – Quality Education SDG 8 – Decent Work and Economic Growth SDG 17 – Partnerships for the Goals	Connected students with global mentors and academic institutions
APS, MTT-S, Computer Society	Hack the Halls	SDG 4 – Quality Education SDG 9 – Industry, Innovation and Infrastructure	Encouraged software/hardware development under competitive constraints
Computational Intelligence Society	EPOCH '24	SDG 3 – Good Health and Well-being SDG 4 – Quality Education SDG 11 – Sustainable Cities and Communities	Addressed mental health and smart city challenges via AI projects
Computer Society	CodeCon'24	SDG 4 – Quality Education SDG 8 – Decent Work and Economic Growth	Boosted programming skills relevant to tech careers
EMBS, Photonics Society	IEEE Week Project Showcase	SDG 3 – Good Health and Well-being SDG 4 – Quality Education SDG 9 – Industry, Innovation and Infrastructure	Displayed innovations in health-tech and inclusive STEM outreach
Robotics and Automation Society	RoboOlympics	SDG 4 – Quality Education SDG 9 – Industry, Innovation and Infrastructure SDG 17 – Partnerships for the Goals	Robotics competition promoting teamwork, automation, and intercollegiate collaboration

These activities not only enhance technical knowledge but also help students understand the broader impact of engineering solutions on society and sustainability.

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### 3.7 Attainment of Course Outcomes (25)

Total Marks 25.00

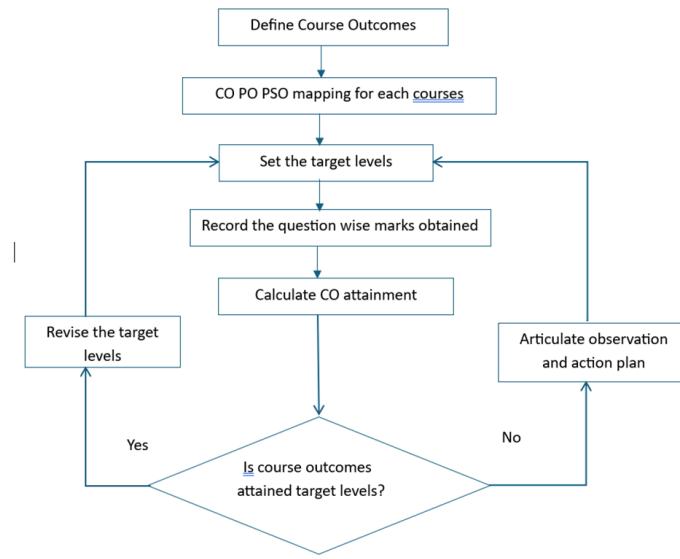
**3.7.1. Describe the Assessment Tools and Processes Used to Gather the Data for the Evaluation of Course Outcome (5)**

Institute Marks : 5.00

### 3.7.1. Describe the Assessment Tools and Processes Used to Gather the Data for the Evaluation of Course Outcome (05).

(Describe different assessment tools (semester end examinations, mid-semester tests, laboratory examinations, student portfolios etc.,) to measure the student learning and hence attainment of course outcomes.)

The evaluation of Course Outcomes (COs) is carried out using a structured and systematic approach involving various internal and external assessment tools. The assessment tools vary based on the course type, categorized into Professional Core Courses (PCC), Integrated Professional Core Courses (IPCC), Professional Core Course Laboratories (PCCL), and MCQ-Based Courses. For the direct CO attainment, the assessment tools like CIE(IA+CCA) SEE, Lab conduction, OE experiments, Lab tests, are used.



#### 3.7.1.1. List of tools used for CO attainment.

**Direct Assessment Tools:** These are based on measurable student performance and provide objective evidence of learning. Direct assessment tools involve the following:

**Continuous Internal Evaluation (CIE):** CIE involves assessing the student's performance through the Mid semester tests (Internal assessment tests) and Continuous Comprehensive Assessments (CCAs) / Alternate Assessment Tools (AATs). CIE is evaluated for 50% assessment marks for all the courses.

- **Internal Assessment tests:** IA tests will be conducted twice in a semester. Each question is mapped to specific COs and categorized based on Bloom's Taxonomy levels. The mapping is ensured through a structured question paper blueprint. These assessments evaluate the cognitive attainment levels of students in terms of understanding, application and analysis.

BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT Avahalli, Doddaballapur Main Road, Bangalore - 560064 Department of Computer Science and Engineering FIRST INTERNAL ASSESSMENT TEST, NOVEMBER 2022 – 23																						
Course Name	Computer System Design	Course Code	21CS36																			
Branch & Semester	CSE I <sup>st</sup> A, B and C	Date	01/12/2021																			
Name of the Course Coordinator (s)	Mrs. Durga Bhawani A Dr. Ashwini N	Max.	40																			
		Marks	90 Minutes																			
<b>Note:</b> Answer THREE full questions from Part A and Part B questions are compulsory.																						
Qn. No.	PART A		Marks	CO																		
1.	a Solve for prime implicants & essential prime implicants using k-map method. $F(A,B,C,D) = \Sigma m(6,7,9,10,13) + \Sigma d(4,5,11,15)$ b Write the And-Or solution circuit for the given fundamental products $Y = f(A,B,C) = \Sigma m(3,5,6,7)$ and also design the truth table.	5M	COs:2 K:3																			
2.	a What is Map-Entered Variable method? Apply MEV method simplify following function: $f(a,b,c,d) = \Sigma m(2, 3, 4, 5, 13) + \Sigma d(8, 9, 10, 11)$ . b For $f = \Sigma m(2, 3, 4, 5, 7, 9, 13, 14, 15)$ , identify the Overlapping groups for the given canonical sum form $f(a,b,c,d) = \Sigma m(2, 3, 4, 5, 7, 9, 13, 14, 15)$ . c Explain the give terms with an example. i)Don't care ii)Ex-OR gate	6M 2M	COs:2 K:3																			
3.	a	4M	COs:1 K:2																			
4.	a Express how a 3 to 8 decoder and multi input OR gate for the full adder Boolean expression can be realized simultaneously. b Implement the full subtractor with its Equation, Truth table and Circuit diagram using basic gates.	4M 4M	COs:1 K:2																			
5.	a Apply Quaternary simplifying the following function: $f(a,b,c,d) = \Sigma m(2,3,10,12,13,14,15) + \Sigma d(0,1)$ and also list the prime implicants & essential prime implicants. b Demonstrate the working of multiplexer with its logic diagram, equation truth table and block diagram.	5M	COs:2 K:3																			
6.	a Use 4:1 Mux with enable to realize the given equation $Y = AB + B'C'A + C' + D$ . b Sketch a 32:1 multiplexer using four 8:1 multiplexer and one 4:1 multiplexer.	4M 4M	COs:2 K:3																			
7.	a Sketch a 16:1 multiplexer using four 4:1 multiplexer and three 2:1 multiplexers. b Sketch a 32:1 multiplexer using four 8:1 multiplexer and one 4:1 multiplexer.	4M 4M	COs:2 K:3																			
8.	A digital system is to be designed in which the months of the year is given as input in four bit form. The month January is represented as '0000', Feb as '0001' and so on. If the month is April, the system should output '1011' corresponding to the input of month containing 31 days or otherwise it is 0000. If the input numbers exceed the number of variables (A,B,C,D) find the following a) Write truth table b) Write Boolean expression in $\Sigma m$ and mfb form c) Sketch the simplified expression using basic gates.	2+4+2 M	COs:2 K:3																			
<p>CO1: Discuss the basic concepts of digital systems components (K2)      CO2: Apply various minimization methods to realize the digital circuits (K3)      CO3: Interpret digital operations in digital circuits (K4)      CO4: Analyze the functioning of various units in digital systems (K4)</p> <table border="1"> <tr> <td>Remembering (K1)</td> <td>Understanding (K2)</td> <td>Applying (K3)</td> <td>Analyzing (K4)</td> <td>Evaluating (K5)</td> <td>Creating (K6)</td> </tr> <tr> <td colspan="6">Signatures of the Question Paper Scrutiny Committee</td> </tr> <tr> <td>Course Coordinator(s)</td> <td>Module Coordinator(s)</td> <td>Program Coordinator</td> <td colspan="3">HoD</td> </tr> </table>					Remembering (K1)	Understanding (K2)	Applying (K3)	Analyzing (K4)	Evaluating (K5)	Creating (K6)	Signatures of the Question Paper Scrutiny Committee						Course Coordinator(s)	Module Coordinator(s)	Program Coordinator	HoD		
Remembering (K1)	Understanding (K2)	Applying (K3)	Analyzing (K4)	Evaluating (K5)	Creating (K6)																	
Signatures of the Question Paper Scrutiny Committee																						
Course Coordinator(s)	Module Coordinator(s)	Program Coordinator	HoD																			

Table 1: CIE Marks Distribution for Integrated Professional Core Courses

Sl. No	Assessment Tool	Maximum marks	Marks Reduced to	Final CIE Marks
1	Internal Assessment - I	40	20	50
2	Internal Assessment - II	40		
3	CCA 1	05		
4	Practical - Continuous Evaluation	15		
5	Practical – Internal Assessment	10		

Table 2: CIE Marks Distribution for Professional Core Courses

Sl. No	Assessment Tool	Maximum marks	Marks Reduced to	Final CIE Marks
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1	Internal Assessment - I	40	30	50
2	Internal Assessment - II	40		
3	CCA 1	10	10	
4	CCA 2	10	10	

**Sample CIE Marks allotment sheet:**

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT (Autonomous Under VTU)									
BMSIT&M - Fol (Adu) - B.E. CSE (Autonomous) - 2022-23 IA Marks Report									
CSE (Aut) - B-21233-C-Computer System Design									
Sr.	USN	Student	Theory Mark 1	Theory Mark 2	Theory Mark 3	Theory Mark 4	Final Total	Avg(2M+AA12Dm)	Final Theory
1	18Y21CS073	JAYANTH N MUTHENI	21.00	31.00	0	30.00	40	40	71
2	18Y21CS074	KIRAN KUMAR	31.00	0	70.00	21.00	35	40	71
3	18Y21CS075	K S BIMONDAKA	31.00	0	40.00	30.00	40	40	71
4	18Y21CS076	KIRAN KUMAR	31.00	0	30.00	30.00	40	40	71
5	18Y21CS077	KIRTHEE V S	21.00	31.00	0	45.00	45	40	81
6	18Y21CS078	KIRTHEE V S	31.00	37.00	60.00	0	53	40	93
7	18Y21CS079	KIRTHEE V S	31.00	39.00	60.00	0	53	40	93
8	18Y21CS080	KIRAN KULUMA	31.00	38.00	40.00	0	56	40	96
9	18Y21CS081	KIRAN KULUMA	31.00	31.00	31.00	0	50	40	91
10	18Y21CS082	LAKSHMIKA S M	35.00	22.00	16.00	0	27	40	67
11	18Y21CS083	LAKSHMIKA S M	35.00	22.00	16.00	0	27	40	67
12	18Y21CS084	LONKEE KUMAR	37.00	23.00	29.00	0	45	40	85
13	18Y21CS085	MADHUVIKA PRASAD	31.00	19.00	20.00	0	40	40	71
14	18Y21CS086	MADHUVIKA PRASAD	39.00	37.00	24.00	0	48	40	88
15	18Y21CS087	MADHUVIKA PRASAD	39.00	37.00	24.00	0	48	40	88
16	18Y21CS088	MADHUVIKA PRASAD	22.00	0	18.00	0	30	40	60
17	18Y21CS089	MANGI T	36.00	23.00	21.00	0	36	40	76
18	18Y21CS090	MANGI T	39.00	29.00	0	37.00	37	40	76
19	18Y21CS091	MARIVAN SALIM ALI BA MATRAJ	0	22.00	20.00	11.00	28	40	68
20	18Y21CS092	MARIVAN SALIM ALI BA MATRAJ	35.00	23.00	24.00	0	36	40	71
21	18Y21CS093	MEGHANA T J	40.00	40.00	38.00	0	50	40	95
22	18Y21CS097	MUHAMMAD AREEB	40.00	0	38.00	37.00	40	40	87
23	18Y21CS098	MUHAMMAD ANWAR ABBAS BIN MOHAMMAD AL SAQI	39.00	25.00	10.00	0	21	40	61
24	18Y21CS099	MUHAMMAD ANWAR ABBOS BIN MUJEL	39.00	33.00	0	53	40	93	
25	18Y21CS100	MUHAMMAD SAQAAN	35.00	35.00	35.00	0	50	40	93
26	18Y21CS101	MUHAMMAD SHAFIQ DODD M J	22.00	0	11.00	0	17	40	57
27	18Y21CS102	MUHAMMAD SHARIQ SHARIFI	37.00	31.00	16.00	0	53	40	80
28	18Y21CS103	MUHAMMAD SHARIQ SHARIFI	37.00	39.00	39.00	0	53	40	93
29	18Y21CS106	NAVIOTH RAI	31.00	0	28.00	30.00	45	40	85
30	18Y21CS107	NIMAL KIRAN SHARMA	28.00	25.00	32.00	0	43	40	83
31	18Y21CS108	NIMAL KIRAN SHARMA	0	28.00	22.00	32.00	41	40	81
32	18Y21CS109	NIMIL GOWDA D H	32.00	21.00	31.00	0	36	40	76
33	18Y21CS110	NIMIL N	32.00	39.00	39.00	0	55	40	95
34	18Y21CS111	NIRALA KULKARNI	40.00	27.00	0	40.00	54	40	84
35	18Y21CS112	NSITHCHA N	33.00	31.00	31.00	0	53	40	93
36	18Y21CS114	NTISHYA Y S	38.00	39.00	33.00	0	55	40	95
37	18Y21CS115	NUZHATHU NAYANA P	38.00	39.00	33.00	0	55	40	95
38	18Y21CS116	NOOTHAN A M	31.00	23.00	33.00	0	43	40	83
39	18Y21CS117	PC SAURAPRATH	32.00	17.00	24.00	0	27	40	67
40	18Y21CS118	P.C.SAURAPRATH	32.00	30.00	30.00	0	53	40	91
41	18Y21CS119	P.SUBHASHINI	39.00	40.00	40.00	0	60	40	100
42	18Y21CS120	PREETHI KUMARWANTH KUMAR REDDY	18.00	37.00	37.00	0	56	40	96
43	18Y21CS121	PAVAN KALYAN S	29.00	29.00	33.00	0	53	40	93
44	18Y21CS122	PAVAN KUMAR S	29.00	17.00	26.00	0	36	40	76
45	18Y21CS123	POOJA P	40.00	40.00	40.00	0	60	40	100
46	18Y21CS124	POOJA P	40.00	40.00	38.00	0	59	40	99
47	18Y21CS125	POTHIREDDY HARSHINI	25.00	26.00	31.00	0	41	40	81
48	18Y21CS126	PRABHATHEE LAL	38.00	40.00	40.00	0	56	40	96
49	18Y21CS127	PRANAY SRINIVASA	38.00	28.00	36.00	0	50	40	90
50	18Y21CS128	PRANAY VIRUPAKSHI NARAYADE	31.00	25.00	25.00	0	41	40	81
51	18Y21CS129	PRATHAM GOWDA M	30.00	31.00	28.00	0	41	40	81
52	18Y21CS133	PRATHAM GOWDA M	27.00	37.00	38.00	0	51	40	91
53	18Y21CS134	PRATHAM PUNNISHEETTY	32.00	32.00	38.00	0	51	40	91
54	18Y21CS135	PREETHI K R	12.00	32.00	32.00	0	43	40	75
55	18Y21CS136	PREETHI K R	39.00	37.00	40.00	0	56	40	98
56	18Y21CS135	PREM K S	31.00	24.00	34.00	0	48	40	88
57	18Y21CS136	PREM K S	31.00	17.00	31.00	0	43	40	73
58	18Y21CS137	PRIYANE SINGH	39.00	40.00	36.00	0	58	40	98
59	18Y21CS138	PRIYANSHU GUPTA	40.00	40.00	35.00	0	58	40	98
60	18Y21CS140	PRUDHVI SHETTY S	39.00	37.00	37.00	0	57	40	97
61	18Y21CS140	PRUDHVI SHETTY S	39.00	37.00	37.00	0	57	40	97
62	18Y21CS141	PULAKUMTA SUMANTH REDDY	26.00	0	26.00	31.00	43	40	83
63	18Y21CS142	RAJENDRA KIRUDY	20.00	40.00	40.00	0	53	40	93
64	18Y21CS143	RS TRISHAK	0	24	22.00	15.00	31	40	71
65	18Y21CS144	RAJ SHEKHAR SINGH	37.00	36	8.00	0	41	40	81
66	18Y21CS145	RAGHUVENDRA SHARMA	36.50	27.00	35.00	0	58	40	98
67	18Y21CS146	MUSKAN GOYAL	39	35	39.00	0	57	40	97
68	18Y21CS147	PALAK DEONGLA	38	38	39.00	0	58	40	98
69	18Y21CS148	PRANAV TYAGI	29	29	39.00	0	58	40	98
70	18Y21CS149	PRANAV TYAGI	38	36	40.00	0	57	40	97
71	18Y21CS152	RAGHVENDRA SHARMA	33	32	39.00	0	52	40	92
72	18Y21CS234	INAYANA T V	32	30	36.00	0	49	40	89

These are aligned with COs to assess student engagement and comprehension on a continuous basis.

**Evaluation Process for Laboratory Courses:** The laboratory courses will be evaluated for 50 marks, which includes:

- Continuous evaluation: Each laboratory experiment is evaluated for 30 marks using appropriate rubrics for assessing the Fundamental knowledge, Conduction of the experiment, Analyses & Interpretation of the data and Documentation.

- Internal assessment:** Laboratory assessment evaluates students practical knowledge, experimental skills and ability to apply theoretical concepts through laboratory sessions conducted throughout the semester. Laboratory internal assessment will be conducted after all experiments are completed for 50 marks and then scale down to 20 marks.

#### CIE Marks Distribution for Professional Core Course Laboratory

Sl. No	Assessment Tool	Maximum marks	Marks Reduced to	Final CIE Marks
1	Continuous Evaluation	30 (Each experiment is evaluated for 30 marks as per the rubrics)	30	50
2	Internal Assessment	50	20	

- Evaluation Process for Project Work:**

The Mini Project / Major project will be continuously monitored with the periodic reviews across the semester. There is a specific deliverable to be completed by the students and the same is evaluated using a specific rubric. The detailed rubrics will be made known to the students at the beginning of the semester. The reviews will be periodically conducted, and the performance of the students are recorded and also mapped with the Outcomes.

**Rubrics for Mini project:**

Marks distribution for Review 1 – 40 Marks				
Parameters	Allocated Marks	HIGH	MEDIUM	LOW
Literature Survey & Relevance to Present Context	12	An extensive literature survey was conducted and collected a good information about the existing system. (9-12)	A moderate literature survey was made and collected some basic information about the existing system. (4-8)	Inadequate literature survey was made and not collected basic information about the existing system. (0-3)
Problem Identification & Objectives	12	Detailed and extensive explanation of the purpose and need of the Project. (9-12)	Brief explanation of the purpose and need of the project. (4-8)	Problem Identification is not clear. (0-3)
Proposed Methodology & Expected Outcomes	8	Detailed explanation of the proposed methodology and expected outcomes are well defined (6-8)	Brief explanation of proposed methodology and expected outcomes not well defined. (3-5)	Methodology & outcomes are not defined. (0-2)
Presentation Skills	8	Contents of the presentations are appropriate and well delivered. (6-8)	Contents of the presentations are appropriate but not well delivered. (3-5)	Contents of the presentations are not appropriate and not well delivered. (0-2)

**Rubrics for Mini Project CIE Evaluation Review 2: 60 Marks**

**Review 2:** Methodology, Implementation, Results, Discussion, Conclusions and Report evaluation (60 marks)

Marks distribution for Review 2 – 60 Marks				
Parameters	Allocated Marks	HIGH	MEDIUM	LOW
Methodology (Theoretical analysis/ Experimental observations/ Fabrication / Testing)	12	Implementation methodology of each of the objectives are very well defined. Well planned methodology. (9-12)	Implementation methodology of each of the objectives are moderately done. Moderately planned methodology. (4-8)	The defined objectives are not implemented properly. Poor planning was observed. (0-3)
Results, Discussions and Conclusions	12	All the results obtained are well presented and discussed. The conclusions drawn are justifiable. (9-12)	All the results obtained are moderately presented and discussed. The conclusions drawn are moderately justifiable. (4-8)	Poor presentation of the results. Discussion was not proper and conclusions are not valid. (0-3)
Presentation Skills and Viva Voce	8	Contents of the presentations are appropriate and well delivered. (6-8)	Contents of the presentations are appropriate but not well delivered. (3-5)	Contents of the presentations are not appropriate and not well delivered. (0-2)
Report	8	Report is structured and well prepared as per format. (6-8)	Report is not well structured, but as per format. (3-5)	Report is not well structured and not as per format (0-2)
Ethics	8	Project bibliography was complete and flawlessly formatted. All sources were cited in the presentation. Reports to the guide regularly and consistent in work. (6-8)	Project bibliography was moderate and not properly formatted. Few of the sources were only cited during the presentation. Not very regular but consistent in the work. (3-5)	Project bibliography was incomplete. None of the sources were cited during the presentation. Irregular in attendance and inconsistent in work. (0-2)

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Working in a group	8	Collaborates and communicates well in a group situation and integrates the views of others. (6-8)	Exchanges some views but requires guidance to collaborate with others. (3-5)	Makes little or no attempt to collaborate in a group situation. (0-2)
Research Publications	4	Paper accepted/published (3-4)	Paper submitted (1-2)	Not prepared and Not submitted paper (0)

**Mini project diaries where the marks are recorded :**

MINI PROJECT, REVIEW I - EVALUATION SHEET						
USN	Student Name	Literature Survey & Relevance to Present Context (12 Marks)	Problem Identification & Objectives (12 Marks)	Proposed Methodology & Expected Outcomes (8 Marks)	Presentation Skills (8 Marks)	TOTAL MARKS (40 Marks)
18Y22CS108	MAHESH.N.	11	11	8	8	38
18Y22CS122	NIKHIL.R.YALAIWAR	11	11	8	8	38
18Y22CS123	NISHANTH.C.K.	11	11	8	8	38
18Y22CS138	PRUTHVI.AVALEKAR	11	11	8	8	38

Remarks by the Committee members

\* Kindly encompass some probabilistic models / Blockchain techniques

Name and Signature of the committee members with date:  
 Guide:   
 Evaluator 1:   
 Evaluator 2:   
 Evaluator 3: 

Signature of the HoD with date

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## Sample MiniProject Marks:

MINI PROJECT, REVIEW 2 - EVALUATION SHEET									
USN	Student Name	Methodology (12 Marks)	Results, Discussions and Conclusions (12 Marks)	Presentation Skills and Viva Voce (8 Marks)	Report (8 Marks)	Ethics (8 Marks)	Working in a group (8 Marks)	Research Publication (4 marks)	TOTAL MARKS (60 Marks)
18Y22CS108	MAHESH.N.	12	12	8	8	7	8	3	58
18Y22CS122	NIKHIL.R.YALAIWAR	12	12	8	8	7	8	3	58
18Y22CS123	NISHANTH.C.K.	12	12	8	8	7	8	3	58
18Y22CS138	PRUTHVI.AVALEKAR	12	12	8	8	7	8	3	58

Remarks by the Committee members

\* Guide must be informed the paper publication well in advance.  
 \* Good Project and Very Good Concept.

Name and Signature of the committee members with date:  
 Guide:   
 Evaluator 1:   
 Evaluator 2:   
 Evaluator 3: 

## MAJOR PROJECT RUBRICS:

**Rubrics for Project work Phase I (VII Semester)**

Review 1: Literature Survey, Problem Identification, Detailed analysis of the Objectives and Study of existing Methodologies (30 marks)  
 Review 2: Detailed methodology, Expected deliverables, Presentation skills and Report Evaluation (70 marks)

Total CIE Marks: 100

Marks distribution for Phase I, Review 1 – 30 Marks (Evaluated jointly by a committee comprising Guide and other designated members)				
Parameters	Allocated Marks	HIGH	MEDIUM	LOW
Literature Survey & Relevance to Present Context	10	An extensive literature survey was conducted and collected a good information about the existing system. (8-10)	A moderate literature survey was made and collected some basic information about the existing system. (4-7)	Inadequate literature survey was made and not collected basic information about the existing system. (0-3)
Problem Identification & Objectives	10	Detailed and extensive explanation of the purpose and need of the Project. (8-10)	Brief explanation of the purpose and need of the project. (4-7)	Problem Identification is not clear. (0-3)
Study of existing Methodology	5	Detailed study of the existing methodologies was made. (4-5)	Moderate study of the existing methodologies was made. (2-3)	Little study of the existing methodologies was made. (0-1)
Presentation Skills	5	Contents of the presentations are appropriate and well delivered.	Contents of the presentations are appropriate but not well delivered.	Contents of the presentations are not appropriate and not well delivered.

**Marks distribution for Phase I, Review 2 – 70 Marks  
(Evaluated jointly by a committee comprising Guide and other designated members)**

Parameters	Allocated Marks	HIGH	MEDIUM	LOW
Extended Literature Survey	10	An extensive extended literature survey was conducted and collected a good information about the existing system. (8-10)	A moderate extended literature survey was made and collected some basic information about the existing system. (3-7)	Inadequate extended literature survey was made and not collected basic information about the existing system. (0-2)
Proposed Methodology & Expected Outcomes	20	Detailed explanation of the proposed methodology and expected outcomes are well defined. (15-20)	Brief explanation of proposed methodology and expected outcomes not well defined. (6-14)	Methodology & outcomes are not defined. (0-5)
Presentation Skills	10	Contents of the presentations are appropriate and well delivered. (8-10)	Contents of the presentations are appropriate but not well delivered. (3-7)	Contents of the presentations are not appropriate and not well delivered. (0-2)
Report	20	The report is structured and well prepared as per format. (15-20)	The report is not well structured, but as per format. (6-14)	Report is not well structured and not as per format (0-5)
Ethics	5	Project bibliography was complete and flawlessly formatted. All sources were cited in the presentation. Reports to the guide regularly and consistent in work. (4-5)	Project bibliography was moderate and not properly formatted. A few of the sources were only cited during the presentation. Not very regular but consistent at the work. (2-3)	Project bibliography was incomplete. None of the sources were cited during the presentation. Irregular attendance and inconsistency at work. (0-1)
Working in a group	5	Collaborates and communicates well in a group situation and integrates the views of others. (4-5)	Exchanges some views but requires guidance to collaborate with others. (2-3)	Make little or no attempt to collaborate in a group situation. (0-1)

**Rubrics for Project work Phase II (VIII Semester):**

Marks distribution for Phase II, Review 1 – 30 Marks (Evaluated jointly by a committee comprising Guide and other designated members)				
Parameter	Allocated Marks	HIGH	MEDIUM	LOW
Methodology (Theoretical analysis/ Experimental observations/ Fabrication / Testing)	10	Methodology being implemented are strongly in line with the objectives defined. (8-10)	Methodology being implemented are moderately in line with the objectives defined. (3-7)	Methodology being implemented are slightly in line with the objectives defined. (0-2)
Results and Discussions	10	All the results obtained are well presented and discussed. (8-10)	All the results obtained are moderately presented and discussed. (3-7)	Poor presentation of the results. Discussion was not proper. (0-2)
Presentation Skills	10	Excellent Presentation (8-10)	Moderate Presentation (3-7)	Poor Presentation (0-2)

**Rubrics for Project work Phase II (VIII Semester):**

**Marks distribution for Phase II, Review 2 – 70 Marks**  
**(Evaluated jointly by a committee comprising Guide and other designated members)**

Parameter	Allocated Marks	HIGH	MEDIUM	LOW
Methodology (Theoretical analysis/ Experimental observations/ Fabrication / Testing)	10	Implementation methodology of each of the objectives are very well defined. Well planned methodology. (8-10)	Implementation methodology of each of the objectives are moderately done. Moderately planned methodology. (3-7)	The defined objectives are not implemented properly. Poor planning was observed. (0-2)
Results, Discussions and Conclusions	10	All the results obtained are well presented and discussed. The conclusions drawn are justifiable. (8-10)	All the results obtained are moderately presented and discussed. The conclusions drawn are moderately justifiable. (3-7)	Poor presentation of the results. Discussion was not proper, and conclusions are not valid. (0-2)
Presentation Skills and Viva Voce	10	Contents of the presentations are appropriate and well delivered. (8-10)	Contents of the presentations are appropriate but not well delivered. (3-7)	Contents of the presentations are not appropriate and not well delivered. (0-2)
Report	20	The report is structured and well prepared as per format. (15-20)	The report is not well structured, but as per format. (6-14)	Report is not well structured and not as per format (0-5)
Ethics	5	Project bibliography was complete and flawlessly formatted. All sources were cited in the	Project bibliography was moderate and not properly formatted. A few of the sources were only cited	Project bibliography was incomplete. None of the sources were cited during the presentation. Irregular attendance and inconsistency at

		presentation. Reports to the guide regularly and consistent in work. (4-5)	during the presentation. Not very regular but consistent at the work. (2-3)	work. (0-1)
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DRAFT &amp; AFQ

		The conclusions drawn are justifiable. (15-20)	discussed. The conclusions drawn are moderately justifiable. (8-14)	valid. (0-7)
Presentation Skills and Viva Voce	10	Contents of the presentations are appropriate and well delivered. (8-10)	Contents of the presentations are appropriate but not well delivered. (4-7)	Contents of the presentations are not appropriate and not well delivered. (0-3)
Report	25	Report is structured and well prepared as per format (20-25)	Report is not well structured, but as per format (10-19)	Report is not well structured and not as per format (0-9)
Research Publications	10	Paper accepted/ published in an indexed Journal / Conferences (8-10)	Paper submitted in an indexed Journal / Conferences (1-7)	Not prepared and Not submitted paper (0)

*K.M.Jath*  
14.10.24  
Dean Academics

*A.L.S*  
14/10/24  
PRINCIPAL

Sample Project Diary marks:

- Evaluation Process for Internship:

An industrial internship is essential for engineering students as it bridges the gap between academic knowledge and real-world application. Students are required to carry out 15 weeks of internship as a part of the curriculum. This allows students to get hands-on experience, allowing students to apply theoretical concepts to practical situations, thereby deepening their understanding. Furthermore, internships help students make informed career choices by allowing them to explore different engineering domains and understand what suits their interests and strengths.

To ensure rigorous and outcome-focused evaluation of industrial internships, structured rubrics will be followed that aligns with Program Outcomes (POs). The process integrates continuous monitoring, standardized rubrics, and industry collaboration to foster graduate readiness.

**Rubrics for Internship:**

<b>INDUSTRY / RESEARCH INTERNSHIP (2IINT82)</b>				
<b>RUBRICS FOR INDUSTRY INTERNSHIP (CIE)</b>				
<b>Review 1</b>				
<b>TO BE EVALUATED BY THE INTERNAL COMMITTEE for 20 Marks</b>				
(Committee consisting of the Head of the concerned department and THREE faculty members of the Department, one of whom shall be the Guide)				
Performance Indicator	Maximum Marks	HIGH	Moderate	LOW
Industry Internship daily report (PO 9)	10	The diary is exceptionally detailed, well-organized, and comprehensive. Entries are consistently on time, with complete details of the industry internship, clear documentation of tasks, and use of relevant evidence (e.g., visuals, charts). (7-10)	The diary is adequately detailed but may lack consistency. Details of the industry internship and documentation are present but somewhat incomplete. Evidence is limited. (4-6)	The diary is missing significant content, disorganized, and poorly written. Details of the internships are absent or irrelevant, with no evidence provided. (0-3)
Presentation Skills (PO 9)	10	Contents of the presentations are appropriate and well delivered. (7-10)	Contents of the presentations are appropriate but not well delivered. (4-6)	Contents of the presentations are not appropriate and not well delivered. (0-3)

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<b>RUBRICS FOR INDUSTRY INTERNSHIP (CIE)</b>				
<b>Review 2</b>				
<b>TO BE EVALUATED BY THE INTERNAL COMMITTEE for 30 Marks</b>				
(Committee consisting of the Head of the concerned department and THREE faculty members of the Department, one of whom shall be the Guide)				
Performance Indicator	Maximum Marks	HIGH	Moderate	LOW
Industry Internship daily report (PO 9)	5	The diary is exceptionally detailed, well-organized, and comprehensive. Entries are consistently on time, with complete details of the industry internship, clear documentation of tasks, and use of relevant evidence (e.g., visuals, charts). (4-5)	The diary is adequately detailed but may lack consistency. Details of the industry internship and documentation are present but somewhat incomplete. Evidence is limited. (2-3)	The diary is missing significant content, disorganized, and poorly written. Details of the internships are absent or irrelevant, with no evidence provided. (0-1)
Presentation Skills (PO 9)	5	Contents of the presentations are appropriate and well delivered. (4-5)	Contents of the presentations are appropriate but not well delivered. (2-3)	Contents of the presentations are not appropriate and not well delivered. (0-1)
Industry Internship Final documentation (PO 9)	10	The documentation is exceptionally well-structured and comprehensive. It includes clear objectives, detailed task descriptions, robust analysis, and well-documented outcomes. The language is professional and error-free. (7-10)	The documentation is moderately structured but lacks depth in some sections. Objectives and tasks are documented but with limited analysis. Language is clear but contains noticeable grammatical or formatting issues. (4-6)	The documentation lacks structure with little to no documentation of tasks or objectives. Analysis is absent or irrelevant, and the language contains numerous errors. (0-3)

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Relevance of the Industry internship activities towards Environment, Sustainability and Innovation (PO 6)	10	Internship activities are highly relevant and impactful, with clear contribution to environmental protection, sustainable practices, and innovative solutions. Demonstrates a comprehensive understanding of sustainability challenges. (7-10)	Activities are moderately relevant to environmental and sustainability goals. Contributions are basic or indirect, with limited innovation. (4-6)	Internship activities lack relevance to environmental protection, sustainability, or innovation. No evidence of efforts to address sustainability challenges or promote innovative solutions. (0-3)
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**Sample internship diaries where the marks are recorded:**

**Sample internship diaries where the marks are recorded**

**VIII Semester: INDUSTRY INTERNSHIP, REVIEW I - EVALUATION SHEET (Internal Committee)**

**MAXIMUM MARKS: 20**

USN	Student Name	Industry Internship daily report (10 Marks)	Presentation Skills (10 Marks)	TOTAL MARKS (20 Marks)
18Y2ICS126	Prakhar Boraia	09	08	17

**Remarks by the Committee members**

1) Both end deployment was not explained properly

**Name and Signature of the committee members with date:**

  
 Evaluator 1

  
 Evaluator 2

ACE Scanner

**VIII Semester: INDUSTRY INTERNSHIP, REVIEW 2 - EVALUATION SHEET (Internal Committee)**  
MAXIMUM MARKS: 30

USN	Student Name	Industry Internship daily report (5 Marks)	Presentation Skills (5 Marks)	Industry Internship Final documentation (10 Marks)	Relevance of the Industry internship activities towards Environment, Sustainability and Innovation (10 Marks)	TOTAL MARKS (30 Marks)
163Y21CS126	Prakhar Bhowla	05	04	09	07	25

**Remarks by the Committee members**

1) Only UI components were created  
2) Technical explanations were not in detail.

Name and Signature of the committee members with date:

**VIII Semester: INDUSTRY INTERNSHIP (21INT82) - CONSOLIDATED CIE MARKS**

USN	Student Name	TOTAL MARKS (Internal committee Review marks + External Guide Review marks) 20 + 20 = 40 Marks	FINAL CIE Marks (20 Marks)	Signature of the Student with date
163Y21CS126	Prakhar Bhowla	17 + 25 + 44 = 86	43	Prakhar Bhowla 16-05-2025

Name and Signature of the committee members with date:

Signature of the HoD with date

- **Semester End Examinations (SEE):**

The semester end examination is a summative assessment that provides a comprehensive evaluation of all course outcomes. A well-structured question paper with mapped COs and Bloom's level indicators is used. The examination ensures broader coverage and deeper assessment of knowledge assimilation. SEE is evaluated for 50% assessment marks for all the courses.

The Institution carries out Semester End Examination at the end of the semester tentatively mentioned in the Institute academic calendar. SEE examination is conducted in two patterns:

- I. SEE for Theory course

- o All the theory courses are assessed for 100 marks and then scaled down to 50 marks.
- o The curriculum of each course is divided into five modules. 2 questions (each of 20 marks) from each module are set, and the student has to answer five full questions by choosing 1 question from each module that requires a student to study the complete curriculum.
- o The blooms taxonomy and coverage of course outcomes are taken into consideration while preparing the question paper.



USN 

1	B	Y							
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21CS36



## BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(An Autonomous Institute affiliated to Visvesvaraya Technological University, Belagavi)  
SEMESTER END EXAMINATION QUESTION PAPER

### Third Semester B.E. Degree Examination Regular / Make-up / Arrears / Supplementary

#### COMPUTER SYSTEM DESIGN

Time: 3 hrs.

Max. Marks: 100

- Note:** 1. Part A consists of 20 Multiple Choice Questions (MCQs) which are compulsory.  
 2. Part B consists of Descriptive Questions. Answer FIVE full questions, choosing ONE full question from each module.

Q. No	PART A Multiple Choice Questions	Marks
01	The gates required to build a half adder are a) EX-OR gate and NOR gate      b) EX-OR gate and OR gate c) EX-OR gate and AND gate      d) EX-NOR gate and AND gate	01
02	Which combinational circuit is renowned for selecting a single input from multiple inputs & directing the binary information to output line? a) Data Selector                        b) Data distributor c) Both data selector and data distributor      d) De-Multiplexer	01
03	One that is not the outcome of magnitude comparator is _____ a) $a > b$ b) $a < b$ c) $a - b$ d) $a = b$	01
04	How many outputs will a decimal-to-BCD encoder have? a) 4    b) 8    c) 12    d) 16	01
05	_____ is an example for sequential circuit a) Flip flop    b) Full adder    c) Half adder    d) None of the above	01
06	A register is defined as _____ a) The group of latches for storing one bit of information b) The group of latches for storing n-bit of information c) The group of flip-flops suitable for storing one bit of information d) The group of flip-flops suitable for storing binary information	01
07	A bidirectional 4-bit shift register is storing the nibble 1110. Its input is LOW. The nibble 0111 is waiting to be entered on the serial data-input line. After two clock pulses, the shift register is storing _____ a) 1110    b) 0111    c) 1000    d) 1001	01
08	What is the difference between a ring shift counter and a Johnson shift counter? a) There is no difference                b) A ring is faster c) The feedback is reversed            d) The Johnson is faster	01
09	How many flip-flops are required to make a MOD-32 binary counter?	01

	<b>02</b> a) 3   b) 45   c) 5   d) 6	
<b>10</b>	Synchronous counters eliminate the delay problems encountered with asynchronous counters because the: a) Input clock pulses are applied only to the first and last stages	<b>01</b>

## 21CS36

	b) Input clock pulses are applied only to the last stage c) Input clock pulses are not used to activate any of the counter stages d) Input clock pulses are applied simultaneously to each stage	
11	Which segments of a seven-segment display would be required to be active to display the decimal digit 2? a) a, b, d, e, and g b) a, b, c, d, and g c) a, b, d, f, and g d) a, b, c, d, e, and f	01
12	How many flip-flops are required to construct a decade counter? a) 10 b) 8 c) 5 d) 4	01
13	_____ provides storage internal to the CPU a) Registers b) RAM c) ROM d) None of the above	01
14	_____ enables a processor to work simultaneously on multiple instructions by performing a different phase for each of the multiple instructions at the same time. a) Branch prediction b) Pipelining c) Data flow analysis d) All the three	01
15	With memory-mapped I/O there is a _____ for memory locations and I/O devices a) Two address space b) Single address space c) No address Space d) None of the above	01
16	_____ microprocessor was an 8-bit machine, with an 8-bit data path to memory a) 8080 b) 8088 c) 8085 d) 80186	01
17	_____ determines the status of the processor and the outcome of previous ALU operations a) Program counter b) Instruction register c) Flags d) MBR	01
18	The ALU gives the output of the operations and the output is stored in the _____ a) Memory Devices b) Registers c) Flags d) Output units	01
19	Highly encoded schemes that use compact codes to specify a small number of functions in each micro instruction is _____ a) Horizontal organization b) Vertical organization c) Diagonal organization d) None of the above	01
20	The functions of execution and sequencing performed by using _____ a) Input signals b) Output signals c) Control signal d) CPU	01

**PART B**  
**Descriptive Questions**

Q. No	Module – 1	Marks	CO, RBT
1a.	Using Quine Mc-Clusky method, simplify the following Boolean Expression. $f(a,b,c,d) = \Sigma m(7,9,12,13,14,15) + \Sigma d(4,11)$ Solve the above expression and list out the Prime implicant and Essential Prime implicant with Prime implicant chart.	8	CO2, K3
b.	Explain tristate buffers and how it can be used as 2:1 MUX.	8	CO1, K2
OR			
2a.	Define Multiplexer. Realize 16:1 MUX using 4:1 MUX.	8	CO1, K3
b.	Illustrate 8-to-3 Priority Encoder with respective block diagram and truth table.	8	CO2, K2

Module – 2			
3a.	Define shift register? Explain the working of 8bit SISO shift register using SR FlipFlop.	8	CO3, K2

## 21CS36

b.	Differentiate between latch and a flip-flop. Explain different types of flip-flops with Truth Table and Logic Circuit.	8	CO3, K3
<b>OR</b>			
4a.	Explain the working of multi operational PIPO right shift register using Flip-flops and MUXs and also build timing diagram for the same.	8	CO3, K2
b.	Realize a JK master slave flipflop with neat diagram, truth table and timing diagram.	8	CO3, K3
<b>Module – 3</b>			
5a.	Differentiate between: i) Mealy and Moore model. ii) Synchronous and Asynchronous sequential circuits.	8	CO3, K3
b.	Design Mod-8 synchronous up counter.	8	CO4, K4
<b>OR</b>			
6a.	Analyze the state graph for the following circuit using Mealy and Moore Model.	8	CO3, K3
b.	Design Mod-5 synchronous up counter.	8	CO4, K3
<b>Module – 4</b>			
7a.	Draw and explain the top level structure of computer.	8	CO2, K2
b.	Illustrate with an example the program execution indicating the contents of memory and registers.	8	CO4, K2
<b>OR</b>			
8a.	Illustrate with a neat diagram the simplified view of major elements of multicore computer.	8	CO1, K2
b.	Explain with neat flow diagram how a simple Interrupt is processed by CPU indicating hardware and software states.	8	CO4, K2
<b>Module – 5</b>			
9a.	Explain the complete sequence of micro operations with a flowchart.	8	CO3, K2
b.	Sketch the block diagram of hardware for addition and subtraction and explain how an overflow occurs with an example.	8	CO2, K2
<b>OR</b>			
10a.	Demonstrate with a block diagram, the basic organization of micro programmed control unit.	8	CO3, K3

b. Use the Booth's algorithm to multiply 25 by 15 where each number is represented using 6 bits.

8

CO2, K3

**BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT**

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**I. SEE for Laboratory courses**

All the laboratory courses are assessed for 100 marks at the Semester End Examination and the same will be scaled down to 50 marks. Practical examinations will be conducted usually immediately at the end of semester under the supervision of two examiners, one internal examiner, and one external examiner. Based on the experiment conducted during the semester, students are evaluated based on the procedure, conduction, analysis, interpretation and viva-voce.

**II. SEE for Project Work and Internship**

The SEE for the Internship and Project work will be assessed for 100 marks each. The evaluation is based on the specific rubrics. The performance indicators were identified as the deliverables and directly mapped to the Program Outcomes. The examinations will be conducted under the supervision of two examiners, one internal examiner, and one external examiner. The marks are recorded based on the extent to which the students have attained the performance indicators.

		Demonstrates a comprehensive understanding of sustainability challenges. (7-10)	(4-6)	sustainability challenges or promote innovative solutions. (0-3)
Individual / Working in a group (PO 8)	10	Function effectively as an individual. Collaborates and communicates well in a group situation and integrates the views of others. (7-10)	Moderately active as an individual and Exchanges some views but requires guidance to collaborate with others. (4-6)	No individual contribution and Make little or no attempt to collaborate in a group situation. (0-3)
Project Management and Finance (PO 10)	5	Well-structured project with effective planning, task execution, and time management. Cost analysis of the project was done effectively and well documented. (4-5)	Moderate project planning and management. Tasks and finances are somewhat managed. Cost analysis of the project was average and not very well documented. (2-3)	Poor project planning, ineffective task and time management. Cost analysis was not done, and financial documentation is inadequate. (0-1)
Ability to learn independently, adapt to new and emerging technologies, and exhibit critical thinking (PO 11)	5	Consistently demonstrates independent learning, adapts quickly to new technologies, and applies critical thinking to solve problems. (4-5)	Sometimes demonstrates independent learning and adaptability; applies basic critical thinking in familiar contexts. (2-3)	Rarely demonstrates independent learning; struggles to adapt or think critically without direct instruction. (0-1)

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**Indirect Assessment Tools:****Course end survey**

At the end of the course, the course coordinator conducts a course end survey for the students. The survey consists of a set of questions related to course outcomes. Course coordinator will generate the survey report based on the scale opted by students for each question. The result obtained from the processing of the questionnaire will be reference for improvement of the POs which are not attained during their graduation.

COURSE END SURVEY ATTAINMENTS SUBJECT WISE														
Name of Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
21MA11- Calculus and Differential Equations	1.50	0.99												
21PY12-Engineering Physics	1.43	0.95		0.95							0.95			
21EE13-Elements of Electrical Engineering	2.39	1.43			1.44	1.44	0.96							
21ME14 Engineering Graphics	0.97	0.97	1.45	1.45	2.42					1.45				
21CV15-Elements of Civil Engineering	2.42	2.42									0.96			

21PYL16-Engineering Physics Laboratory	1.43	1.43	0.96	1.43	0.96		2.39	0.96				
21EE17-Electrical Engineering Laboratory		2.44	1.46	0.97	2.44	0.97			1.46	1.46		
21AE110- Design Thinking and Innovation											0.94	
21MA21-Advanced Calculus, Laplace Transforms and Linear Algebra		2.48	1.37	0.98								
21CH22-Engineering Chemistry												
21CS23-C Programming for Engineers	1.51	1.01	1.01	1.01	1.51			1.01				
21EC24-Basic Electronics Engineering	1.42	1.41										
21ME25-ELEMENTS OF MECHANICAL ENGINEERING											0.94	
21CHL26-Engineering Chemistry Laboratory												
21AE27 INDIAN KNOWLEDGE SYSTEM												
21MTB31-Advanced Engineering Mathematics-I		2.46	0.98									
21CS35-Data Structure and Applications	1.00	1.00	1.00	1.00	1.50		1.00	1.00	1.00	2.51	2.51	2.51
21CS36-Computer System Design	0.97	0.97	1.45		2.42		1.45			1.45		
21CS37-Discrete Mathematical Structures	1.49	1.48	0.99	2.48	0.99	0.99	0.99	2.47	2.47	2.47		2.51
21CSL38A-Data Structures and Applications Laboratory	1.50		1.00	0.97			1.00			1.00	0.86	1.40
21CSL38B-Computer System Design Laboratory	1.46	0.97		1.46		0.97	0.97	0.97		0.97		
21CSL38C-Web Technology Laboratory with Mini Project	1.49	0.99	1.48	0.99	0.99		1.48	0.99		0.99	2.47	2.47
21UHV33-Universal Human Values- I												

21MTB41 Advanced Engineering mathematics-II	2.45	0.98										
21cs45-Microcontroller and Embedded Systems	1.44	1.44	0.96	0.96	0.96		0.96	1.44	0.96	0.96	0.96	0.86
21CS46-Design and Analysis Algorithm	1.48	1.48	0.98	0.98	0.98	0.98	0.98	0.98	1.48	1.48	0.98	0.00
21CS47-Software Engineering	1.49	1.49	0.99	0.99			0.99	2.48	2.48		0.99	2.51
21CIP42-Constitution of India and Professional Ethics	0.00				2.48	2.48	2.48	1.49	2.48		0.99	
21UHV43-Universal Human Values- II												
21HSS44-Environmental Studies												
21CSL48A-Microcontroller and Embedded Systems Laboratory	1.45	0.97	0.00	0.00	0.97	0.00	0.00	0.97	1.45	1.45	0.97	0.86
21CSL48B-Design and Analysis of Algorithms Laboratory	1.49	0.99	0.99	1.49	2.48	0.99	0.99	1.49			0.99	0.86
21CSL48C-Object Oriented Programming using JAVA Laboratory	1.00		1.00							1.00		
21CS55-Database Management System	1.41	1.41	1.41	1.41	2.35		0.94	2.35	2.35	0.94	1.41	
21CS56-Operating Systems	0.93	0.93										
21CS57-Data Communication and Networks	1.31	0.87		1.31							0.87	
21CSL58A-Database Management System Laboratory	2.35		0.94	0.94	0.94		0.94				0.86	
21CSL58B-Operating Systems Laboratory	0.92	0.92	0.92								2.29	
21CSL58C-Data Communication and Networks Laboratory	1.29	0.86					1.24				0.86	
21HSS51-Management and Entrepreneurship							2.20	1.32	1.32			1.32
21AEC52-Cyber and Intellectual Property Law	0.90	0.90	1.36	1.36		1.36	1.36	2.26	1.36	1.36		
21CS541-Blockchain Technology	1.35	1.35		1.35			2.13				0.90	
21CS543-INTERNET OF THINGS	1.30	0.87	0.87	2.21	1.33		0.88	2.21	1.33	1.33	2.21	

21CS63-Green IT and Sustainability	1.35	0.87			2.35	2.35	0.87	1.36	1.36		1.00		
21CS67-Data Science and Machine Learning	1.34	0.90		1.35	0.90						0.89	2.25	2.25
21CS68-Theory of Computation	1.39		0.91		1.37			1.34	1.34			0.86	
21HSS61-Project and Finance Management	0.93	0.93	0.93				0.93	1.40	1.40			2.34	
21AEC62-Bioinformatics											1.40	2.32	
21CS643- Robotic Process Automation	1.30	0.87	0.87	1.30	0.87			0.87	0.87	0.87	0.87	1.30	1.30
21CS645-Big Data Analytics	1.25										1.25		
21CS66-Mini Project	2.34	1.40	2.34	1.40	1.40	1.40	1.40	2.34	2.34	2.34	1.40	1.40	1.40
21CSL69A-Data Science and Machine Learning Laboratory	2.32	2.32	2.32	2.32	0.93			0.93	0.93			0.94	
21CSL69B-Emerging Technology Lab	1.42	0.95			0.95			0.95		0.95	1.42		
21CSL69C-Mobile Application Development Laboratory	1.41	0.94	0.94	0.94	0.94			0.94	1.41			0.94	
21HSS71-Research Methodology	1.50	1.00	1.00	1.00	1.00			1.00	1.50			1.00	2.51
21CS72-Data Visualization with Python	1.02	1.02	1.02	1.53	2.55				1.02			2.55	2.55
21CSP76-Project Works	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32
21CS732- Data warehousing and Data mining	0.99	0.99	1.49	1.49	2.48				1.49				
21CS733-ADVANCED JAVA	1.41	0.94	0.94	0.94	0.94				1.45			1.45	1.45
21CS742-Cloud Computing	0.00	1.49	1.49			0.99	0.99	1.49		1.49		0.99	0.99
BATCH 2021-25	1.5	1.2	1.2	1.3	1.4	1.4	1.4	1.3	1.6	1.5	1.4	1.1	1.5
	2.0												

Graduate Exit Survey:

GRADUATE EXIT SURVEY	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
BATCH 2021-25	2.6	2.6	2.6	2.6	2.5	2.7	2.6	2.7	2.7	2.7	2.6	2.7	2.7	2.7

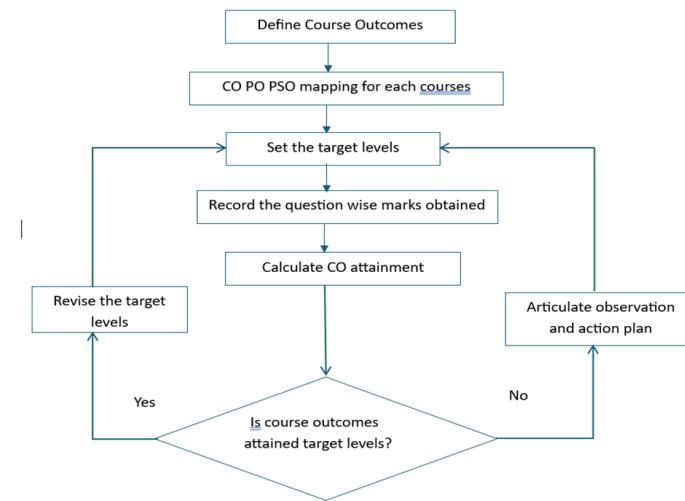
## 3.7.2 Record the Attainment of Course Outcomes of all Courses with Respect to Set Attainment Levels (20)

Institute Marks : 20.00

### 3.7.2 Record the Attainment of Course Outcomes of all Courses with Respect to Set Attainment Levels (20)

(Program shall set course outcome attainment levels for each course. Measuring CO attainment through Continuous Internal Examinations (CIE) and Semester End Examination (SEE) needs to be detailed.)

The process of recording the attainment of Course Outcomes (COs) is a critical component of the Outcome-Based Education (OBE) framework adopted by the institution. Each course offered in the curriculum is designed with clearly defined Course Outcomes (COs) that align with the Program Outcomes (POs) and Program Specific Outcomes (PSOs). These COs reflect the specific knowledge, skills, and competencies that students are expected to acquire upon successful completion of the course. Target may be stated in terms of percentage of students getting more than class average marks



To ensure effective monitoring and evaluation, predefined attainment levels are set for each CO. Typically, these attainment levels are categorized into three tiers – High, Moderate, and Low .According to Table 3.7.2.1, 80% of students scoring 60% and above is level 3(High), 70% of students scoring 60% and above are level 2 (Medium), 60 % of students scoring 60% and above is level 1(Low).

#### 3.7.2.1 The process used for calculating the CO attainment.

The steps involved in calculating the CO-Attainment are as follows.

- Define the course outcome for each course.
  - Identify the tools for CO attainment (CIE and SEE)
  - Decide the weightages of the tools for each CO (The weightages can be different for each CO).
  - Calculate the CO attainment from CIE and SEE
  - Calculate the final CO attainment by referring the weightages.
- Defining the Course Outcomes for each course.*

Course Outcomes (COs) are explicit statements detailing the specific abilities, skills, and knowledge that a student is expected to acquire and demonstrate upon the successful completion of a course. Each CO is carefully crafted to align with the course content, ensuring that the learning objectives are measurable and achievable.

- Sample CO Statements*

#### Course Title: Theory of Computation

Upon successful completion of the course, the students will be able to

CO-1	Make use of the concept of abstract machines and their power to recognize the languages.
CO-2	Apply the finite state machines for modelling and solving computing problems.
CO-3	Design context free grammars for formal languages.
CO-4	Analyse difference between decidability and undecidability.
CO-5	Design the automata using the JFLAP Tool

Table 3.7.2.1: Sample course outcomes

*c. Decide the weightages for each tool.*

To calculate the CO attainment values, different weightages are given to the assessment tools. These weightages can be different for each course. Table 3.7.2 shows a sample of the weightage given to CIE, CCA, and SEE.

Table 3.7.2: COs and their weightages used for CO attainment calculation for Signal Processing.

CO Weighta ges	IA	CC As	SE E	Su m
CO1	65 %	0%	35 %	100 %
CO2	65 %	0%	35 %	100 %
CO3	55 %	0%	45 %	100 %
CO4	0%	56%	44 %	100 %
CO5	0%	100 %	0%	100 %

*d. Calculate the CO attainment from CIE and SEE*

**Calculations for IA:** The attainment of Course Outcomes (COs) using Internal Assessment (IA) is carried out through a structured multi-step process:

## Step 1: Mapping Questions to COs

Each question in the internal assessments is mapped to a specific Course Outcome. For example, if Question 1 and Question 2 in IA1 and Question 5 in IA3 are mapped to CO1, this mapping is recorded accordingly.

## Step 2: Calculating Student-wise CO Scores

For each student, the marks obtained in the questions mapped to a particular CO are summed. Taking the example in step 1, the marks obtained by a student in Q1 and Q2 of IA1 and Q5 of IA3 are added together to calculate the student's score for CO1. This process is repeated for all students and for each CO.

## Step 3: Evaluating CO Attainment using a Formula.

Percentage = (Total marks obtained for the attempted CO-mapped questions / Sum of Max Marks of the respective CO-mapped questions) × 100

If the Percentage is > 60, then a label "Y" is assigned for that CO, else it is blank.

## Step 4: Determining CO Attainment Level

Count the total number of "Y"s for each CO. Divide this number by the total class strength to calculate a percentage value. Based on this percentage, the attainment level is determined as follows:

- **Level 3:** ≥ 80%
- **Level 2:** ≥ 70% and < 80%
- **Level 1:** ≥ 60% and < 70%
- **Level 0:** < 60%

Table 3.7.2.3 shows the process for CO attainment using IA marks.

				IA-1		IA-2						IA-3						CIE							
				CO No.	1	1	2	2	2	2	2	1	1	1	1	2	3	3	3	3	2	2	2	2	
				Question No.	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5
				MAXIMUM MARKS	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
S1No.	USN	Ome																			CO1	CO2	CO3	CO4	CO5
1	1BY21CS001	ABDULLAH KHALED SALEH BACKBA			3	8	4		6	6	2		0		0	1		0	0		Y				
2	1BY21CS002	ABDURAHMAN ABDULAH SALEM BANSINGAB							8	10		10	8		6	3	5	2	6	1	8	2	Y		
3	1BY21CS003	ABHISHEK KUMAR							10	10	10	10	9		9	6	4	9		Y	Y	Y			
4	1BY21CS004	ABHISHEK PATIL							10	10	6		4		5		6		7	Y	Y				
5	1BY21CS005	ADBHUT SHUKLA	10	10	10	10	8							7	9	8	10	10		Y	Y	Y			
6	1BY21CS006	ADITI K	5	3	8	0									0	5	4	9							
7	1BY21CS007	ADITYA BHUSHAN	2	0		2									1	0									
8	1BY21CS008	AISHWARYA	6	9	0	8	10	1	6	10	10	10	10	10	1	2	0	3	3	1	Y				
9	1BY21CS009	AJINKYA SHRESTHA	4	0	4					10			1	2		6				Y					
10	1BY21CS010	Akash R	8	10	9	9	3	3	10	10	10	10	10	10	7	4		6	10	Y	Y	Y			
11	1BY21CS011	AKHILA KT	9	8	10		10	8	4	10	10	10	10	4	10	10	9	9	8	4	8	Y	Y	Y	
																				168	147	149	0	0	
																				67%	62%	63%	0%	0%	
																				1	1	1	0	0	

Table 3.7.2.3: Table shows the process of CO attainment calculation using IA scores.

#### • Calculations for CCA:

The procedure for evaluating CO attainment through CCA is identical to the one used for Internal Assessment (IA), with the only difference being the assessment tool. The steps followed are

Step1: Mapping CCA to CO

The CCA is mapped to one or more Cos.

Step2: Calculating Student-wise CO Scores from CCA

For each student, the marks obtained in all the CCA components that map to a particular CO are added to compute the total score for that CO. This is done for all students and all COs.

Step 3: Evaluating CO Attainment with a Formula.

Percentage = (Marks obtained / Max Marks allotted to CCA) × 100

If there are more than one CCA conducted, the sum of the marks scored by all components corresponding to a CO is considered.

If the result of above equation is >60% then it results in "Y", otherwise it is blank.

Step 4: Step 4: Determining the CO Attainment Level for CCA

1. Count the number of students who received a "Y" for each CO.
2. Divide this count by the total number of students in the class to get the percentage of attainment.
3. Use the following scale to assign the attainment level:

**Level 3:** ≥ 80%

**Level 2:** ≥ 70% and < 80%

**Level 1:** ≥ 60% and < 70%

**Level 0:** < 60%

3.7.2.4 Table shows the process of CO attainment calculation using CCA scores.

S1 No.	USN	Name	CCAs		CCAs							
			CO No.		20	5	CO1		CO2	CO3	CO4	CO5
			Question No.		1	2						
MAXIMUM MARKS			20	20								
1	1BY21CS001	ABDULLAH KHALED SALEH BAOKBA	10	20							Y	
2	1BY21CS002	ABDULRAHMAN ABDULLAH SALEM BASINGAB	18	20							Y Y	
3	1BY21CS003	ABHISHEK KUMAR	19	20							Y Y	
4	1BY21CS004	ABHISHEK PATIL	17	20							Y Y	
5	1BY21CS005	AD BHUT SHUKLA	18	20							Y Y	
6	1BY21CS006	ADITI K	19	20							Y Y	
7	1BY21CS007	ADITYA BHUSHAN		20							Y	
8	1BY21CS008	AISHWARYA	20	20							Y Y	
9	1BY21CS009	AJINKYA SHRESTHA										
10	1BY21CS010	Akash R	17	20							Y Y	
11	1BY21CS011	AKHILA K T	20	20							Y Y	
					0	0	0	195	201			
					0%	0%	0%	82%	85%			
					0	0	0	3	3			

- Calculations for SEE.

Step 1: Mapping Questions to Cos

Each SEE question—whether multiple-choice (MCQ) or descriptive—is mapped to a specific Course Outcome (CO).

Step2: For each student, the marks obtained in all the questions mapped to a particular CO are summed. This sum is divided by the total maximum marks allotted to those same questions. This gives a **normalized score** for that CO.

Percentage = (Marks obtained / Max Marks allotted to SEE) × 100

If the result of above equation is >60% then it results in "Y", otherwise it is blank.

S1 No.	USN	Name	MCQs		SEE												SEE												
			CO No.		1	2	3	1	1	1	2	2	2	3	3	3	2	3	2	3	2	4	4	CO1	CO2	CO3	CO4	CO5	
			Question No.		4	9	7	1a	1b	2a	2b	3a	3b	4a	4b	5a	5b	6a	6b	7a	7b	8a	8b	9a	9b	10a	10b		
MAXIMUM MARKS			1	1	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8			
1	1BY21CS001	ABDULLAH KHALED SALEH BAOKBA	3	2	3	2	1	0	0	6	1	2	1	0	0	6	1	0	0	0	3	0	0	2	3				
2	1BY21CS002	ABDULRAHMAN ABDULLAH SALEM BASINGAB	3	3	2	8	8	7	7	0	0	8	8	7	7	0	0	6	5	0	0	8	7	8	6				
3	1BY21CS003	ABHISHEK KUMAR	3	9	2	0	0	8	8	0	0	0	8	8	0	0	7	7	5	8	8	7	8	8	Y	Y			
4	1BY21CS004	ABHISHEK PATIL	4	3	4	4	5	4	4	0	0	4	5	4	4	0	0	6	6	0	0	8	8	7	4	Y	Y		
5	1BY21CS005	AD BHUT SHUKLA	4	6	5	8	8	0	0	0	0	8	8	0	0	0	8	8	0	0	8	8	8	8	Y	Y	Y		
6	1BY21CS006	ADITI K	4	5	4	5	5	0	0	6	7	5	5	0	0	6	7	0	0	0	0	8	6	7	4	Y	Y	Y	
7	1BY21CS007	ADITYA BHUSHAN	1	4	4	3	1	0	0	3	4	3	1	0	0	3	4	0	0	0	0	0	0	0	4	Y			
8	1BY21CS008	AISHWARYA	4	7	5	8	8	8	8	0	0	8	8	8	0	0	8	8	0	0	8	8	8	8	Y	Y	Y		
9	1BY21CS009	AJINKYA SHRESTHA	3	5	5	0	0	0	0	0	0	0	0	0	0	0	6	4	0	0	0	0	5	3	Y	Y	Y		
10	1BY21CS010	Akash R	3	3	4	0	0	6	8	8	0	0	6	8	8	0	0	0	8	8	8	8	8	Y	Y	Y			
11	1BY21CS011	AKHILA K T	2	6	2	0	0	8	8	0	0	0	8	8	0	0	6	8	6	8	8	7	8	8	Y	Y	Y		
																									190	195	199	98	0
																									80%	82%	84%	41%	0%
																									3	3	3	0	0

Table 3.7.2.5: Process of CO attainment calculation using SEE scores.

a. The Final CO attainment calculation.

Based on the weightages given in Table 3.7.2.1, the CO attainment for each activity and the corresponding weightage is considered

For example:

If the CO1 attainment through IA is 67%, and through SEE is 80%.

For IA, since percentage (67%) is above 60% the attainment level is 1,

And for SEE, since percentage (80%) is above 80% the attainment level is 3,

The final attainment of CO1 is = (65% of 1) + (35% of 3) = 0.65+1.05=1.71

**Similar calculations can be used for other CO attainment calculations.**

COURSE OUTCOMES	OVERALL ATTAINMENT LVL
CO1	1.71
CO2	1.70
CO3	1.90
CO4	1.67
CO5	3.00

**Table 3.7.2.6: Process of CO attainment calculation using SEE scores.**

**CO Attainment of all courses:**

sl.No.	Name of Course	CO1	CO2	CO3	CO4	CO5
1	21MA11- Calculus and Differential Equations	2.19	1.5	1.5	1.67	
2	21PY12-Engineering Physics	0.56	0.97	1.63	0.7	
3	21EE13-Elements of Electrical Engineering	0.48	1.12	0.88	1.78	
4	21CV15-Elements of Civil Engineering	1.38	1.46	1.36	0.45	2.36
5	21PYL16-Engineering Physics Laboratory	2.5	2.5	2.5		
6	21EE17-Electrical Engineering Laboratory	3	3	3	3	
7	21AE110- Design Thinking and Innovation	3	3	2.56	2.42	2.64
8	21MA21-Advanced Calculus, Laplace Transforms and Linear Algebra	1.92	1.14	2.25	1.89	2.74
9	21CH22-Engineering Chemistry	2.04	2.14	1.6	1.4	
10	21CS23-C Programming for Engineers	3	2.7	2.1	2.7	
11	21EC24-Basic Electronics Engineering	2.41	0.65	2.24	3	
12	21CHL26-Engineering Chemistry Laboratory	3	3			
13	21MTB31-Advanced Engineering Mathematics-I	2.08	2.13	1.28	2.16	
14	21CS35-Data Structure and Applications	1.77	0.92	1.71	1.23	
15	21CS36-Computer System Design	2.41	2.4	2.41	2.16	

16	21CS37-Discrete Mathematical Structures	3	3	3	3	
17	21CSL38A-Data Structures and Applications Laboratory	3	3	3		
18	21CSL38B-Computer System Design Laboratory	3	3	3		
19	21CSL38C-Web Technology Laboratory with Mini Project	3	3	3		
20	21UHV33-Universal Human Values-I	1.5	1.5			
21	21MTB41 Advanced Engineering mathematics-II	1.26	0.85	3	3	
22	21cs45-Microcontroller and Embedded Systems	1.58	2	3	3	1.5
23	21CS46-Design and Analysis Algorithm	1.77	2.69	1.85	2.14	
24	21CS47-Software Engineering	2.47	2.47	2.34		
25	21UHV43-Universal Human Values-II	3	3			
26	21CSL48A-Microcontroller and Embedded Systems Laboratory	3	3	3		
27	21CSL48B-Design and Analysis of Algorithms Laboratory	3	3	3		
28	21CSL48C-Object Oriented Programming using JAVA Laboratory	3	3	3		
29	21CS55-Database Management System	2.28	2.4	3	3	3
30	21CS56-Operating Systems	1.8	3	3	1.5	2
31	21CS57-Data Communication and Networks	3	2.06	2.75	2.47	2.62
32	21CSL58A-Database Management System Laboratory	3	3	3		
33	21CSL58B-Operating Systems Laboratory	2.8	2.8	2.8	2.8	2.8
34	21CSL58C-Data Communication and Networks Laboratory	3	3	3	3	3
35	21HSS51-Management and Entrepreneurship	3	3	3	3	
36	21AEC52-Cyber and Intellectual Property Law	3	3	3	3	2.01
37	21CS541-Blockchain Technology					
38	21CS543-INTERNET OF THINGS	3	3	2.6	3	3
39	21CS63-Green IT and Sustainability	3	3	3	3	

40	21CS67-Data Science and Machine Learning	3	3	2.38	3	
41	21CS68-Theory of Computation	1.71	1.7	1.9	1.67	3
42	21HSS61-Project and Finance Management	3	3	3	3	3
43	21CS643- Robotic Process Automation	3	3	3	2.3	3
44	21CS645-Big Data Analytics	3	1.54	2.47	2	2.27
45	21CSL69A-Data Science and Machine Learning Laboratory	3	3			
46	21CSL69B-Emerging Technology Lab	3	3	3		
47	21CSL69C-Mobile Application Development Laboratory	2.8	2.8	2.8		
48	21HSS71-Research Methodology	3	2.1	3	3	3
49	21CS72-Data Visualization with Python	3	3	3	3	3
50	21CS732- Data warehousing and Data mining	1.43	1.32	1.8	2	
51	21CS733-ADVANCED JAVA	3	2.1	2.1	2.3	
52	21CS742-Cloud Computing	1.27	0.63	0.96	0.5	1.67

Table 3.7.2.7: The Attainment of all the courses is listed below.

**Process and tools for PO attainment.****Step 1: Mapping Course Outcomes (COs) to Program Outcomes (POs)**

Each Course Outcome (CO) is mapped to the relevant Program Outcomes (POs) based on the associated Performance Indicators (PIs) and competencies.

**Step 2: Determining the Strength of Mapping**

The strength of the mapping is evaluated on a scale of 1 to 3, reflecting the extent of contribution:

1: Slight (Low) – Represents a minimal contribution towards the attainment of the PO.

2: Moderate (Medium) – Indicates a moderate contribution towards the attainment of the PO.

3: Substantial (High) – Denotes a significant contribution towards the attainment of the PO.

**Step 3: Calculating the Mapping Strength**

For each CO, the number of PIs mapped to a specific PO is counted.

The mapping strength is calculated using the formula:

$$\text{Mapping Strength} = \text{Number of PIs Mapped} / \text{Total Number of PIs for the PO}$$

Based on the calculated ratio, the mapping strength is assigned as follows:

$\leq 0.33$ : Mapping Strength = 1

$> 0.33$  and  $\leq 0.66$ : Mapping Strength = 2

$> 0.66$ : Mapping Strength = 3

**Step4: PO-PSO Mapping**

The PSO mapping is done based on the relevance of the Cos based on the defined PSOs.

Table below shows the CO to PO and PSO mapping for Signal Processing Course.

**CO-PO-PSO Mapping:**

CO-PO MAPPING		Course Outcomes	CO Level- Maximu m	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2
PO	PO			0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00
Make use of the concept of abstract machines and their power to recognize the languages.	3	2.0 0 0 0 0 0 0 0 0 0 0 0 0.00 0.00 0.00 0.00 0.00															
Apply the finite state machines for modelling and solving computing problems.	3	2.0 0 0 0 0 0 0 0 0 0 0 0 0.00 0.00 0.00 1.00 0.00															
Design context free grammars for formal languages.	3	2.0 0 0 0 0 0 0 0 0 0 0 0 0.00 0.00 0.00 1.00 0.00															
Analyse difference between decidability and undecidability.	3	2.0 0 0 0 0 0 0 0 0 0 0 0 0.00 0.00 0.00 0.00 0.00															
Design the automata using the JFLAP Tool	3	0.0 0 0 0 0 3.0 0 0 0 0 0 2.0 2.00 0.00 0.00 1.00 0.00															
SUM		8.0 0 0 1.0 0 0 5.0 0 0 0 0 2.0 2.00 0.00 0.00 3.00 0.00															
Ciii*		2.0 0.0 0.0 1.0 0.0 1.7 0.0 0.0 0.0 0.0 2.0 2.0 2.0 0.0 0.0 1.0 0.0															

CO-PO and PSO mapping.

**Step 5: Calculating the PO and PSO attainments.**

Next, once the mapping is done, the CO PO and PSO attainment is done by the average of all CO attainments for a particular PO.

For example, if CO1 to PO1 mapping is 3, and the CO1 attainment is 0.5, the PO1 attainment for CO1 is  $3 \times 0.5 = 1.5$ . similarly, the attainment value for each CO to PO1 is calculated, and the average PO1 attainment for all the COs is considered as the final PO1 attainment. This process is followed for all POs and PSOs. The Table below shows the PO attainment table for signal processing course.

PO- PSO Attainment table

ATTAINMENT	CO Level-Attained														
		PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2
Make use of the concept of abstract machines and their power to recognize the languages.	1.71	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apply the finite state machines for modelling and solving computing problems.	1.70	1.1	0.0	0.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
Design context free grammars for formal languages.	1.90	1.1	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
Analyse difference between decidability and undecidability.	1.67	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Design the automata using the JFLAP Tool	3.00	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	1.1	1.1	0.0	0.0	0.6	0.0
SUM		4.6	0.0	0.6	0.0	2.8	0.0	0.0	0.0	1.1	1.1	0.0	0.0	1.7	0.0
PO ATTAINMENT		1.1	0.0	0.6	0.0	0.9	0.0	0.0	0.0	1.1	1.1	0.0	0.0	0.6	0.0

Process to set the Target:

To start with the First cycle of a course, the initial target set is 3 and the benchmark is that 80% of the students are scoring ≥ 60% of the marks.

The target set is based on:

- The performance of the students.
- Minimum expected academic standards by the students.
- As a measure of continuous improvement.

#### CO Attainment of the Sample Course: Theory of Computation

COs	Target	Attained	Observations
CO1	3	1.71	The CO attainment is Moderate. The CO is mostly in understand and explain level. In the coming semester, More assignments or questions may be framed at explain level.
CO2	3	1.70	The CO attainment is Moderate. Students are able to understand the FSM but difficult in designing the FSM. More assignments, Practical examples and hands-on tools may improve the attainment.
CO3	3	1.90	The CO attainment is quite good. More analytical problems on finite automata, grammars can be given
CO4	3	1.67	To analyse the real time examples on decidability and un decidability and further to illustrate them with examples
CO5	3	3.00	This CO is attained.

#### CO Gap analysis:

These course-wise attainment records are first reviewed by the Course Coordinator. In cases where attainment falls short of the expected level, appropriate Gap analysis and Action plan measures are to be planned by the Course coordinator(s) which may include the following:

- Revising the course contents
- Revising instructional strategies
- Revisiting the assessment plan with a balanced CO weightages and RBT levels
- Enhancing the quality of learning resources.
- Incorporate tutorial sessions for more analytical exposure.
- Arranging partial delivery of the courses from industry experts.

The action plan will then be presented to the members of the Program Assessment Committee (PAC) for verification and approval for implementation for the next cycle.

#### Action Plan to improve CO attainment of sample course: Theory of Computation

Cos	Action Plan
CO1	To accommodate effective delivery methods, setting up of quality question papers which includes higher end Bloom's levels
CO2	Appropriate Alternative Assessment Tools such realizing TOC concepts through real life examples.
CO3	The CO attainment is quite good. More analytical problems on finite automata, grammars can be given
CO4	To analyse the real time examples on decidability and un decidability and further to illustrate them with examples

CO5	Attained
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**3.8 Attainment of Program Outcomes and Program Specific Outcomes (25)**

Total Marks 25.00





## PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
21PYL16	1.7	1.7	0.8	1.7	0.8	0	0	2.5	0.8	0	0	0
21EEL17	3	2	1	3	1	0	0	0	1.5	1.5	0	0
21CHL26	2	1	0	2	2	1.17	1	1	2	1	0	1
21CSL38A	2	0	1	1	0	0	0	1	0	0	0	1
21CSL38B	2	1	0	0	2	0	0	1	1	1	0	1
21CSL38C	2	1	1.5	1.3	1	0	0	2	1	0	1	1
21CSL48B	2	1	1	2	3	1	1	1.7	0	0	0	1
21CSL48A	2	1	0	0	1	0	0	1	2	1.7	1	0
21CSL58A	2.5	0	1	1	1	0	0	0	1	0	0	0
21CSL58B	0.9	0.9	0.9	0	0	0	0	0	0	0	0	0
21CSL58C	2	1	0	0	0	0	0	0	0	2	0	0
21AEC52	1	1.5	2	2	0	2	2	0	2.5	2	2	0
21CSL69B	2	1	0	0	1	0	0	0	0	1	0	1
21CSL69C	1.87	0.93	0.93	0.93	0.93	0	0	0.93	1.87	0	0	0.93
21CSL48C	1	0	0	1	0	0	0	0	0	0	0	1
21MA11	1.1	0.6	0	0	0	0	0	0	0	0	0	0
21EE13	0.83	0.55	0	0	0	1.18	1.18	0.59	0.00	0.00	0.00	0.00
21CV15	1.20	1.20	0	0	0	0	0	0	0	0	0	0.50
21AE110	1.20	0.90	0.80	0.90	0.00	1.00	1.00	0.00	1.50	1.50	0.80	0.90
21MAT21	2.00	1.30	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21CH22	1.20	0.60	0.00	0.60	0.00	0.60	0.60	0.00	0.00	0.00	0.00	0.60
21CS23	1.75	0.88	0.88	0.88	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21cs35	0.71	0.71	0.98	0.70	0.82	0.82	0.82	1.23	1.23	1.23	0.41	0.41
21CS46	1.60	1.00	0.90	0.70	0.70	0.70	0.70	1.40	1.40	0.70	1.40	1.40
21UHV43	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21CS55	1.80	1.50	2.00	2.00	3.00	0.00	0.00	1.00	3.00	3.00	1.00	3.00
21MTB41	2.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21cs45	1.20	1.40	0.90	1.00	1.00	0.00	1.00	2.00	1.00	1.00	1.00	1.00
21CS56	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21AEC52	1.00	1.50	2.00	2.00	0	2	2	0	2.5	2.00	2.00	0.00

21CS541	1.80	1.60	0.00	0.00	1.80	0	0	0	3	0	0	0
21CS543	1.70	1.20	1.30	3.00	2.00	0	0	1	3	2	2	3
21CS63	2.00	1.00	0	0	0	3	3	1	2.00	2	0	1
21CS67	1.90	0.90	0.00	1.40	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.9
21CS68	1.10	0.00	0.60	0.00	0.90	0.00	0.00	0.00	1.10	1.10	0.00	0.00
21HSS61	1.00	1.00	1	0	0	0	0	1	2.00	2	0	0
21CS643	1.90	1.10	0.90	1.80	1.00	0.00	0	0.00	1.00	1.00	1.00	1.00
21CS645	1.50	0	0	0	0	0	0	0.00	0.00	0.00	0	0
21CS66	2.00	2.00	1.00	1.00	2.00	0.00	0.00	2.00	2.00	2.00	0	2
21HSS71	1.00	0.70	0.40	0.50	0.50	0.00	0.00	0.50	0.90	0.50	0.50	0.50
21CS72	2.00	1.00	1.80	1.50	1.00	2.00	2.00	2.30	3.00	1.40	1.00	1.00
21CSP76	2.00	2.00	3.00	2.00	2.00	2.00	2.00	3.00	3.00	3.00	2.00	3.00
21CS732	1.00	1.30	1.80	2.00	2.00	0.00	0.00	0.00	1.30	0.00	0.00	2.00
21CS733	1.60	0.80	0.70	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21CS742	0.00	0.40	0.30	0.00	0.00	0.40	0.40	0.40	0.00	0.50	0.00	0.30
21CS81B	1.17	0.86	0.00	0.00	1.53	0.00	0.00	1.53	0.00	0.00	0.00	1.53
21INT82	2.00	2.00	1.00	1.00	3.00	1.00	0.00	3.00	2.00	2.00	2.00	3.00
21PY12	0.6	0.3	0	0	0.4	0	0	0	0	0	0	0.3
21EC24	1.4	0.7	1.4	1.4	2	0	0	2	2	1	0	0
21MTB31	1.9	0.6	0	0	0	0	0	0	0	0	0	0
21CS36	1.6	0.8	0	0	1.6	0	0	0.8	0.8	1.2	0	0
21CS37	2	1.67	1	2.5	1	1	1	3	3	3	0	0
21UHV33	0.75	0	0	0	0	0	0	0	0	0	0	0
21CS47	1.6	1.6	1.1	0.8	0	0	0	0.8	2.3	2.3	0	0.8
21CS57	1.7	0.9	0	0	0	0	0	0	0	0	0	0
21HSS51	0	0	0	0	0	0	0	0	0	1	1	1
21CSL69A	3	3	3	3	1	0	0	0	1	0	1	0

## PO Attainment Indirect

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Graduate Exit	2.6	2.6	2.6	2.6	2.5	2.7	2.6	2.7	2.7	2.7	2.6	2.7
course end st	1.51	1.19	1.16	1.34	1.37	1.28	1.28	1.29	1.62	1.45	1.40	1.14

## PO Attainment Level

Note: The Institution can fix the weightage of the indirect attainment maximum up to 20%.

Define the Weightage for Indirect Attainment: 0.20

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	1.55	1.02	1.14	1.48	1.26	1.40	1.38	1.31	1.74	1.45	1.06	1.01
InDirect Attainment	2.05	1.9	1.9	1.95	1.95	2.05	2.0	2.0	2.15	2.15	2.0	1.9
Overall Attainment	1.55	1.02	1.14	1.48	1.26	1.40	1.38	1.31	1.74	1.45	1.06	1.01

### PSO Attainment

Course	PSO1	PSO2
21CS37	2	3
21CSL38A	1	1
21CSL38C	2.3	2.3
21UHV33	PSO1	1
21CS46	1.1	1.6
21CSL48A	1	PSO2
21CSL48B	1	2
21CSL58A	1	PSO2
21CSL58B	2.8	PSO2
21CSL58C	1	PSO2
21CSL69B	1.67	PSO2
21AE110	0.8	PSO2
21CS23	0.83	0.83
21CS35	1.08	1.18
21CS36	0.8	PSO2
21CS47	2.4	2.3
21CS56	1.6	1.5
21HSS51	1	2
21CS67	2.8	2.5
21CS68	0.6	PSO2
21CS645	1.4	PSO2
21CSL69A	PSO1	1
21HSS71	0.5	PSO2

21CSP76	3	3
21CS733	1.5	1.6
21CS742	1	1
21INT82	3	3
21CS57	0.9	PSO2
21EC24	1	0
21CS45	1	0
21HSS61	0.3	0
21CS643	1.8	2.3
21CS66	2	2
21CS69A	0	1
21CS72	3	3
21CS732	1.4	0
21CS81B	3	3

**PSO Attainment Indirect**

Survey	PSO1	PSO2
Course End Survey	1.5	2.0
Graduate End Survey	2.7	2.7

**PSO Attainment Level**

Course	PSO1	PSO2
Direct Attainment	1.32	1.78
InDirect Attainment	2.1	2.35
Overall Attainment	1.32	1.78

4 STUDENTS' PERFORMANCE (120)

Total Marks 107.66





**Table No. 4A: Admission details for the program excluding those admitted through multiple entry and exit points.**

<b>Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)</b>	<b>2024-25 (CAY)</b>	<b>2023-24 (CAYm1)</b>	<b>2022-23 (CAYm2)</b>	<b>2021-22 (CAYm3)</b>	<b>2020-21 (CAYm4)</b>	<b>2019-20 (CAYm5)</b>	<b>2018-19 (CAYm6)</b>
N=Sanctioned intake of the program (as per AICTE /Competent authority)	900	240	180	180	180	180	180
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/institutions plus no. of students, who migrated to this program	900	248	191	199	182	180	188
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	24	18	18	17	23	18
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	122	30	27	37	38	38	38

Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	1022	302	236	254	237	241	244
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**Table No. 4B: Admission details for the program through multiple entry and exit points.**

	Item (No. of students admitted/exited through multiple entry and exit points) in the respective batch	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (LYG)	2019-20 (LYGm1)	2018-19 (LYGm2)
N52=No. of students admitted in 2nd year via multiple entry and exit points in same batch	N52=No. of students admitted in 2nd year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N53=No. of students admitted in 3rd year via multiple entry and exit points in same batch	N53=No. of students admitted in 3rd year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N54=No. of students admitted in 4th year via multiple entry and exit points in same batch	N54=No. of students admitted in 4th year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N5=N52+N53+N54	N5=N52+N53+N54	0	0	0	0	0	0	0
N61=No. of students exits after 1st year via multiple entry and exit points in same batch	N61=No. of students exits after 1st year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N62=No. of students exit after 2nd year via multiple entry and exit points	N62=No. of students exit after 2nd year via multiple entry and exit points	0	0	0	0	0	0	0
N63=No. of students exit after 3rd year via multiple entry and exit points in same batch	N63=No. of students exit after 3rd year via multiple entry and exit points in same batch	0	0	0	0	0	0	0
N6=N61+N62+N63	N6=N61+N62+N63	0	0	0	0	0	0	0

**Table No. 4C: No. of students graduated within the stipulated period of the program.**

Year of entry	Total no. of students (N1 + N2 + N3+ N4 + N5 - N6 as defined above)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2024-25 (CAY)	1022				
2023-24 (CAYm1)	302	270			
2022-23 (CAYm2)	236	211	229		
2021-22 (CAYm3)	254	220	236	236	
2020-21 (LYG)	237	219	228	225	201
2019-20 (LYGm1)	241	214	234	225	193
2018-19 (LYGm2)	244	210	225	225	220

**4.1 Enrolment Ratio (20)**

Total Marks 20.00

Institute Marks : 20.00

Get Details from Table 4.1

**Table No.4.1.1: Student enrolment ratio in the 1st year.**

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	900	900	122	113.56
2023-24 (CAYm1)	240	248	30	115.83
2022-23 (CAYm2)	180	191	27	121.11

Average [ (ER1 + ER2 + ER3) / 3 ] = 116.83 ≈ 100

Assessment : 20.00

**4.2 Success Rate of the Students in the Stipulated Period of the Program (15)**

Total Marks 12.75

Institute Marks : 12.75

**Table No.4.2.1: The success rate in the stipulated period of a program.**

Item	(2020-21) LYG	(2019-20) LYGm1	(2018-19) LYGm2
A*=(No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).)	237.00	241.00	244.00
B=No. of students who graduated from the program in the stipulated course duration	201.00	193.00	220.00
Success Rate (SR)=(B/A) * 100	84.81	80.08	90.16

Average SR of three batches ((SR\_1+ SR\_2+ SR\_3)/3): 85.02

SR Points : 12.75

**Note \*:** If the value of A in Table No. 4.2.1 is less than the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2), then the value of A in Table No. 4.2.1 should be the sum of the sanctioned intake (N) and the lateral entry including leftover seats (N2).

**4.3 Academic Performance of the First-Year Students of the Program (10)**

Total Marks 7.83

Institute Marks : 7.83

**Table No.4.3.1: Academic Performance of the First-Year Students of the Program.**

<b>Academic Performance</b>	<b>CAYm1( 2023-24 )</b>	<b>CAYm2( 2022-23 )</b>	<b>CAYm3 ( 2021-22 )</b>
Mean of CGPA or mean percentage of all successful students(X)	8.35	8.66	7.63
Y=Total no. of successful students	261.00	200.00	201.00
Z=Total no. of students appeared in the examination	269.00	208.00	217.00
API [X*(Y/Z)]	8.10	8.33	7.07

Average API[ (AP1+AP2+AP3)/3 ] : 7.83

Assessment = Average API : 7.83

**4.4 Academic Performance of the Second Year Students of the Program (10)**

Total Marks 7.84

Institute Marks : 7.84

**Table No.4.4.1: Academic Performance of the Second Year Students of the Program.**

<b>Academic Performance</b>	<b>CAYm1 ( 2023-24 )</b>	<b>CAYm2 ( 2022-23 )</b>	<b>CAYm3 ( 2021-22 )</b>
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2nd year/10)	8.48	8.18	7.16
Y=Total no. of successful students	229.00	236.00	228.00
Z=Total no. of students appeared in the examination	229.00	238.00	236.00
API [ X * (Y/Z) ]	8.48	8.11	6.92

Average API [ (AP1 + AP2 + AP3)/3 ] : 7.84

Assessment [ AverageAPI ] : 7.84

**4.5 Academic Performance of the Third Year Students of the Program (10)**

Total Marks 7.31

**Table No.4.5.1: Academic Performance of the Third Year Students of the Program**

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	8.48	7.31	6.84
Y=Total no. of successful students	236.00	225.00	225.00
Z=Total no. of students appeared in the examination	236.00	228.00	234.00
API [ X*(Y/Z) ]:	8.48	7.21	6.23

Average API [ (AP1 + AP2 + AP3)/3 ] : 7.31

Assessment [1.5 \* AverageAPI] : 7.31

#### 4.6 Placement, Higher Studies and Entrepreneurship (30)

Total Marks 26.93

Institute Marks : 26.93

**Table No. 4.6.1: Placement, higher studies, and entrepreneurship details.**

Item	LYG (2020-21)	LYGm1(2019-20)	LYGm2(2018-19)
FS*=Total no. of final year students	225.00	225.00	225.00
X=No. of students placed	171.00	182.00	190.00
Y=No. of students admitted to higher studies	15.00	18.00	16.00
Z= No. of students taking up entrepreneurship	6.00	4.00	4.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	85.33	90.67	93.33

Average Placement Index = (P\_1 + P\_2 + P\_3)/3: 89.78

Placement Index Points: 26.93

#### 4.7 Professional Activities (25)

Total Marks 25.00

**4.7.1 Professional Societies/ Bodies, Chapters, Clubs, and Professional Engineering Events Organized (5)**

Institute Marks : 5.00



**Table No. 4.7.1.1: List of active professional societies/bodies/chapters/clubs.**

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs
1	Computer Society of India, Bangalore Chapter
2	IEEE Computer Society- CS Student Chapter
3	AR VR HUB
4	Coding Club
5	Access Denied Club
6	IEEE, Aerospace and Electronic system Society
7	IEEE, Photonics Society
8	IEEE COMPUTATIONAL INTELLIGENCE SOCIETY
9	IEEE Information Theory Society
10	IEEE COMMUNICATIONS SOCIETY
11	IEEE ROBOTICS & AUTOMATION SOCIETY
12	OS Club
13	WEB.3 Club
14	ICT Academy
15	Institutions Innovation Council
16	Entrepreneurship Development Cell

**Table No. 4.7.1.2: List of events/programs organized.**

(CAYm1) 2023-24

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	Coding Club	HAcksphere	National	27/03/2024
2	Coding Club	COD'IN DETECTIVES (CID)	National	23/05/2024
3	Coding Club	Unlocking Potential with Azure: a journey into cloud innovation	National	27/05/2024
4	Coding Club	Squid Game	National	22/12/2023
5	AR VR HUB	WORKSHOP on WEB VR	National	22/01/2024
6	AR VR HUB	Creators of Metaverse(Phase 1)	National	08/01/2024
7	AR VR HUB	Srishti 2024 Challenge	National	24/05/2024
8	AR VR HUB	Capstone Projects	National	02/01/2024
9	AR VR HUB	VR Workshop	National	17/05/2024
10	AR VR HUB	10 day training Program as an Outreach Activity	National	01/06/2024
11	AR VR HUB	META AR VR Workshop	National	21/06/2024
12	AR VR HUB	Blender Basic Workshop!	National	19/07/2024
13	IEEE Computer Society Chapter	Capture the Signal	National	05/07/2024
14	IEEE Computer Society Chapter	Tech Trend Fusions: Echoes of Innovation	National	22/06/2024
15	IEEE Computer Society Chapter	Website For National Level Prototype Competitions	National	24/02/2024
16	IEEE Computer Society Chapter	IEEE Silicon	National	26/10/2023
17	IEEE Computer Society Chapter	IEEE Member On-Boarding Session	National	23/08/2023
18	Computer Society of India, Bangalore Chapter	CRTLQuest	National	22/12/2023
19	Computer Society of India, Bangalore Chapter	Exploring the Future: Web3 Session Insights	National	08/12/2023
20	Access Denied Club	Capture The Flag (CTF)	National	07/05/2024
21	Access Denied Club	Information Security in Payment Industries	National	21/12/2023
22	Access Denied Club	Adding Context to Threat Intelligence using Generative AI	National	16/12/2023
23	Access Denied Club	Career Opportunities in Cyber Security	National	19/04/2023
24	ICT Academy	International Girls in ICT day	National	01/04/2024
25	AICTE	"Creators of Metaverse with Meta Spark Studio	National	08/01/2024

(CAYm2) 2022-23

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	AR VR HUB	Gaming and Augmented and Virtual reality Model Designing	National	12/06/2023
2	Access Denied Club	Null and Void	National	04/05/2023
3	Access Denied Club	Ethical Hacking for Beginners – A free hands-on penetration testing webinar	National	14/01/2023
4	Access Denied Club	Recon - Get started with Cyber Security	National	09/12/2022
5	IEEE Computer Society Chapter	Career Clash: Placement and Higher Studies	National	21/07/2023
6	IEEE Computer Society Chapter	EEE Member Drive	National	11/06/2023
7	IEEE Computer Society Chapter	GIT QUEST	National	26/05/2023
8	IEEE Computer Society Chapter	IEEE BMSIT & M EXECOM MEETING	National	20/05/2023
9	IEEE Computer Society Chapter	BMSIT IEEE Discord Server Setup	National	01/05/2023
10	IEEE Computer Society Chapter	IEEE BMSIT&M EXECOM	National	10/03/2023
11	IEEE Computer Society Chapter	Online Coding Competition	National	24/08/2022
12	Computer Society of India, Bangalore Chapter	Practical Cyber Security,Forensics and Blockchain	National	06/12/2022
13	Computer Society of India, Bangalore Chapter	Star Techie	National	25/11/2022

**(CAYm3) 2021-22**

S.No	Name of the Professional Societies/Bodies, Chapters, Clubs	Name of the Event	National/International level	Date of Event (DD/MM/YYYY)
1	Computer Society of India	5G Wireless Technology	National	29/09/2021
2	IEEE Computer Society Chapter	Girl Geeks	National	07/08/2021
3	IEEE Computer Society Chapter	EEG Cognition and Signal Processing	National	27/08/2021
4	IEEE Computer Society Chapter	Arduino for Beginners	National	23/09/2021
5	IEEE Computer Society Chapter	Solving Real Life Problems using AI and Signal Processing	National	31/10/2021
6	IEEE Computer Society Chapter	What leading Tech Companies Want	National	27/08/2021
7	Indian Academy of Science	Diversified Applications of Machine Learning Algorithms	National	21/09/2021
8	Indian Society for Technical Education	EXPERT GUIDANCE TO CRACK CIVIL SERVICE AND OTHER COMPETITIVE EXAMS	National	25/05/2022

**4.7.2 Student's Participations in Professional Events (10)**

Institute Marks : 10.00



**Table No. 4.7.2.1: List of students participated in professional events.****(CAYm1) 2023-24**

S.No	Name of the Student	Name of the Event	State /State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1	Vikas H	SRISHTI 2024	State	24/05/2024	Won the Third Prize in Srishti Avishkar-Pre Final Project Competition
2	Ajay Kumar Rauniyar	SRISHTI 2024	State	24/05/2024	Won the First Prize in Srishti Avishkar-Pre Final Project Competition
3	Shreya R	SRISHTI 2024	State	24/05/2024	Won the Third Prize in Srishti Avishkar-Pre Final Project Competition
4	S Mithul Narayana	SRISHTI 2024	State	24/05/2024	Won the Third Prize in Srishti Avishkar-Pre Final Project Competition
5	Swaroop and team	Honoured as one of the best innovative projects	State	29/02/2024	Dr. S. K. Shivakumar State Award
6	Kusuma.M	Selected for Foundation for Excellence scholarship program	State	31/03/2024	Awarded a scholarship amount of Rs. 50000/-
7	Pooja P	Commendation by Deputy Director General, Karnataka and Goa	National	03/02/2024	Received Deputy Director General's Commendation Award
8	Dhruvi Mashru	Smart India Hackathon	National	19/12/2023	Participated
9	Arpitha K S	Smart India Hackathon	National	19/12/2023	Participated
10	Rishit Kaushik	VTU Table Tennis (Male) Inter Collegiate Division level Tournament	Division level	01/07/2024	Participated
11	Vansh Neggi	Innovation, Design and Entrepreneurship(IDE) Bootcamp	National	29/04/2024	Participated
12	Ankit Kumar Gupta	Smart India Hackathon	National	19/12/2024	Participated
13	Devanshee Sharma	Smart India Hackathon	National	19/12/2024	Participated
14	Karthik Prabhu, Jayanth, Keval Krishna, Yusuf	Poster presentation	State	29/11/2023	Participated
15	Shaik Pervez	Smart India Hackathon, 2023	National	19/12/2024	Participated
16	Impu	HACKNOVATE 5.0	National	10/05/2024	Participated
17	Varshini S N	Sociental Internship	State	25/10/2023	Participated
18	Priyank Singh	Advance Leadership Camp-V	National	05/02/2024	Participated
19	Bushra Mahek M	OpenEDG Python Institute Authorized Academy program	National	25/06/2024	Participated
20	Impu Rao H M	VTU Volleyball women Inter Collegiate Division level Tournament	Division level	11/01/2024	Participated
21	Siddharth Pandey	SIH Internal Hackathon	National	15/09/2023	Participated
22	Raghvendra Sharma	SIH Internal Hackathon	National	15/09/2023	Participated

**(CAYm2) 2022-23**

S.No	Name of the Student	Name of the Event	State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1	Rishab S Rokhade	Director General of NCC's Appreciation	State	13/03/2022	Awarded the prestigious Director General of NCC's Appreciation Medallion
2	Vishnu Shasthri	Vaggeya Sourabha	State	27/02/2022	Participated
3	Poorvik D	Smart India Hackathon	National	26/08/2022	Secured FIRST place for the project
4	Likith V	Smart India Hackathon	National	26/08/2022	Secured FIRST place for the project
5	Pavuluru Rohith	Smart India Hackathon	National	26/08/2022	Secured FIRST place for the project
6	Prajwal D	Smart India Hackathon	National	26/08/2022	Secured FIRST place for the project
7	Vansh Neggi	Workshop on Cloud and DevOps	State	27/07/2023	Participated

## (CAYm3) 2021-22

S.No	Name of the Student	Name of the Event	State /National/International level	Date of Event (DD/MM/YYYY)	Name of Award
1	Jatin G Nair	Table Tennis Inter Collegiate Bangalore North Zone Tournament held	state	24/11/2021	Winner
2	Vangur Shravani	campus visit	International	25/03/2022	Winner
3	shivani	NCC	National	28/10/2021	Best Cadet
4	Tejaswini S Roa	42nd All India Classical Dance Festival	National	30/10/2021	Natya Sindoora National Award
5	Rishab S Rokhade	NCC	National	13/03/2022	Dy DG Commendation Card
6	Vishnu Shasthri	Carnatic Classical Music	State	27/02/2022	Vaggeya Sourabha
7	Swathi Sandhya	Student ambassador team.	National	01/01/2021	Microsoft learn Gold Student Ambassador
8	Mithil Menon	Basketball	State	17/12/2021	Runner
9	Asif Ali Ahmed R Roobini G Sheetal Neeraj Vishnu Sastry	Innovation for UG students	State	10/05/2021	Dr S K Shivakumar State Award
10	Likitha D	C Programming Quiz	State	18/08/2021	Passed
11	ischitha	ande Bharatam Nritya Utsav	State	19/12/2021	Winner
12	Sahana	BMSCE Kreedotsav-2021	State	25/11/2021	Participation
13	Kruthika	Inter-Collegiate Volleyball	State	30/11/2021	Participation
14	Achinth Shashank S N	BMSCE Kreedotsav-2021	state	25/11/2021	Participation
15	Mr. Chethan Patel, Ms. Megana Arora	Quizathon	National	15/06/2022	First place
16	Mr.Sharanu, Mr. Kanak Dullu, Ms. Bhumika Dinesh Shetty	SRISHTI - 2022	National	24/05/2022	Participation

## 4.7.3 Publication of Journals, Magazines, Newsletters, etc. in the Department (5)

Institute Marks : 5.00



**Table No. 4.7.3.1: List of students involved in publication of journals, magazines, and newsletters, etc. in the Department.****(CAYm1) 2023-24**

S.No	Name of the Journal, Magazine, Newsletter	Name of the Editor	Name of the Student	Semester	No. of Issues	Hard copy/Soft copy
1	PRINTF("CSE")/ IMPORT	Dr. Thippeswamy G	Reyyan Aleem Janbaz	6	2	Soft copy
2	PRINTF("CSE")/ IMPORT	Dr. Thippeswamy G	Abhishek Kumar	6	2	Soft copy
3	PRINTF("CSE")/ IMPORT	Dr. Thippeswamy G	Arjun P	6	2	Soft copy
4	PRINTF("CSE")/ IMPORT	Dr. Thippeswamy G	Anish Raju	6	2	Soft copy
5	PRINTF("CSE")/ IMPORT	Dr. Thippeswamy G	Adbhut Shukla	6	2	Soft copy
6	Import CSE	Dr. Thippeswamy G	Abhishek Kumar	5	1	Soft copy
7	Import CSE	Dr. Thippeswamy G	Arjun P	5	1	Soft copy
8	Import CSE	Dr. Thippeswamy G	Anish Raju	5	1	Soft copy
9	Import CSE	Dr. Thippeswamy G	Adbhut Shukla	5	1	Soft copy
10	Manthana 2024	Dr. Ambika R.	Mukul Narayan	8	1	Soft copy
11	Manthana 2024	Dr. Ambika R.	Rakshitha Bhat	2	1	Soft copy
12	Manthana 2024	Dr. Ambika R.	Kavya S	8	1	Soft copy
13	Manthana 2024	Dr. Ambika R.	Ayesha Kouser B	4	1	Soft copy
14	Manthana 2024	Dr. Ambika R.	Veeksha Sai	2	1	Soft copy
15	Manthana 2024	Dr. Ambika R.	Mythri S P	4	1	Soft copy
16	Manthana 2024	Dr. Ambika R.	Ragavendra sharma	6	1	Soft copy
17	Manthana 2024	Dr. Ambika R.	Kiran Kusum	8	1	Soft copy

**(CAYm2) 2022-23**

S.No	Name of the Journal, Magazine, Newsletter	Name of the Editor	Name of the Student	Semester	No. of Issues	Hard copy/Soft copy
1	Include	Dr. Thippeswamy G	Charan K S	3	2	Soft copy
2	Include	Dr. Thippeswamy G	G Dhruthi Reddy	3	2	Soft copy
3	Include	Dr. Thippeswamy G	Deekshitha	3	2	Soft copy
4	PRINTF("CSE")	Dr. Thippeswamy G	Abhishek Kumar	4	2	Soft copy
5	PRINTF("CSE")	Dr. Thippeswamy G	Arjun P	4	2	Soft copy
6	PRINTF("CSE")	Dr. Thippeswamy G	Adbhut Shukla	4	2	Soft copy
7	PRINTF("CSE")	Dr. Thippeswamy G	Anish Raju	4	2	Soft copy
8	Manthana 2023	Dr. Ambika R.	Aryan Agrawal	6	1	Soft copy
9	Manthana 2023	Dr. Ambika R.	Abhinav Raj	6	1	Soft copy
10	Manthana 2023	Dr.Ambika R	Subrahmanya Lakshmi	6	1	soft copy
11	Manthana 2023	Dr.Amika R	Tejaswini S Rao	8	1	Sot Copy
12	Manthana 2023	Dr.Ambika R	Malavika S Patil	6	1	Sof copy
13	Manthana 2023	Dr.Ambika R	Ankit Savalagi	4	1	soft copy
14	Manthana 2023	Dr.Ambika R	Corporal Pooja P	4	1	soft copy
15	Manthana 2023	Dr.Ambika R	Chethan Patel	8	1	soft copy
16	Manthana 2023	Dr.Ambika R	BRUNAJA D N	6	1	soft copy
17	Manthana 2023	Dr.Ambika R	SHREYA RAVIKUMAR	4	1	soft copy
18	Manthana 2023	Dr.Ambika R	Devika Manjunath	2	1	soft copy

(CAYm3) 2021-22

S.No	Name of the Journal, Magazine, Newsletter	Name of the Editor	Name of the Student	Semester	No. of Issues	Hard copy/Soft copy
1	Newsletter	International Conference on Sustainable Technolgy and Advanced Computing in Electrical Engineering h	Vinodkumar G	8	1	soft copy
2	Newsletter	International Conference on Sustainable Technolgy and Advanced Computing in Electrical Engineering h	Mr.Shrivatsa Prakash	8	1	soft copy
3	Include	Dr. Bhuvaneshwari C M	Vinodkumar G	7	1	soft copy
4	Include	Dr. Bhuvaneshwari C M	Shrivaths P	7	1	soft copy
5	Include	Dr. Bhuvaneshwari C M	Tarush J Reddy	7	1	soft copy
6	Include	Dr. Bhuvaneshwari C M	P M Suhas	7	1	soft copy
7	Include	Dr. Thippeswamy G	Vinodkumar G	8	2	soft copy
8	Include	Dr. Thippeswamy G	Shrivaths P	8	2	soft copy
9	Include	Dr. Thippeswamy G	Tarush J Reddy	8	2	soft copy
10	Include	Dr. Thippeswamy G	P M Suhas	8	2	soft copy
11	Manthana 22	Dr.Mala C S	Chirag Arora	6	2	soft copy
12	Manthana 22	Dr.Mala C S	Shrividya Shashidhara	2	2	soft copy
13	Manthana 22	Dr.Mala C S	Prashant Parashar	6	2	soft copy
14	Manthana 22	Dr.Mala C S	Shrividya Shashidhara	2	2	soft copy

4.7.4 Student Publications (5)

Institute Marks : 5.00



**Table No. 4.7.4.1: List of student publications.****(CAYm1) 2023-24**

S.No	Name of the Student	Semester	Name of the Publisher	Name of the Journal/ Conference, etc.	Volume No.	Issue No.	Name of the Award if any
1	Pavan Kalyan S, Prem Raj S, Pratik B Patil, Shreyas A	8	Auricle Global Society of Education and Research	International Journal of Intelligent Systems And Applications In Engineering	12	3	nil
2	Mahadeshwara Prasad	8	Auricle Global Society of Education and Research	International Journal of Intelligent Systems and Applications in Engineering	12	4	nil
3	Amurtha T. Madihalli, Anand Bhardwaj, Ananya & Vijender Kumar Solanki	8	Springer International Publishing AG	Lecture Notes in Networks and Systems	1	1	nil
4	Akshay M, Ambika N, Anika Rashmi , Chitra M	8	Gradiva	Gradiva Review Journal	9	3	nil
5	Charukesh, Ishika Malhotra, Mayank Malhotra, Shayan Majid Phamba,	8	IZD STVO IZVESTIYA, , PUSHKINSKAYA PL 5, MOSCOW, RUSSIA	NOVYI MIR Research Journal	8	4	nil
6	R Shreyas, SN Vora, SG Venkatesh	8	Springer	International Conference on Data Management, Analytics and Innovation	1	1	nil

**(CAYm2) 2022-23**

S.No	Name of the Student	Semester	Name of the Publisher	Name of the Journal/ Conference, etc.	Volume No.	Issue No.	Name of the Award if any
1	Sushma B; Vibha S M; Sarbashree Kaspal; Sital Kumari Sah,	3	IEEE	14th ICCCNT IEEE Conference	6	6	nil
2	Vishal R Setty, Villuri Vivek, Sujan Ramesh, Sowmyashree P,	3	IEEE	14th ICCCNT IEEE Conference	1	1	nil
3	Swasti S;Sameeksha B H;Sonia Puri;Rubini P A,	3	IEEE	14th ICCCNT IEEE Conference	1	1	nil
4	Tamanna Patel;Shreya Patil;Roopa L S;Vaishnavi Singh ,	3	IEEE	14th ICCCNT IEEE Conference	1	1	nil
5	Sidharth N;Sujit Sigamani;Swaroop A;Sanath S Soni,	3	IEEE	14th ICCCNT IEEE Conference	1	1	nil
6	Shreya Ravikumar;Vikramaditya Jason;T A Sarika;Syed Adnan,	3	IEEE	14th ICCCNT IEEE Conference	1	1	nil
7	Kumar Anurag, Santanu Agarwal, Ramansh Taluja, Prashant Kumar Dewangan,,	8	International Research Publication House	International Journal of Engineering Research & Technology (IJERT)	11	6	nil
8	Amrutha D , Bhumika M , Shivani Hosangadi , Shravya,	8	International Research Publication House	International Journal of Engineering Research & Technology (IJERT)	11	5	nil
9	Mohammed Zaid Siddiqui , Saurav Kumar Yadav , Sanjeev Kumar Suman	8	International Research Publication House	International Journal of Engineering Research & Technology (IJERT)	12	4	nil
10	Siddarth Vaddem	8	Springer Nature	International Conference on Data Management and Innovation (ICDMAI 2023)	1	1	nil
11	Mr.Shubham Mishra	8	YMER Digital	YMER	21	10	nil

## (CAYm3) 2021-22

S.No	Name of the Student	Semester	Name of the Publisher	Name of the Journal/ Conference, etc.	Volume No.	Issue No.	Name of the Award if any
1	Ms. Poorvi Rohidekar,Mr. Pranove,	8	ASR Research India	Journal of Positive School Psychology	6	3	Nil
2	Mr. Pranove A B	8	IJAS	Journal of Positive School Psychology	12	3	Nil
3	Rameez Pathan, Sambedh Kandel	8	IEEE	INDIACom-2021	1	1	Nil
4	Rishika Sankaran , Anushruti Adhikari , Kruthika Ravishankar	8	YMER	YMER	1	1	Nil

5 FACULTY INFORMATION (100)

Total Marks 73.33





Sr.No	Name of the Faculty	PAN No.	APAAR faculty ID*(if any)	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at Time Joining in this Institution	Present Designation	The date on which Designated as Professor/ Associate Professor if any	Nature of Association (Regular/ Contract/ Ad hoc)	Currently Associated (Y/N)	In case of NO, Date of Leaving	IS HOD?
1	Dr.Sanjay H A	ARPPS7968F	NA	ME/M. Tech and PhD	Indian Institute of Science	Parallel Computing	28/02/2024	1.2	Professor	Professor	28/02/2024	Regular	Yes		Yes
2	Dr.Thippeswamy G	ACGPT2919M	NA	Ph.D	Mangalore University	Image Processing	19/08/2013	11.7	Professor	Professor	19/08/2013	Regular	Yes		No
3	Dr.Mahesh G	AIVPG7290H	NA	Ph.D	VTU	Wireless Networks	06/08/2018	6.9	Associate Professor	Professor	01/07/2024	Regular	Yes		No
4	Dr.Satish Kumar T	BAVPS6450A	NA	Ph.D	Anna University	Algorithms,Compilers	28/08/2018	6.9	Assistant Professor	Professor	01/04/2025	Regular	Yes		No
5	Dr. Usha B A	ABIPU5770A	NA	Ph.D	VTU	Information Security	01/06/2018	6.11	Associate Professor	Professor	10/11/2022	Regular	Yes		No
6	Dr. Nagabhushan. S. V	AGHPN9615P	NA	Ph.D	VTU	Decision Science and Optimization	04/08/2006	18.9	Assistant Professor	Associate Professor	11/10/2021	Regular	Yes		No
7	Dr. Hemamalini B H	ABTPH2803A	NA	Ph.D	VTU	Educational Data Mining	23/07/2010	14.9	Assistant Professor	Professor	01/04/2025	Regular	Yes		No
8	Dr. Bharati R	AYCPP3084F	NA	Ph.D	Prist University	Security in IOT	12/08/2009	15.9	Assistant Professor	Associate Professor	01/07/2013	Regular	Yes		No
9	Dr. Radhika. K. R	AUMPR1250M	NA	Ph.D	Banglore University	Data Mining	23/01/2013	12.2	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No
10	Dr. Ashwini N	AITPA9925B	NA	Ph.D	VTU	Data Science	11/08/2012	12.8	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No
11	Dr. Aruna Kumari. B. N	AYXPA2357D	NA	Ph.D	VTU	Software Engineering	06/08/2018	6.9	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No
12	Dr.Gerard Deepak	BKJPD1951R	NA	Ph.D	NIT, Tiruchirappalli	Semantic Artificial Intelligence,Web Mining, Explainable AI	05/08/2024	0.8	Associate Professor	Associate Professor	05/08/2024	Regular	No	25/03/2025	No
13	Dr. Ravi Hosur	ACLPH6550M	NA	Ph.D	VTU	IOT, Digital Forensics, Digital Image Processing	25/07/2024	0.10	Associate Professor	Associate Professor		Regular	Yes		No
14	Prof. Vishakha Yadav	ABNPY3258L	NA	M.Sc. (Engineering)	VTU	Computer Vision	11/02/2005	20.2	Lecturer	Assistant Professor		Regular	Yes		No
15	Dr.Anand R	AKWPA4115C	NA	Ph.D	Presidency University	Machine Learning and Data Mining	30/09/2006	18.8	Lecturer	Assistant Professor		Regular	Yes		No

16	Dr. Muneshwara M S	ARJPM8071H	NA	Ph.D	VTU	Block Chain Network,IOT, Cloud Computing	14/09/2006	18.8	Lecturer	Assistant Professor		Regular	Yes		No
17	Prof.Durga Devi G Y	AUJPD8414E	NA	M.E/M.Tech	VTU	Network Security	06/02/2008	17.2	Lecturer	Assistant Professor		Regular	Yes		No
18	Prof.Jagadish P	AOUPJ5449J	NA	M.E/M.Tech	VTU	Image Processing	08/02/2010	15.2	Lecturer	Assistant Professor		Regular	Yes		No
19	Dr.Durga Bhavani A	AYDPA2890B	NA	Ph.D	VTU	IOT	14/03/2011	14.2	Assistant Professor	Assistant Professor		Regular	Yes		No
20	prof.Rajesh N V	ATFPR4691E	NA	M.E/M.Tech	VTU	Machine Learning	18/04/2011	13.11	Lecturer	Assistant Professor		Regular	Yes		No
21	Dr. Ambika G N	BABPA5376F	NA	Ph.D	VTU	Artificial Intelligence	07/03/2012	13.2	Assistant Professor	Assistant Professor		Regular	Yes		No
22	Dr. Vidya R	BKUPP4887P	NA	Ph.D	VTU	Computer Network Security	07/03/2012	13.2	Assistant Professor	Assistant Professor		Regular	Yes		No
23	Prof. A Mari Kirthima	AKBPA7798J	NA	M.E/M.Tech	Anna University	Computer Network	16/08/2012	12.7	Assistant Professor	Assistant Professor		Regular	Yes		No
24	Dr. Shankar R	CFYPS4134J	NA	Ph.D	VTU	Sentiment Analysis	31/07/2015	9.9	Assistant Professor	Assistant Professor		Regular	Yes		No
25	Prof. Guru Prasad S	BOIPS5703P	NA	M.E/M.Tech	VTU	Data Science	02/07/2014	10.9	Assistant Professor	Assistant Professor		Regular	Yes		No
26	Dr. Laxmi B N	APFPN6495Q	NA	ME/M. Tech and PhD	VTU	Machine Learning	12/02/2020	5.1	Assistant Professor	Assistant Professor		Regular	Yes		No
27	Dr.Dhanalakshmi B K	AQWPB0187F	NA	Ph.D	VTU	Cloud Computing	01/03/2021	4.1	Assistant Professor	Assistant Professor		Regular	Yes		No
28	Prof.Shilpa M	GDPPS6778M	NA	M.E/M.Tech	VTU	Ma	01/03/2024	1.1	Assistant Professor	Assistant Professor		Regular	Yes		No
29	Prof.Goutami CH	AQPPC9552L	NA	M.E/M.Tech	JNTU Ananathpur	Machine Learning	20/03/2024	1	Assistant Professor	Assistant Professor		Regular	Yes		No
30	Dr. Jai Arul Jose G	AHDPJ3655J	NA	Ph.D	Sathyabama University	Information Security	21/03/2024	1	Assistant Professor	Assistant Professor		Regular	Yes		No
31	Dr.Mohammed Khurram J	ALYPJ9097P	NA	Ph.D	VTU	Computer Network, Cyber Security	15/07/2024	0.8	Assistant Professor	Assistant Professor		Regular	Yes		No
32	Shama M	EDRPS1719G	NA	M.E/M.Tech	VTU		02/04/2018	7	Assistant Professor	Assistant Professor		Regular	Yes		No
33	Prof.Packiya Lekshmi	CHIPP6827M	NA	M.E/M.Tech	Anna University	Computer Network	15/07/2024	0.8	Assistant Professor	Assistant Professor		Regular	Yes		No
34	Chaitanya V	CGXPC7399M	NA	M.E/M.Tech	BU	Artificial Intelligence and Machine Learning	30/08/2024	0.7	Assistant Professor	Assistant Professor		Regular	Yes		No
35	Prof.Akshay Arya	CHSPA3656D	NA	M.E/M.Tech	VTU	Computer Network	25/07/2024	0.9	Assistant Professor	Assistant Professor		Regular	Yes		No

36	Neetha P.U.	BZYPN1414K	NA	ME/M. Tech and PhD	BU	Deep Learning	30/08/2024	0.7	Assistant Professor	Assistant Professor		Regular	Yes		No
37	Prof. Chandini A	CFTPC1634J	NA	M.E/M.Tech	Reva University	Computer Science Engineering	05/08/2024	0.8	Assistant Professor	Assistant Professor		Regular	Yes		No
38	Soujanya S.D.	KQMPS8537L	NA	M.E/M.Tech	VTU	CSE	29/08/2024	0.7	Assistant Professor	Assistant Professor		Regular	Yes		No
39	Prof. Priyanka M R	CCGPP2287J	NA	M.E/M.Tech	VTU	Block Chain	12/08/2024	0.7	Assistant Professor	Assistant Professor		Regular	Yes		No
40	Prof. Arpitha Shivanna	BCNPA2298A	NA	M.E/M.Tech	Banglore University	Computer Network	21/08/2024	0.7	Assistant Professor	Assistant Professor		Regular	Yes		No
41	Sunanda Dixit	AJUPD9156H	NA	ME/M. Tech and PhD	VTU	Image Processing	07/08/2019	6.2	Associate Professor	Associate Professor		Regular	No	25/10/2023	No
42	Anjan Krishnamurthy	ATAPA4874D	NA	ME/M. Tech and PhD	VTU	Network security	14/08/2018	5.8	Associate Professor	Professor	12/11/2022	Regular	No	03/05/2024	No
43	Dr. Anil G N	ACWPN0566G	NA	Ph.D	Rani Chennamma University	Adhoc Networks	22/07/2002	22.8	Lecturer	Professor	01/08/2018	Regular	Yes		No
44	Prof.Tanya Chandra	BFKPC0773A	NA	M.E/M.Tech	Punjab Engineering College	Deep Learning and Machine Learning	04/03/2024	1.1	Assistant Professor	Assistant Professor		Regular	Yes		No
45	Dr. Basavraj G N	AODPB2421D	NA	ME/M. Tech and PhD	JNTU	Wireless Sensor Network	06/06/2022	2.10	Assistant Professor	Assistant Professor		Regular	Yes		No
46	Dr. Chetana C	AJCPC2253J	NA	ME/M. Tech and PhD	JJTU	Artificial Intelligence	07/03/2012	13.1	Assistant Professor	Assistant Professor		Regular	Yes		No
47	Dr. Shanthi D L	BIEPD9536P	NA	ME/M. Tech and PhD	VTU	Wireless Sensor Network	13/08/2012	12.8	Assistant Professor	Assistant Professor		Regular	Yes		No
48	Dr. Gireesh Babu C N	ASRPG0606M	NA	ME/M. Tech and PhD	VTU	Artificial Intelligence	31/08/2013	11.8	Assistant Professor	Assistant Professor		Regular	Yes		No
49	Dr. Swetha M S	DFIPS6280C	NA	ME/M. Tech and PhD	VTU	Cyber Security	02/07/2014	10.10	Assistant Professor	Assistant Professor		Regular	Yes		No
50	Mahalakshmi S	AWJPM3270H	NA	M.E/M.Tech	Anna University	Soft Computing	13/08/2012	12.8	Assistant Professor	Assistant Professor		Regular	Yes		No
51	Ambika R S	BJDPA8238B	NA	M.E/M.Tech	Reva	Artificial Intelligence	10/07/2013	11.9	Assistant Professor	Assistant Professor		Regular	Yes		No
52	Dr. Savitha S	CGLPK9125R	NA	ME/M. Tech and PhD	VTU	Wireless Sensor Network	28/05/2022	2.11	Assistant Professor	Assistant Professor		Regular	Yes		No
53	Dr. Harish Kumar N	CPCPK1290K	NA	ME/M. Tech and PhD	VTU	IOT.ML	05/05/2023	1.11	Assistant Professor	Assistant Professor		Regular	Yes		No
54	Dr. Kalai Vani Y S	BIFPK9786D	NA	ME/M. Tech and PhD	Hindustan University	Cyber Security, ML	10/04/2023	2	Assistant Professor	Assistant Professor		Regular	Yes		No
55	Dr. Srinivas B V	EVYPS9951M	NA	ME/M. Tech and PhD	VTU	Cloud Computing	28/07/2023	1.9	Assistant Professor	Assistant Professor		Regular	Yes		No

56	Sonne Gowda	FNOPS6698A	NA	M.E/M.Tech	VTU	Cyber Security	02/05/2024	1	Assistant Professor	Assistant Professor		Regular	Yes		No
57	Saritha A K	CYWPS4507E	NA	M.E/M.Tech	Calicut University	ML	10/06/2024	0.10	Assistant Professor	Assistant Professor		Regular	Yes		No
58	Amulya P	HMUPP5990R	NA	M.E/M.Tech	Bangalore University	Cloud Computing	02/08/2024	0.8	Assistant Professor	Assistant Professor		Regular	Yes		No
59	Sowmya K	EKRPS7229J	NA	M.E/M.Tech	VTU	Cyber Security	03/08/2024	0.8		Assistant Professor		Regular	Yes		No
60	Bhavya G	BGPPB0289N	NA	M.E/M.Tech	VTU	ML	24/08/2023	1.8	Assistant Professor	Assistant Professor		Regular	Yes		No
61	Vinay Kumar Y B	AGXPV6699K	NA	M.E/M.Tech	Bangalore University	Computer Networks	20/05/2024	0.11	Assistant Professor	Assistant Professor		Regular	Yes		No
62	Annapareddy Haarika	AXBPA2475R	NA	M.E/M.Tech	JNTU, Kakinada	IOT, Computer Networks	01/08/2024	0.9	Assistant Professor	Assistant Professor		Regular	Yes		No
63	Malini M	AROPM4265C	NA	M.E/M.Tech	Anna University	Image Processing, Deep Learning	02/08/2024	0.8	Assistant Professor	Associate Professor		Regular	Yes		No
64	Sanjana V Hunashikatti	BKIPH4852C	NA	M.E/M.Tech	Bangalore University	Data Mining, Data Science	18/03/2025	0.1	Assistant Professor	Assistant Professor		Regular	Yes		No
65	Spandana L	GTRPS5056J	NA	M.E/M.Tech	VTU	Artificial Intelligence	09/09/2024	0.7	Assistant Professor	Assistant Professor		Regular	Yes		No
66	Dr. surekha K B	AVMPK4538N	NA	ME/M. Tech and PhD	JNTU	Wireless Sensor Network	19/02/2021	4.2	Associate Professor	Professor	01/07/2024	Regular	Yes		No
67	Dr. Narasimhamurthy M S	BPFPS2400P	NA	ME/M. Tech and PhD	VTU	Software Engineering,Cloud Computing,AIML	26/02/2021	4.2	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No
68	Dr. Pushpa S K	AMCPP3486F	NA	ME/M. Tech and PhD	Vinayaka Mission University	Wireless Sensor Network	02/07/2004	20.10	Assistant Professor	Professor	01/08/2018	Regular	Yes		No
69	Dr. rakesh N	AGPPN1542G	NA	ME/M. Tech and PhD	Priest University, Thanjore, Tamil Nadu	Voice Security, Propogation Channel Modelling	05/04/2021	4	Associate Professor	Associate Professor	05/04/2021	Regular	Yes		No
70	Dr. shoba M	BNNPS0488M	NA	ME/M. Tech and PhD	Reva University	Wireless Sensor Network	10/11/2021	3.5	Associate Professor	Associate Professor	10/11/2021	Regular	Yes		No
71	Dr. Manjunath T N	ADZPT0616K	NA	ME/M. Tech and PhD	Bharathiar University	Data Management	03/08/2015	9.9	Professor	Professor	03/08/2015	Regular	Yes		No
72	Dr. Bhuvaneshwari C M	AEJPM9930Q	NA	ME/M. Tech and PhD	Central University of Hyderabad	NLP	01/04/2021	4.1	Professor	Professor	01/04/2021	Regular	Yes		No
73	Dr. Arun Kumar B R	AFGPA8408H	NA	ME/M. Tech and PhD	Dravidian University,AP Govt	Wireless Sensor Network, Cyber Security	08/01/2013	12.3	Professor	Professor	08/01/2013	Regular	Yes		No

74	Dr. Sheela Kathavate	ACWPH5701J	NA	ME/M. Tech and PhD	VTU	Parallel Computing	05/03/2020	5.1	Associate Professor	Associate Professor	05/03/2020	Regular	Yes		No
75	Dr. Geeta Amol Patil	AOQPP3113H	NA	ME/M. Tech and PhD	BITS	Computer Architecture	15/03/2021	4.1	Associate Professor	Associate Professor	15/03/2021	Regular	Yes		No
76	Dr. Mohan B A	ASTPM7014P	NA	ME/M. Tech and PhD	VTU	IOT	18/10/2021	3.6	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No
77	Dr. Veena N	AMGPN2579M	NA	ME/M. Tech and PhD	VTU	Brain Computer Interface	07/09/2015	9.7	Assistant Professor	Associate Professor	10/11/2021	Regular	Yes		No
78	Dr. Prakash G L	ALEPP8212A	NA	ME/M. Tech and PhD	UPES	Cloud Data Security	10/11/2021	3.5	Associate Professor	Associate Professor	10/11/2021	Regular	Yes		No
79	Dr. Chandrashekhar K T	AHFPC8324B	NA	ME/M. Tech and PhD	VTU	ML	16/08/2012	12.8	Assistant Professor	Assistant Professor		Regular	Yes		No
80	Dr. Vinutha K	AGSPV3601J	NA	ME/M. Tech and PhD	VTU	ML	02/07/2014	10.10	Assistant Professor	Assistant Professor		Regular	Yes		No
81	Dr. ravi Kumar B N	BVPPR8663B	NA	ME/M. Tech and PhD	VTU	Artificial Intelligence	03/07/2014	10.10	Assistant Professor	Assistant Professor		Regular	Yes		No
82	Prof.Anusha K L	ATYPA8870B	NA	M.E/M.Tech	VTU	Computer Network	08/04/2025	0	Assistant Professor	Assistant Professor		Regular	Yes		No
83	prof.Ajith S	AQQPA9166K	NA	M.E/M.Tech	VTU	Deep Learning, Image Processing,LLP	17/03/2025	0.1	Assistant Professor	Assistant Professor		Regular	Yes		No
84	Prof.Gururaj P	CAZPP2624Q	NA	M.E/M.Tech	VTU	Cloud Computing	02/04/2025	0.1	Assistant Professor	Assistant Professor		Regular	Yes		No
85	Beerappa	CIVPB3028F	NA	M.Tech	VTU	Cyber security	28/08/2024	0.8	Assistant Professor	Assistant Professor		Regular	Yes		No
86	Dr.Archana R A	BBQPA9151G	NA	Ph.D	Bharathiyar University	Big Data	25/03/2021	4.2	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No
87	Prof. Srujana SN	FVFPS7908G	NA	M.Tech	VTU	Computer Networking	02/05/2025	0	Assistant Professor	Assistant Professor		Regular	Yes		No
88	Prof. Belji T	CEVPB0451D	NA	M.Tech	Anna University	IOT	05/05/2025	0	Assistant Professor	Assistant Professor		Regular	Yes		No
89	prof.Sneha Sureddy	EKMPS7490N	NA	M.Tech	JNTU Hyderabad	Machine Learning, Deep Learning, Computer Vision	08/05/2025	0	Assistant Professor	Assistant Professor		Regular	Yes		No
90	prof.Shilpa K A	DHPPS0812D	NA	M.Tech	VTU	Computer Science	05/05/2025	0	Assistant Professor	Assistant Professor		Regular	Yes		No
91	Pushpanathan G.	CXGPP8626J	NA	M.Tech	VTU	CSE	05/09/2024	0.8	Assistant Professor	Assistant Professor		Regular	Yes		No
92	Brunda S	BKHPB6721K	NA	M.Tech	VTU	Deep learning and Image Processing	29/02/2024	1.2	Assistant Professor	Assistant Professor		Regular	Yes		No
93	Dr.Drakshaveni G.	AIPPG8389K	NA	M.Tech	VTU	CSE	04/07/2022	2.10	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No

94	Dr.Sudersanam	BCMPS9354Q	NA	M.Tech and Ph.D.	VTU	Parallel Computing	27/05/2022	3	Assistant Professor	Associate Professor	01/07/2024	Regular	Yes		No
95	Dr.Sudhamani M.V.	AFKPS0292R	NA	M.Tech and Ph.D.	VTU	Image Processing	11/10/2021	3.7	Professor	Professor		Regular	No	14/05/2024	No
96	Dr.Anil Kumar	BGPPK8609F	NA	M.Tech and Ph.D.	NITK	Networks on chips	09/05/2022	1.10	Assistant Professor	Assistant Professor		Regular	No	02/04/2024	No
97	Dr.Kshama	AXIPG7169H	NA	M.Tech and Ph.D.	VTU	Cloud Computing	05/08/2022	1.8	Assistant Professor	Assistant Professor		Regular	No	17/04/2024	No
98	Dr.Karthik S.A.	AVCPA3618B	NA	M.Tech and Ph.D.	VTU	Machine Learning	06/06/2022	1.11	Assistant Professor	Assistant Professor		Regular	No	09/05/2024	No

**5.1 Student-Faculty Ratio (SFR) (30)**

Total Marks 14.00





No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):

UG1=1st UG program

UGn=nth UG program

**B**= No. of Students in UG 2nd year (ST)

**C**= No. of Students in UG 3rd year (ST)

**D**= No. of Students in UG 4th year (ST)

No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):

PG1=1st PG program.

PGm=mth PG program

**A**= No. of Students in PG 1st year

**B**= No. of Students in PG 2nd year

Student Faculty Ratio (**SFR**) = S/F

**S**= No. of students of all programs in the Department including all students of allied departments/clusters.

**No. of students (ST)**=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)

Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.

**F**=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

## UG

No. of UG(Engineering) programs in Department including allied departments/clusters(UGn):

Information Science & Engineering						
Year of Study	CAY		CAYm1		CAYm2	
	(2024-25)		(2023-24)		(2022-23)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	240	24	180	18	180	18
3rd Year	180	18	180	18	180	18
4th Year	180	18	180	18	180	18
<b>Sub-Total</b>	<b>600</b>	<b>60</b>	<b>540</b>	<b>54</b>	<b>540</b>	<b>54</b>
<b>Total</b>	<b>660</b>		<b>594</b>		<b>594</b>	

Computer Science and Engineering						
Year of Study	CAY		CAYm1		CAYm2	
	(2024-25)		(2023-24)		(2022-23)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	240	24	180	18	180	18
3rd Year	180	18	180	18	180	18
4th Year	180	18	180	18	180	18
<b>Sub-Total</b>	<b>600</b>	<b>60</b>	<b>540</b>	<b>54</b>	<b>540</b>	<b>54</b>
<b>Total</b>	<b>660</b>		<b>594</b>		<b>594</b>	

Artificial Intelligence and Machine Learning						
Year of Study	CAY		CAYm1		CAYm2	
	(2024-25)		(2023-24)		(2022-23)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	180	18	120	12	60	6
3rd Year	120	12	60	6	60	3
4th Year	60	6	60	3	60	0
<b>Sub-Total</b>	<b>360</b>	<b>36</b>	<b>240</b>	<b>21</b>	<b>180</b>	<b>9</b>
<b>Total</b>	<b>396</b>		<b>261</b>		<b>189</b>	

Computer Science and Business System						
Year of Study	CAY		CAYm1		CAYm2	
	(2024-25)		(2023-24)		(2022-23)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	60	6	0	0	0	0
3rd Year	0	0	0	0	0	0
4th Year	0	0	0	0	0	0
<b>Sub-Total</b>	<b>60</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>66</b>		<b>0</b>		<b>0</b>	
Grand Total	1782		1449		1377	

**PG**

No. of PG Programs in the Department 2

Computer Science and Engineering						
Year of Study	CAY(2024-25)		CAYm1(2023-24)		CAYm2 (2022-23)	
	Sanction Intake					
1st Year	18		18		18	
2nd Year	18		18		18	
<b>Total</b>	<b>36</b>		<b>36</b>		<b>36</b>	
Cyber Security						
Year of Study	CAY(2024-25)		CAYm1(2023-24)		CAYm2 (2022-23)	
	Sanction Intake					
1st Year	18		18		18	
2nd Year	18		18		0	
<b>Total</b>	<b>36</b>		<b>36</b>		<b>18</b>	
Grand Total	72		72		54	

**SFR**

No. of UG Programs in the Department 2

No. of PG Programs in the Department 2

Information Science & Engineering Computer Science and Engineering Artificial Intelligence and Machine Learning Computer Science and Business System Computer Science and Engineering Cyber Security

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
UG1.B	264	198	198
UG1.C	198	198	198
UG1.D	198	198	198
<b>UG1: Information Science &amp; Engineering</b>	<b>660</b>	<b>594</b>	<b>594</b>
UG2.B	264	198	198
UG2.C	198	198	198
UG2.D	198	198	198
<b>UG2: Computer Science and Engineering</b>	<b>660</b>	<b>594</b>	<b>594</b>
UG3.B	198	132	66
UG3.C	132	66	63
UG3.D	66	63	60
<b>UG3: Artificial Intelligence and Machine Learning</b>	<b>396</b>	<b>261</b>	<b>189</b>
UG4.B	66	0	0
UG4.C	0	0	0
UG4.D	0	0	0
<b>UG4: Computer Science and Business System</b>	<b>66</b>	<b>0</b>	<b>0</b>
PG1.A	18	18	18
PG1.B	18	18	18
<b>PG1: Computer Science and Engineering</b>	<b>36</b>	<b>36</b>	<b>36</b>
PG2.A	18	18	18
PG2.B	18	18	0
<b>PG2: Cyber Security</b>	<b>36</b>	<b>36</b>	<b>18</b>
DS=Total no. of students in all UG and PG programs in the Department	1392	1260	1242
AS=Total no. of students of all UG and PG programs in allied departments	462	261	189
S=Total no. of students in the Department (DS) and allied departments (AS)	<b>S1= 1854</b>	<b>S2= 1521</b>	<b>S3= 1431</b>
DF=Total no. of faculty members in the Department	81	60	59
AF= Total no. of faculty members in the allied Departments	22	10	8
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	<b>F1= 103</b>	<b>F2= 70</b>	<b>F3= 67</b>
FF=The faculty members in F who have a 100% teaching load in the first-year courses	7	5	4
Student Faculty Ratio (SFR)=S/(F-FF)	<b>SFR1= 19.31</b>	<b>SFR2= 23.40</b>	<b>SFR3= 22.71</b>
Average SFR for 3 years	<b>SFR= 21.81</b>		

Average SFR for three assessment years : 21.81

Assessment SFR : 14

**5.2 Faculty Qualification (25)**

Total Marks 25.00

Institute Marks : 25.00

Year	X	Y	RF	$FQ = 2.5 \times [(10X + 4Y) / RF ]$
2024-25(CAY)	56	47	59.00	31.69
2023-24(CAYm1)	50	20	46.00	31.52
2022-23(CAYm2)	41	25	41.00	31.10

Average Assessment : 31.44

**5.3 Faculty Cadre Proportion (25)**

Total Marks 25.00

Institute Marks : 25.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2024-25)	6.00	12.00	13.00	22.00	39.00	69.00
CAYm1(2023-24)	5.00	10.00	10.00	13.00	30.00	47.00
CAYm2(2022-23)	4.00	8.00	9.00	16.00	27.00	43.00
Average Numbers	5.00	10.00	10.67	17.00	32.00	53.00

Cadre Ratio Marks [ (AF1 / RF1) + [(AF2 / RF2) \* 0.6] + [ (AF3 / RF3) \* 0.4] ] \* 12.5 : 25.00

**5.4 Visiting/Adjunct/Emeritus Faculty etc. (10)**

**Table No. 5.4.1: List of visiting/adjunct faculty/professor of practice and their teaching and practical loads.****(CAYm1) 2023-24**

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mrs.Ramya	Manager	Bioneds	Biology for Engineers	50.00
2	Smt.Smitha Karthik	Software Engineer	scelstream	Music	26.00
3	smt.Sneha shree Naveen Kumar	Music Teacher	Krishna Gana sudha Sageetha shale	Music	26.00

**(CAYm2) 2022-23**

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1					

**(CAYm3) 2021-22**

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Mrs.Aparna Katti	Music Teacher	SAPA Music Center	Music	26.00

**5.5 Faculty Retention (10)**

Total Marks 9.33

Institute Marks : 9.33

Description	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section 5.1 of SAR; (RF=S/20).	46	41	64
AF=The no. of available faculty members in the Department including allied Departments	70	67	53
A= The no. of faculty members at the current institute with less than 1 year of experience (A in AF)	0	0	1
B= The no. of faculty members at the current institute with more than 1 year and less than 2 years of experience (B in AF)	5	3	3
C= The no. of faculty members at the current institute with more than 2 years and less than 3 years of experience (C in AF)	8	6	3
D= The no. of faculty members at the current institute with more than 3 years and less than 4 years of experience (D in AF)	6	6	9
E= The no. of faculty members at the current institute with more than 4 years of experience (E in AF)	51	52	39
FR=((A*0)+(B*1)+(C*2)+(D*3)+(E*4))/RF) *2.50 (points limited to 10)	10	10	8

Average : 9.33

Assessment Marks : 9.33

**6 FACULTY CONTRIBUTIONS (120)**

Total Marks 102.00

**6.1 Professional Development Activities (60)**

Total Marks 60.00

**6.1.1 Memberships in Profession Societies at National/International Levels (5)**

Institute Marks : 5.00



**Table No. 6.1.1.1: List of faculty members and their memberships.**

S.No	Name of the Faculty	Name of the Professional Society /Body at National and International Level	Name of the Grade/Level/Position
1	Dr. Thippeswamy G	Institution of Engineers (IEI), Computer Society of India (CSI), Indian Society for Technical Education(ISTE)	Fellow, Member, Life member
2	Dr. Anil G N	Indian Society for Technical Education(ISTE)	Member
3	Dr. Sanjay H A	IEEE	Senior Member
4	Dr. Usha B A	IEEE	Member
5	Dr. Mahesh G	ISTE, IAENG	Member
6	Dr. Radhika K R	IEEE, MIE	Member
7	Dr. Bhuvaneshwari C M	ISTE, IEI, IFERP	Member
8	Dr. Bharathi R	IEEE	Member
9	Dr. Srivani P	IAENG, LMISTE	Member
10	Mrs. Vishakha Yadav	LMISTE, CSI	Member
11	Dr. Shankar R	IUPRAI	Member
12	Dr. Muneshwara M S	IEAE	Member
13	Dr. Anand R	SEMCE, MISTE	Member
14	Mrs. Durga Devi G Y	CSI	Member
15	Mr. Jagadish P	SEMCE	Member
16	Mr. Rajesh N V	ISTE	Member
17	Dr. Ambika G N	CSI	Member
18	Dr. Vidya R Pai	CSI	Member
19	Mrs. A. Mari Kirthima	ISTE	Member
20	Dr. Lakshmi B N	AMIE	Member
21	Dr. Archana	IAENG	Member
22	Dr. Ravi Kumar B N	IUPRAI	Member
23	Mr. Guruprasad S	LMISTE, IAENG	Member
24	Mr. Priyanka M R	IEEE (99954639), IAENG	Member
25	Dr. Surekha K B	IEEE, IAENG	Senior Member
26	Dr. Manjunath T N	Sr.IEEE Member FIE	Member
27	Dr. Pushpa S K	IEI, ISTE, ISC	Member
28	Dr. B R Arun Kumar	Life member :Cryptography Research Society of India (CRSI-L/181) since 2004, Indian Society for Technical Education (LM 45448) since 2005	Member
29	Dr. Narasimhamurthy M S	LMISTE, ICSES, IAENG	Member
30	Dr. Rakesh N	ACM, IEEE, ISTE, LCSI	Life Member
31	Dr. Sheela Kathavate	ISTE	Member

32	Dr. Prakash G L	MISTE	Member
33	Dr. Shoba M	IEEE, AMIEI, ISTE, InSc, AIMER	Member
34	Dr. Mohan B A	IAENG	Member
35	Dr. Basavaraj G N	IEEE, ISTE, IAENG	Member
36	Dr. Chetana C	ISTE,IUPRAI	Member
37	Mrs. Mahalakshmi S	Member of Institution of Engineers, LCSI	Life Member
38	Dr. Shanthi D L	ISTE, LCSI	Member
39	Dr. GireeshBabu C N	IEEE, LCSI	Member
40	Dr. Chandrashekhar K T	ISTE	Member
41	Dr. Vinutha K	ISCA	Member
42	Dr. Ravi Kumar B N	SEMCE	Member
43	Mrs. Ambika R S	IEEE	Member
44	Dr. Swetha M S	IEEE, SEMCE	Member
45	Dr. Savitha S	ISTE, InSc	Member
46	Dr. Kalai Vani Y S	THE INDIAN SCIENCE CONGRESS ASSOCIATION	Member
47	Mrs. Bhavya G	ISTE	Member
48	Dr. Srinivas B V	Indian Society of Technical Education:ISTE	Member
49	Mr. Vinay Kumar Y B	MIE	Member
50	Mr. Sanjana H	AMIE	Member
51	Mrs. Shilpa K A	CSI	Member
52	Dr. Veena N	ISTE	Member
53	Dr. Ashwini N	TISCA	Member
54	Dr. Hemamalini B H	Institution of Engineers (IEI)	Member
55	Dr. Mohammad Khurram J	Institution of Engineers (IEI), IAENG	Member
56	Mrs. Anusha K L	Institution of Engineers (IEI), IAENG	Member

**6.1.2 Faculty as Resource Persons or Participants in STTPs/FDPs (10)**

Institute Marks : 5.00

**6.1.2.1 Faculty as Resource Persons in STTPs/FDPs (5)**



**Table No. 6.1.2.1: List of faculty members as resource person in STTP/FDP events.  
(CAYm1) 2023-24**

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1	Dr. Thippeswamy G	IPR	17/5/2023	Bengaluru	Jain college of engineering
2	Dr. Thippeswamy G	FDP on OBE and NBA Orientation Program	19/8/2023	Bengaluru	Vemana Institute of Technology
3	Dr. Nagabhushan S V	AI & ML	02/01/2024	Puttur	SIETK
4	Dr. Shankar R	Python	14/12/2023	Moodbidri	Yenepoya Institute of Technology
5	Dr. Thippeswamy G	Cybersecurity and E- Administration	24/2/2024	Belagavi	Training institute
6	Dr. Shankar R	Business and Data Analytics	27/12/2023	Kulur	Yenepoya Institute of Arts, Science, Commerce, and Management
7	Dr. Shankar R	Python	18/03/2024	Moodbidre	Yenepoya Institute of Technology
8	Dr. Shankar R	Business and Data Analytics	02/04/2024	Kulur	Yenepoya Institute of Arts, Science, Commerce, and Management
9	Dr. Shankar R	Python	02/05/2024	Kanyakumari	Joy University
10	Dr. Usha B A	Artificial Intelligence in Cyber Security	16/09/2023	Hassan	Malnad College of Engineering
11	Dr. Gireesh Babu C N	Evaluation Mechanism for CO-PO attainment and accountability of faculty.	26/10/2023	Bengaluru	Indian Academy College
12	Mrs. Mahalakshmi S	Evaluation Mechanism for CO-PO attainment and accountability of faculty.	26/10/2023	Bengaluru	Indian Academy College
13	Dr. Manjunath T N	NBA accreditation	16/03/2024	Bengaluru	School of CIVIL Engineering REVA University
14	Dr. Surekha K B	NBA accreditation	16/03/2024	Bengaluru	School of CIVIL Engineering REVA University
15	Dr. Usha B A	Cyber Security for the Participating 3 Karnataka Battalion NCC 500+ Cadets	12/06/2024	Bengaluru	Manipal University
16	Dr. Swetha M S	Hands-on cloud virtualisation and Google Cloud Platform	03/06/2024	Bengaluru	Sir MVIT
17	Dr. Swetha M S	Cyber security	21/06/2024	Bengaluru	SEA college of engineering.
18	Dr. Harish Kumar N	Partial Delivery on Analysis and Design of Algorithms	22/06/2024	Bengaluru	Dayananda Sagar College of Engineering
19	Dr. Gireesh Babu C N	Digital India and Cyber Awareness	22/08/2024	Bengaluru	DTI, Bengaluru Govt. of Karnataka
20	Mrs. Shama H M	Innovation & Entrepreneurship	12/02/2024	Goa	AITD, Goa
21	Mr. Pradeep Kumar G M	Python Programming	13/01/2024	Chikkaballapur	SJCIT
22	Mr. Sanjay M Belgaonkar	Machine Learning Using Python	19/09/2024	Bengaluru	NCET
23	Mr. Sachin A U	Machine Learning Using Python	19/09/2024	Bengaluru	NCET
24	Mr. Shobhit Tembhre	Machine Learning Using Python	19/09/2024	Bengaluru	NCET
25	Mr. Sanjay M Belgaonkar	STTP in Advancements in GIS and Drones with AI (Introduction to ML)	17/03/2025	Bengaluru	BMSIT&M
26	Mr. Sachin A U	STTP in Advancements in GIS and Drones with AI (Introduction to ML)	17/03/2025	Bengaluru	BMSIT&M
27	Dr. Bharathi M A	Innovate with AI-Use Cases Contemporary and Future	29/11/2023	Bengaluru	SVCE

## (CAYm2) 2022-23

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1	D. Thippeswamy G	Content Creation & Delivery of MOOCs Through SWAYAM Implementation of Vision NEP 2020	03/02/2023	Pune, Maharashtra	Abeda Inamdar Senior College
2	Dr. Shankar R	Web Programming and its Applications	13/05/2023	Bengaluru	SJBIT
3	Dr. Shankar R	Computer Organization and Architecture	13/03/2023	Bengaluru	RLJIT
4	Dr. Durga Bhavani A	Computer Organization and Architecture	13/03/2023	Bengaluru	RLJIT
5	Dr. Bhuvaneshwari C M	NEP-2020 Awareness Programme for the students	20/12/2022	Bengaluru	BMSIT&M
6	Dr. Dhanalakshmi B K	Cloud Computing	16/11/2022	Bengaluru	Cambridge Institute of Technology
7	Dr. Bhuvaneshwari C M	Java Programming for Placement,Open course	12/06/2023	Bengaluru	BMSIT&M
8	Dr. Arun kumar B R	One day workshop on " OBE and NBA Processes"	20/12/2022	Bengaluru	NMIT, Bengaluru
9	Dr. Arun kumar B R	Cyber security attacks and research opportunities	23/05/2023	Belagavi	VTU, Belagavi
10	Dr. Arun kumar B R	Topic : Cyber Security a and Blockchain Technology Applications Open Course : Hands on Training	12/06/2023	Bengaluru	CSE Dept., BMSIT&M, Bengaluru
11	Dr. Arun kumar B R	Cyber security, block chain and NFTs Student Skill development Programme	06/12/2022	Bengaluru	CSE Dept., BMSIT&M, Bengaluru
12	Dr. Prakash G L	AWS Cloud Computing Tools and Services	02/09/2022	Bengaluru	Department of Information Science & Engineering B M S Institute of Technology & Management
13	Dr. Shobha M	AWS Cloud Computing Tools and Services	02/09/2022	Bengaluru	B M S Institute of Technology & Management
14	Dr. Mohan B A	AWS Cloud Computing Tools and Services	02/09/2022	Bengaluru	B M S Institute of Technology & Management
15	Dr. Manoj H M	Inculcating Universal Human Values in Technical Education	21/10/2022	Online	ATAL
16	Dr. Rajesh I S	Deep Learning & its Applications	06/03/2023	Tiptur	KIT, Tiptur
17	Dr. Srivani P	Computer Organization & Its applications	13/03/2023	Doddaballapur	R. L Jalappa Institute of Technology
18	Dr. Pradeep K R	Machine Learning Applications	10/07/2023	Bengaluru	NCET
19	Dr. Manoj H M	Recent Trends in Cybersecurity & Blockchain Technology	20/03/2023	Online	BMS College of Engineering, Bengaluru
20	Dr. Bharathi M A	Introduction to Data Science and its Applications	18/10/2022	Bengaluru	B M S Institute of Technology & Management

## (CAYm3) 2021-22

S.No	Name of the Faculty as Resource Person	Name of the STTP/FDP	Date (DD/MM/YYYY)	Location	Organized by
1	Dr. Sheela Kathavate	Innovation and Industry 3.0	11/08/2021	Bengaluru	SJBIT college
2	Dr. Usha B A	Industry 4.0: Applications of Deep Learning and Artificial Intelligence in Computer Vision	20/07/2021	Chennai	Dept of Information Technology, St. Joseph's Institute of Technology, OMR, Chennai
3	Dr. Dhanalakshmi B K	Power of Linux OS in Recent Trends	23/07/2021	Bengaluru	RNS Institute of Technology
4	Dr. Archana R A	Advanced Computer Concepts	18/08/2021	Bengaluru	Quantech Origin Private Limited, Bangalore
5	Dr. Usha B A	Artificial Intelligence in Cyber Security	06/05/2022	Tamil Nadu	Department of CSE, Francis Xavier Engineering College (An Autonomous Institution), Vannarpet, Tirune
6	Dr. Muenshwara M S	Java for Placements	14/06/2022	Bengaluru	BMSIT&M
7	Mr. Jagadish P	Java for Placements	14/06/2022	Bengaluru	BMSIT&M
8	Dr. Bharathi M A	Machine Learning Applications	28/10/2021	Bengaluru	ABBS School of Law, Bengaluru
9	Dr. Bharathi M A	Intelligent Networks	06/01/2022	Belgaum	AITM, Belagavi
10	Dr. Srivani P	New Age Technologies for Smart Agriculture- Open Avenues for students	07/05/2022	Bengaluru	Creative Knowledge, Gouribidnoor
11	Dr. Anupama H S	Programming in Python	19/12/2022	Bengaluru	BMSIT&M
12	Dr. Pradeep K R	Programming in Python	19/12/2022	Bengaluru	BMSIT&M
13	Mrs. Shama H M	Innovation and Entrepreneurial journey	25/02/2022	Bengaluru	B M S Institute of Technology & Management

**6.1.2.2 Faculty Members' Participation in STTPs/FDPs (5)**

Institute Marks : 5.00





Name of the faculty	Max 5 Per Faculty		
	2023-24(CAYm1)	2022-23(CAYm2)	2021-22(CAYm3)
Dr. Anil G N	5.00	0.00	5.00
Dr. Thippeswamy G	5.00	5.00	5.00
Dr. Manjunath T N	5.00	5.00	5.00
Dr. Mahesh G	5.00	5.00	5.00
Dr. Satish Kumar T	5.00	5.00	5.00
Dr. HemaMalini B H	5.00	5.00	5.00
Dr. Usha B A	5.00	5.00	5.00
Dr. Radhika K R	5.00	5.00	0.00
Dr. Nagabhushan S V	5.00	5.00	5.00
Dr. Shankar R	5.00	5.00	5.00
Dr. Muneshwara M S	5.00	5.00	5.00
Dr. Arun kumar B R	5.00	5.00	5.00
Dr. Srivani P	5.00	5.00	5.00
Dr. Aruna kumari B N	5.00	5.00	0.00
Dr. Bharathi R	5.00	5.00	5.00
Dr. Anand R	5.00	5.00	5.00
Dr. Durga Bhavani A	5.00	5.00	5.00
Dr. Manoj H M	5.00	5.00	5.00
Dr. Lakshmi B N	5.00	5.00	5.00
Dr. Ashwini N	5.00	5.00	5.00
Dr. Bhuvaneshwari C M	5.00	5.00	5.00
Dr. Dhanalakshmi B K	5.00	5.00	5.00
Dr. Archana R A	5.00	5.00	5.00

Dr. Jai Arul Jose G	5.00	0.00	0.00
Mr. Jagadish P	5.00	5.00	5.00
Mr.Chethana C	5.00	5.00	5.00
Mrs. Mari Kirthima	5.00	5.00	0.00
Mrs. Durgadevi G Y	5.00	5.00	5.00
Dr. Sunanda Dixit	0.00	5.00	5.00
Dr. Anjan Krishnamurthy	0.00	0.00	5.00
Mrs. Vishaka Yadav	5.00	5.00	5.00
Mrs. Shilpa M	5.00	0.00	0.00
Mrs. Brunda S	5.00	0.00	0.00
Mrs. Tanya Chandra	5.00	0.00	0.00
Mrs. Gowthami Ch	5.00	0.00	0.00
Dr. Ambika G N	5.00	0.00	5.00
Dr. Vidya R Pai	5.00	5.00	5.00
Dr. Pushpa S K	5.00	5.00	5.00
Dr. Sudhamani M V	5.00	5.00	5.00
Dr. Sheela K	5.00	5.00	5.00
Dr. Surekha K B	5.00	5.00	5.00
Dr. Geeta Amol Patil	5.00	5.00	5.00
Dr. Rakesh N	5.00	5.00	0.00
Dr. Veena N	5.00	5.00	5.00
Dr. Shoba M	5.00	5.00	5.00
Dr. Prakash G L	5.00	5.00	5.00
Dr. Drakshaveni G	5.00	5.00	5.00

Mrs. Mahalakshmi S	5.00	5.00	5.00
Dr. Shanthi D L	5.00	5.00	5.00
Dr. Chandrashekhar K T	5.00	5.00	5.00
Dr. P Sudarsanam	0.00	5.00	5.00
Dr. GireeshBabu C N	5.00	5.00	5.00
Mrs. Ambika R S	5.00	5.00	5.00
Dr. Swetha M S	5.00	5.00	5.00
Dr. Vinutha K	5.00	5.00	5.00
Dr Ravikumar B N	0.00	5.00	0.00
Dr. Narasimhamurthy M S	5.00	5.00	5.00
Dr. Mohan B A	5.00	5.00	5.00
Dr. Anil Kumar	0.00	5.00	5.00
Dr. Savitha S	5.00	5.00	0.00
Dr. Basavaraj G N	5.00	5.00	0.00
Dr. Karthik S A	0.00	5.00	0.00
Dr. Kshama S B	0.00	5.00	0.00
Dr. Shridhar sanshi	0.00	0.00	5.00
Mrs. Shama H M	5.00	5.00	5.00
Dr. Anupama H S	5.00	5.00	0.00
Dr. Pradeep K R	5.00	5.00	0.00
Dr. Bharathi Malakreddy A	5.00	5.00	5.00
Dr. Vishwa Kiran S	0.00	0.00	5.00
Dr. Srivani P	5.00	5.00	5.00
Mrs. Kavitha D	3.00	0.00	0.00

Dr. Rajesh I S	5.00	0.00	0.00
Mrs. Mayuri K P	5.00	0.00	0.00
Dr. Kantharaju V	5.00	5.00	0.00
Mr. Amitha S K	5.00	0.00	0.00
Mr. Pradeep Kumar G M	5.00	0.00	0.00
Mrs. Bhavya G	5.00	0.00	0.00
Mr. Chidananda K	5.00	0.00	0.00
Mr. Sanjay M Belgaonkar	5.00	5.00	5.00
Sum	348.00	310.00	275.00
RDF = Number of faculty required to comply with the 20:1 student - faculty ratio in the Department alone, as per section 5.1 of SAR(RDF= DS / 20).	69.60	63.00	62.10
Assessment Points (AP)= (Sum/(0.5* RDF)) (Points limited to 5 for each assessment year)	5.00	5.00	5.00

Average assessment over 3 years: 5.00

6.1.3 Faculty Contribution in Development of SWAYAM MOOCs and other E-Content (5)

Institute Marks : 5.00

**Table No. 6.1.3.1: List of faculty members developed MOOC course for the past 3 years.**

S.No	Name of the Faculty	Name of the Course Developed and available online on Swayam platform by your Department faculty
1	Dr. Anand R	OOP Using Java
2	Mr. Jagadish P	Java
3	Dr. Anand R	CS
4	Dr. Hemamalini B H	Theory of Computation
5	Mr. Brunda S	Theory Of Computation
6	Dr. Basavaraj G N	Web Technology Application
7	Dr. Rakesh N	DAA Lab Binary Search
8	Dr. Mohan B A	Web Technology Application
9	Mr. P Sudarshanam	DAA
10	Dr. Srivani P	Application Development Using Python
11	Mr. Jagadish P	Application Development Using Python
12	Dr. Dhanalakshmi B K	Discrete Mathematical Structures
13	Dr. Arunakumari B N	Discrete Mathematical Structures
14	Dr. Surekha K B	Automata Theory & Computability
15	Dr. Savitha S	Automata Theory & Computability
16	Dr. Mohan B A	Web Technology Application
17	Dr. Ashwini N	Analog & digital electronics
18	Mr. Shridhar Sanshi	DMS (Graph theory)
19	Dr. Pushpa S K	DMS (Graph theory)
20	Dr. M V Sudhamani	Getting Started with Internet of Things Notion Press Publisher, ISBN 979-8398974799, June 2023 <a href="https://www.flipkart.com/getting-started-internet-thin">https://www.flipkart.com/getting-started-internet-thin</a>
21	Dr. Usha B A	Big Data Analytics in Cybersecurity Lambert Academic Publishing 2023 <a href="https://www.amazon.com/Big-Data-Analytics-Cybersecurity-Usha/dp/6206751031">https://www.amazon.com/Big-Data-Analytics-Cybersecurity-Usha/dp/6206751031</a>
22	Dr. Shoba M	Big Data Analytics using Python Scientific International Publishing House, ISBN 978-93-5625-195-3, August 2022

**6.1.4 Faculty Certification of MOOCs through SWAYAM, etc. (10)**

Institute Marks : 10.00



**Table No. 6.1.4.1: List of faculty members obtained certification of MOOCs for the past 3 years.**

S.No	Name of the Faculty	Name of Course Passed	Course Offered by (agency)	Grade obtained if any
1	Mr. Annapareddy Haarika	Introduction To Industry 4.0 And Industrial Internet Of Things	NPTEL	pass
2	Dr. Arun kumar B R	Blockchain and its Applications	NPTEL	pass
3	Dr. Geeta Amol Patil	Social Networks	NPTEL	Elite
4	Dr. Gireesh Babu C N	Computer Networks And Internet Protocol	NPTEL	Elite
5	Dr. Harish Kumar N	Cloud Computing	NPTEL	Elite
6	Mrs. Malini M	Deep Learning	NPTEL	Elite
7	Mrs. Mahalakshmi S	Problem solving through programming in C	NPTEL	Elite
8	Dr. Savitha S	Natural Language Processing	NPTEL	pass
9	Dr. Shanthi D L	Reinforcement Learning	NPTEL	Elite
10	Dr. Shanthi D L	Natural Language Processing	NPTEL	pass
11	Dr. Srinivas B V	Edge Computing	NPTEL	Silver
12	Mrs. Sowmya K	Introduction to Large Language Models	NPTEL	pass
13	Mr. Vinaykumar Y B	Programming in Java	NPTEL	Elite
14	Mr. Sonnegowda K	Research Methodology	NPTEL	Elite
15	Mr. Sonnegowda K	Cloud Computing	NPTEL	Topper
16	Dr. Geeta Amol Patil	The Joy of Computing Using Python	NPTEL	Elite
17	Dr. Arun kumar B R	Big Data Computing	NPTEL	Elite
18	Dr. Arun kumar B R	Cyber Security Privacy	NPTEL	Elite
19	Dr. Arun kumar B R	Operating System Fundamentals	NPTEL	Elite
20	Mrs. Amulya P	Introduction to Machine Learning	NPTEL	Elite
21	Mr. Pushpanathan G	Java Full Stack	Wipro	pass
22	Dr. Geeta Amol Patil	NBA Accreditation and Teaching-Learning in Engineering (NATE)	NPTEL	pass
23	Dr. Shanthi D L	Deep Learning	NPTEL	pass
24	Dr. Arun kumar B R	Big Data Computing	NPTEL	Elite
25	Dr. Ashwini N	Machine learning	NPTEL	Elite
26	Dr. Lakshmi B N	The Joy of Computing Using Python	NPTEL	Elite
27	Dr. Dhanalakshmi B k	The Joy of Computing Using Python	NPTEL	Elite
28	Mr. Ajith S	Augmenting design thinking with human computer interaction	NPTEL	Elite
29	Mr. Ajith S	Design, Technology and innovation	NPTEL	Elite
30	Mrs. Gouthami Ch	Cryptography	NPTEL	pass
31	Mrs. Arpitha Shivanna	Data Analytics with Python	NPTEL	pass
32	Dr. Mahesh G	Complete Python Bootcamp From Zero to Hero in Python	Udemy	pass
33	Dr. Hemamalini B H	The Data Science Course 2021: Complete Data Science Bootcamp	Udemy	pass

34	Dr. Usha B A	Crash Course on Python	Coursera	pass
35	Dr. Usha B A	Programming for Everybody(Getting started with Python)	Coursera	pass
36	Dr. Usha B A	Problem Solving Using Computational Thinking	Coursera	pass
37	Dr. Manoj H M	Machine Learning A-Z: Hands-On Python & R In Data Science	Udemy	pass
38	Dr. Lakshmi B N	Learn Python Programming Masterclass	Udemy	pass
39	Dr. Ashwini N	Foundation of Cloud IoT Edge ML	NPTEL	Elite
40	Dr. Usha B A	Systems and Usable Security	NPTEL	pass
41	Dr. Usha B A	Cyber Security	ICT Academy	pass
42	Dr. Usha B A	Innovation Ambassador	Institution's Innovation Council	pass
43	Dr. Nagabhushan S V	Web development using Python	Udemy	pass
44	Dr. Arunkumar B R	Introduction to Research, IIT Madras	NPTEL	pass
45	Dr. Ashwini N	Introduction to Machine Learning	NPTEL	Elite
46	Dr. Mahesh G	Learn C++ Programming - Beginner to Advance- Deep Dive in C++	Udemy	pass
47	Dr. Usha B A	Network Defence Essentials	EC Council	pass
48	Dr. Hemamalini B H	Chat GPT for Data Science and Machine Learning	Udemy	pass
49	Dr. Hemamalini B H	Deep Learning A-Z 2023: Neural Networks, AI & Chat GPT Bonus	Udemy	pass
50	Dr. Shankar R	Strategic Management - Fundamentals 101 to Advanced	Udemy	pass
51	Mrs. Brunda S	Deep Learning	NPTEL	Elite
52	Mrs.Brunda S	Introduction to Machine Learning	NPTEL	pass
53	Mrs. Tanya Chandra	Basics of Computer Networking	Alison	pass
54	Dr. Pradeep K R	Crash Course on Python	Coursera-Google Career Certificate	pass
55	Dr. Pradeep K R	Ask Questions to Make Data-Driven Decisions	Coursera-Google Career Certificate	pass
56	Dr. Pradeep K R	Foundations: Data, Data, everywhere	Coursera-Google Career Certificate	pass
57	Dr. Pradeep K R	Prepare Data for Exploration	Coursera-Google Career Certificate	pass
58	Dr. Anupama H S	NLP	Udemy	pass
59	Dr. Anupama H S	Data Science Boot Camp	Udemy	pass
60	Mr. Harinath H N	Basics of Javascript	Skill academy	pass
61	Dr. Srivani P	Excel Essentials	Udemy	pass
62	Dr.Bharathi M A	Introduction to Networking	Coursera NVIDIA	pass
63	Dr.Bharathi M A	Introduction to Psychology	Coursera,Yale University	pass
64	Dr.Bharathi M A	Machine Learning	Great learning	pass
65	Dr Vishwa Kiran S	Embedded Systems Bare Metal Programming	Udemy	pass
66	Dr. Pradeep K R	Accreditation and Outcome Based Learning	NPTEL - AICTE	pass
67	Dr. Pradeep K R	NLP	Infosys Spring Board	pass

68	Dr. Pradeep K R	Machine Learning using Python	Infosys Spring Board Explore	pass
69	Dr. Pradeep K R	Python for Data Science	Infosys Spring Board	pass
70	Dr. Bharathi M A	Cybersecurity for everyone	Coursera, University of Maryland	pass
71	Dr. Shankar R	Strategic Management - Fundamentals 101 to Advanced	Udemy	pass
72	Dr Sunanda Dixith	Introduction to Agile and scrum	Coursera	pass
73	Dr Ambika G N	Statistics and Mathematics for DS and DA	Udemy	pass
74	Dr. Ashwini N	Deep Learning	NPTEL	Elite
75	Dr. Nagabhushan S V	Unreal engine for architects and BIM modelers - Virtual Reality	Udemy	pass
76	Mrs. Amitha S K	On Introduction to Machine Learning	NPTEL-AICTE	pass
77	Mrs. Amitha S K	On High Performance Scientific Computing	NPTEL-AICTE	pass
78	Dr. Shanthi D L	Deep Learning	NPTEL	pass
79	Dr. Prakash G L	Deep Learning	NPTEL	pass
80	Dr. KanthaRaju V	Snowflake Complete Course for Clearing Interviews	Udemy	pass
81	Dr. KanthaRaju V	The Complete 2023 Software Testing bootcamp	Udemy	pass
82	Dr Mohan B A	Cloud Computing	NPTEL	pass
83	Dr Mohan B A	Programming in JAVA	NPTEL	pass
84	Dr. Savitha S	Deep Learning	NPTEL	pass
85	Mrs. Amulya P	Cloud Computing	NPTEL	Elite
86	Mrs. Amulya P	Research Methodology	NPTEL	pass

6.1.5 FDP/STTP Organized by the Department (10)

Institute Marks : 10.00

**Table No. 6.1.5.1: List of FDPs/STPs organized by Department for the past 3 years.**  
**(CAYm1) 2023-24**

S.No	Name of the Program	Date of the Program(DD/MM/YYYY)	Duration	Name of the Speaker & Designation and Organization	No. of People Attended
1	Interdisciplinary Cutting Edge Technologies in Science	25/3/2024	15	Dr Manesh, Dr. Vishwas Bapat, Prof. Satwinder Singh	35
2	Recursive Thinking & Dynamic Programming	07/10/2024	4	Mr. Channa Bankapur	200
3	Faculty Development Workshop on "Gen-AI and Prompt Engineering	07/12/2024	1	Mr. Harsh Singhal	60

**(CAYm2) 2022-23**

S.No	Name of the Program	Date of the Program(DD/MM/YYYY)	Duration	Name of the Speaker & Designation and Organization	No. of People Attended
1	5-day national workshop on practical cybersecurity forensics and blockchain technology	06/12/2022	5	Dr.Dinesha H.A, Prof. Sharada Devi K S, Dr.Arun kumar B.R, Dr.Anjan K , Dr. Ajith	70
2	Five Day Faculty Development Program on AWS Cloud Computing Tools and Services	20/09/2022	5	Mr. Vijay Mahantesh, Dr. Prakash G L, Dr Shobha M	35
3	Machine Learning with Python	12/06/2023	5	Prashanth Kumar, Chethan Patel S N, Asif Ali Ahmed R	60
4	Ethical hacking Blockchain and Web Technologies	12/06/2023	5	Dr. Manish Kumar, Sri. Kushal Lokesh, Dr. Arun Kumar BR, Prof. B J Tejaswini	49
5	Hands-on Robotics with ROS	12/06/2023	5	Mr. S N Shashank	50
6	Java Programming for Placements	12/06/2023	5	Dr. Nagbhushan N V, Dr. Bhuvaneshwari C M	37
7	Mobile Application Development	12/06/2023	5	Mr. Chetan S P, Dr.Vishwakiran S, Mrs. Bharathi R, Dr. Dhanalakshmi B K, Dr. Archana R A	35
8	Start Earning! - VFX Unleashed: Mastering the Art of Video Editing, 3D Rendering and Visual Effects	12/06/2023	5	Kevin Phillip, Shankar R, Sunanda Dixit, Rajesh N V	60
9	5 Day open course-Gaming and Augmented and Virtual reality Model Designing : A Metaverse	12/06/2023	5	Srikanth Avadhani, Dr Ashwini K B, Prof. Vetrimani Elangoan, Rishav Vishen, Dr. Srivani P	35
10	AI Applications with R-Programming	12/06/2023	5	Mr.Majid Shaikh, Dr.Radhika K R, Mrs.Durgadevi G Y	35

**(CAYm3) 2021-22**

S.No	Name of the Program	Date of the Program(DD/MM/YYYY)	Duration	Name of the Speaker & Designation and Organization	No. of People Attended
1	Full Stack Web Development	13/6/2022	5	Dr. Ravi Kumar B N	65
2	Mobile Application Development	13/6/2022	5	Dr. Vishwa Kiran S	60
3	Online FDP on Emerging Trends in Data Analytics	13/06/2022	5	Dr. Vishwa Kiran S	45

**6.1.6 Faculty Support in Student Innovative Projects (10)**

Institute Marks : 10.00



**Table No. 6.1.6.1: List of faculty members involved in student innovative projects.  
(CAYm1) 2023-24**

S.No	Name of the Faculty	Name of the Event	Date of the Event(DD/MM/YYYY)	Place of Event	Website Link if any
1	Dr. Manjunath T N	Empowering future through strategic alliance	20/09/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=1053665536765267&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=1053665536765267&amp;set=a.441327057999121</a>
2	Dr. Usha B A	New criminal laws	29/06/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=990777533054068&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=990777533054068&amp;set=a.441327057999121</a>
3	Dr. Manjunath T N	Codin detectives	21/05/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=962795449185610&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=962795449185610&amp;set=a.441327057999121</a>
4	Dr. Thippeswamy G	Design of Industrial virtual reality application	21/05/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=960283532770135&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=960283532770135&amp;set=a.441327057999121</a>
5	Dr. Radhika K R	Code sprint	05/05/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=950934127038409&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=950934127038409&amp;set=a.441327057999121</a>
6	Dr. Hemamalini B H	Girls in ICT 2024	28/05/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=945567987575023&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=945567987575023&amp;set=a.441327057999121</a>
7	Dr. Hemamalini B H	Apex- Oracle's low code application	24/05/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=942268354571653&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=942268354571653&amp;set=a.441327057999121</a>
8	Dr. Sheela Kathavate	Faculty driven product oriented projects	17/01/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=609609037837588&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=609609037837588&amp;set=a.441327057999121</a>
9	Dr. Shankar R	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
10	Dr. Dhanalakshmi B K	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
11	Dr. Lakshmi B N	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
12	Dr. Ravi Kumar B N	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
13	Dr. Srivani P	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
14	Dr. Manoj H M	Accelerator/ Incubation- opportunities for early stage entrepreneurs	08/07/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7218154316400877569">https://www.linkedin.com/feed/update/urn:li:activity:7218154316400877569</a>
15	Mrs. Shilpa M	Accelerator/ Incubation- opportunities for early stage entrepreneurs	08/07/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7218154316400877569">https://www.linkedin.com/feed/update/urn:li:activity:7218154316400877569</a>
16	Dr. Vidya R Pai	Girls in ICT 2024	28/05/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=945567987575023&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=945567987575023&amp;set=a.441327057999121</a>
17	Dr. Hemamalini B H	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
18	Dr. Anand R	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
19	Dr. Manjunath T N	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>

20	Dr. Mahesh G	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
21	Dr. Satish Kumar T	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
22	Dr. Radhika K R	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
23	Mrs. Vishaka Yadav	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
24	Dr. Ashwini N	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
25	Dr. Vidya R Pai	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
26	Dr. Ambika G N	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
27	Dr. Anil G N	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
28	Dr. Thippeswamy G	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
29	Dr. Shobha M	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
30	Dr. Mohammad Khurram J	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
31	Dr. Bharathi R	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
32	Dr. Arunakumari B N	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
33	Mrs. Shama H M	SIH 2024- Internal Hackathon	09/09/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648">https://www.linkedin.com/feed/update/urn:li:activity:7239473818400923648</a>
34	Mrs. Shama H M	Anveshana- Pitch2win, an ideathon	18/12/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/posts/institution-s-innovation-council-bmsit-m_reflecting-on-the-success-of">https://www.linkedin.com/posts/institution-s-innovation-council-bmsit-m_reflecting-on-the-success-of</a>
35	Mrs. Shama H M	Anveshana- Bootcamp 2025	11/11/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/posts/institution-s-innovation-council-bmsit-m_anveshana-entrepreneurship-i">https://www.linkedin.com/posts/institution-s-innovation-council-bmsit-m_anveshana-entrepreneurship-i</a>
36	Mrs. Shama H M	Anvehsna' 25- National level prototype competition	11/01/2025	BMSIT&M Campus	<a href="https://www.linkedin.com/posts/institution-s-innovation-council-bmsit-m_anveshana-entrepreneurship-i">https://www.linkedin.com/posts/institution-s-innovation-council-bmsit-m_anveshana-entrepreneurship-i</a>
37	Mrs. Shama H M	Web3 onwards workshop	17/11/2024	BMSIT&M Campus	<a href="https://www.instagram.com/p/DDKG7atV9c/?igsh=MWo4anFrZ3Q2Ymlx">https://www.instagram.com/p/DDKG7atV9c/?igsh=MWo4anFrZ3Q2Ymlx</a>
38	Mrs. Shama H M	Innovation Gauntlet- Inter-institutional business plan competition	25/06/2024	BMSIT&M Campus	<a href="https://www.instagram.com/p/C87TtlbP9OR/?utm_source=ig_web_copy_link">https://www.instagram.com/p/C87TtlbP9OR/?utm_source=ig_web_copy_link</a>
39	Mrs. Shama H M	Accelerator/ Incubation- opportunities for early stage entrepreneurs	08/07/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7218154316400877569">https://www.linkedin.com/feed/update/urn:li:activity:7218154316400877569</a>

40	Mrs. Shama H M	Startup premiere league	14/05/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7196554228562042880">https://www.linkedin.com/feed/update/urn:li:activity:7196554228562042880</a>
41	Dr. Bharathi R	CodeRed'24	13/01/2024	BMSIT&M Campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7177927706959908866">https://www.linkedin.com/feed/update/urn:li:activity:7177927706959908866</a>
42	Dr. Usha B A	ANVESHANA '24- National Level prototype competition	23/02/2024	BMSIT&M campus	<a href="https://www.linkedin.com/feed/update/urn:li:activity:7174784322317529088">https://www.linkedin.com/feed/update/urn:li:activity:7174784322317529088</a>
43	Mrs. Shama H M	Faculty driven product oriented projects	17/01/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=609609037837588&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=609609037837588&amp;set=a.441327057999121</a>
44	Dr. Vidya R Pai	Code sprint	05/05/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=950934127038409&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=950934127038409&amp;set=a.441327057999121</a>
45	Dr. Swetha M S	Codin detectives	21/05/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=962795449185610&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=962795449185610&amp;set=a.441327057999121</a>
46	Dr. Veena N	Codin detectives	21/05/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=962795449185610&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=962795449185610&amp;set=a.441327057999121</a>
47	Mrs. Shama H M	Empowering future through strategic alliance	20/09/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=1053665536765267&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=1053665536765267&amp;set=a.441327057999121</a>
48	Dr. Ambika G N	New criminal laws	29/06/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=990777533054068&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=990777533054068&amp;set=a.441327057999121</a>
49	Dr. Ravi Kumar B N	New criminal laws	29/06/2024	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=990777533054068&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=990777533054068&amp;set=a.441327057999121</a>

(CAYm2) 2022-23

S.No	Name of the Faculty	Name of the Event	Date of the Event(DD/MM/YYYY)	Place of Event	Website Link if any
1	Dr. Shwetha N	Student Entrepreneur Roadshow showcasing	13/01/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121</a>
2	Dr. Sheela Kathavate	Student Entrepreneur Roadshow showcasing	13/01/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121</a>
3	Dr. Anand K R	DEMO DAY- PROTOTYPES & LINKAGE WITH INNOVATION AMBASSADORS	13/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
4	Dr. Dhanalakshmi	DEMO DAY- PROTOTYPES & LINKAGE WITH INNOVATION AMBASSADORS	13/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
5	Dr. Srivani	Design of Industrial virtual reality application	21/05/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=960283532770135&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=960283532770135&amp;set=a.441327057999121</a>
6	Dr. Bharathi	Design of Industrial virtual reality application	21/05/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=960283532770135&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=960283532770135&amp;set=a.441327057999121</a>
7	Dr. Thippeswamy G	Design of Industrial virtual reality application	21/05/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=960283532770135&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=960283532770135&amp;set=a.441327057999121</a>
8	Dr. Sheela Kathavate	FACULTY-DRIVEN PRODUCT-ORIENTED PROJECTS	17/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
9	Dr. Usha B A	FACULTY-DRIVEN PRODUCT-ORIENTED PROJECTS	17/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
10	Mrs. Shama H M	FACULTY-DRIVEN PRODUCT-ORIENTED PROJECTS	17/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
11	Dr. Bharathi R	FACULTY-DRIVEN PRODUCT-ORIENTED PROJECTS	17/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
12	Mrs. Mahalakshmi S	FACULTY-DRIVEN PRODUCT-ORIENTED PROJECTS	17/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
13	Dr. Vinutha K	DEMO DAY- PROTOTYPES & LINKAGE WITH INNOVATION AMBASSADORS	13/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
14	Mrs. Shama H M	Student Entrepreneur Roadshow showcasing	13/01/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121</a>
15	Mrs. Shama H M	Zero waste 2022	22/06/2022	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=793334226676988&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=793334226676988&amp;set=a.441327057999121</a>
16	Dr. Anjan Krishnamurthy	Zero waste 2022	22/06/2022	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=793334226676988&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=793334226676988&amp;set=a.441327057999121</a>
17	Mrs. Shama H M	Project with Professors	25/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
18	Dr. Ravi Kumar B N	Project with Professors- food quality monitoring labels	25/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
19	Dr. Shobha M	Project with Professors- session 2	03/02/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
20	Mrs. Shama H M	Innovative Project with Professors	10/02/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>

21	Dr. Gireesh Babu C N	Innovative Project with Professors	10/02/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
22	Mrs. Shama H M	Attaining Product-Market fit and Idea-Solution fit	17/02/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
23	Mrs. Mahalakshmi S	Attaining Product-Market fit and Idea-Solution fit	17/02/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
24	Mrs. Mahalakshmi S	Innovative Project with Professors	10/02/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
25	Mrs. Mahalakshmi S	Project with Professors	25/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
26	Mrs. Shama H M	Field visit to problem solving	22/10/2022	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
27	Dr. Sheela Kathavate	Field visit to problem solving	22/10/2022	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
28	Dr. Dhanalakshmi	DEMO DAY- PROTOTYPES & LINKAGE WITH INNOVATION AMBASSADORS	13/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
29	Dr. Lakshmi B N	DEMO DAY- PROTOTYPES & LINKAGE WITH INNOVATION AMBASSADORS	13/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
30	Dr. Kirna Kumar	DEMO DAY- PROTOTYPES & LINKAGE WITH INNOVATION AMBASSADORS	13/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
31	Dr. Vidya Pai	DEMO DAY- PROTOTYPES & LINKAGE WITH INNOVATION AMBASSADORS	13/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
32	Dr. Radhika K R	DEMO DAY- PROTOTYPES & LINKAGE WITH INNOVATION AMBASSADORS	13/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
33	Mrs. Vishaka Yadav	DEMO DAY- PROTOTYPES & LINKAGE WITH INNOVATION AMBASSADORS	13/01/2023	BMSIT&M campus	<a href="https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images">https://www.linkedin.com/company/innovation-centre-bmsitm/posts/?feedView=images</a>
34	Mrs. Mahalakshmi S	Student Entrepreneur Roadshow showcasing	13/01/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121</a>
35	Dr. Ambika G N	Student Entrepreneur Roadshow showcasing	13/01/2023	BMSIT&M campus	<a href="https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121">https://www.facebook.com/photo/?fbid=605192831612542&amp;set=a.441327057999121</a>

(CAYm3) 2021-22

S.No	Name of the Faculty	Name of the Event	Date of the Event(DD/MM/YYYY)	Place of Event	Website Link if any
1	Dr. Manjunath T N	Aneshana - Idea competition	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3</a>
2	Dr. Shruthi	Aneshana - Idea competition	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3</a>
3	Dr. Bharathi R	Aneshana - Idea competition	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3</a>
4	Dr. Ravi Kiran	Aneshana - Idea competition	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3</a>
5	Mrs. Shama H M	Aneshana - Idea competition	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3</a>
6	Mr. Jagadish P	Aneshana - Idea competition	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/7598830413460706/?type=3</a>
7	Dr. Sheela Kathavate	Aneshana - Idea competition	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/photo/?fbid=7598830413460706&amp;set=pb.100063654921654.-2207520000">https://www.facebook.com/photo/?fbid=7598830413460706&amp;set=pb.100063654921654.-2207520000</a>
8	Dr. Usha B A	Aneshana - Idea competition	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/photo/?fbid=7598830413460706&amp;set=pb.100063654921654.-2207520000">https://www.facebook.com/photo/?fbid=7598830413460706&amp;set=pb.100063654921654.-2207520000</a>
9	Dr. Sheela Kathavate	Internal Hackathon for SIH 2022	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/photo/?fbid=7590835207593560&amp;set=pb.100063654921654.-2207520000">https://www.facebook.com/photo/?fbid=7590835207593560&amp;set=pb.100063654921654.-2207520000</a>
10	Mrs. Shama H M	Internal Hackathon for SIH 2022	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/photo/?fbid=7590835207593560&amp;set=pb.100063654921654.-2207520000">https://www.facebook.com/photo/?fbid=7590835207593560&amp;set=pb.100063654921654.-2207520000</a>
11	Mrs. Shama H M	Students' entrepreneurial journey 2022	18/03/2022	BMSIT&M Campus	<a href="https://www.facebook.com/photo/?fbid=7486929624650786&amp;set=pb.100063654921654.-2207520000">https://www.facebook.com/photo/?fbid=7486929624650786&amp;set=pb.100063654921654.-2207520000</a>
12	Dr. Sheela Kathavate	Converting prototype to startup	25/08/2021	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/6292697050740722/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/6292697050740722/?type=3</a>
13	Mrs. Shama H M	Building an innovation product fit to market	30/08/2021	BMSIT&M Campus	<a href="https://www.facebook.com/photo/?fbid=6318095471534213&amp;set=pb.100063654921654.-2207520000">https://www.facebook.com/photo/?fbid=6318095471534213&amp;set=pb.100063654921654.-2207520000</a>
14	Mrs. Shama H M	Converting prototype to startup	25/08/2021	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/6292697050740722/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/6292697050740722/?type=3</a>
15	Dr. Sheela Kathavate	Prototype/ process design development	23/06/2021	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/5979337785409985/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/5979337785409985/?type=3</a>
16	Dr. Sheela Kathavate	Agri Hackathon	05/03/2021	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/5207655739244864/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/5207655739244864/?type=3</a>
17	Mrs. Shama H M	Agri Hackathon	05/03/2021	BMSIT&M Campus	<a href="https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/5207655739244864/?type=3">https://www.facebook.com/bmsit/photos/pb.100063654921654.-2207520000/5207655739244864/?type=3</a>
18	Dr. Vinutha K	Internal Hackathon for SIH 2022	12/04/2022	BMSIT&M Campus	<a href="https://www.facebook.com/photo/?fbid=7590835207593560&amp;set=pb.100063654921654.-2207520000">https://www.facebook.com/photo/?fbid=7590835207593560&amp;set=pb.100063654921654.-2207520000</a>

**6.1.7 Faculty Internship/Training/Collaboration with Industry (10)**

Institute Marks : 10.00



**Table No. 6.1.7.1: Faculty internship/training/collaboration details.**

S.No	Name of the Faculty	Name of the Internship/ Training/ Collaboration	Name of the Company & Place	Duration	Outcomes of Internship/ Training/ Collaboration
1	Dr. HemaMalini B H	Machine Learning	Infidata Technology Pvt Ltd	10	Guiding project & Teaching the subjects
2	Dr. Mahesh G	Hands on projects using C++	Pushkala Technologies	10	Guiding project & Teaching the subjects
3	Mr. Muneshwara M S	RPA on Testing Tools	SQE SYSTEMS & SOLUTIONS	10	Guiding project & Teaching the subjects
4	Mr. Jagadish .P	Basics of digital marketing	S J ventures	10	Guiding project & Teaching the subjects
5	Dr. Srivani P	AI&ML	Rayvector	10	Guiding project & Teaching the subjects
6	Mr. Shankar R	PBC Process	Global Electronics	10	Guiding project & Teaching the subjects
7	Dr. HemaMalini. B.H	MACHINE LEARNING	Emberquest Pvt Limited	10	Guiding project & Teaching the subjects
8	Kalai Vani	Full stack in java	wipro	10	Guiding project & Teaching the subjects
9	Pushpanathan	Full stack in java	wipro	15	Guiding project & Teaching the subjects
10	Dr Lakshmi B N	SAP	Sap labs	4	Guiding project & Teaching the subjects
11	Dr Manoj H M	SAP	Sap labs	4	Guiding project & Teaching the subjects
12	Dr NarshimMurthy	SAP	Sap labs	4	Guiding project & Teaching the subjects
13	Mrs. Chethana C	Deep learning Algorithms	DigiPix Technologies	10	Final year Projects, Open Course
14	Dr. Anjan K	Data Science and Security	DigiPix Technologies	10	Projects and Consultancy work
15	Dr. Muneshwara M S	Artificial Intelligence	Master Associates Technology Pvt. Ltd.	10	Guiding project & Teaching the subjects
16	Dr. Anand R	Machine Learning	KIMSHUKA TECHNOLOGIES	10	Guiding project & Teaching the subjects
17	Mr. Jagadish P	Applications of AWS	prinkleway Technologies Private Limited	10	Guiding project & Teaching the subjects
18	Dr. Vidya R Pai	Network Security	DigiPix Technologies	10	Guiding project & Teaching the subjects
19	Dr. Radhika K R	Machine Learning	v-aim groups, bangalore	10	Guiding project & Teaching the subjects
20	Dr. Manoj H M	Machine Learning	Power planet Bangalore	10	Guiding project & Teaching the subjects
21	Dr. Anand R	Software development Life cycle	Lei Technologies	10	Guiding project & Teaching the subjects
22	Mrs.Vishakha Yadav	Web development	Posterwa	10	Guiding project & Teaching the subjects
23	Mrs. G.Y Durgadevi	Network security	Hi-Rel Components and Rugged Systems	10	Guiding project & Teaching the subjects
24	Dr. Radhika K .R	Web development	Dhruvesh Technologies Pvt.Ltd	10	Guiding project & Teaching the subjects
25	Dr.Aruna Kumari	Semantic web	Nayakart Online Solutions Private Limited	10	Guiding project & Teaching the subjects
26	Dr Dhanalakshmi b k	Machine Learning	Germ R & D	10	Guiding project & Teaching the subjects
27	Dr. Pushpa S K	Data Science	Skillcurious	10	Guiding project & Teaching the subjects
28	Dr. Sudhamani M V	Implementation of Blockchain essentials	Igeeks Technologies	10	Guiding project & Teaching the subjects
29	Dr. Usha B A	AI for Interior Design	Cromatica	10	Guiding project & Teaching the subjects
30	Dr. Rakesh N	Application of Deep learning models in various research domains	Impavid Technmologies	10	Guiding project & Teaching the subjects
31	Dr. Veena N	Advanced Web Development	VIVID Infotech Software Solutions (P) Ltd	10	Guiding project & Teaching the subjects

32	Dr. Shoba M	Model development using Huggingface and OpenAI APIs	Adalovelace Software Pvt. Ltd.	10	Guiding project & Teaching the subjects
33	Dr. Prakash GL	Artificial Intelligence & Machine Learning	AQMENZ Automation Pvt. Ltd.,	10	Guiding project & Teaching the subjects
34	Dr. Drakshaveni G	Data science using Python	Naiberly Technologies Pvt Ltd	10	Guiding project & Teaching the subjects
35	Mrs. Chetana. C	ML applications	DIGIPIX Technologies	10	Guiding project & Teaching the subjects
36	Dr. Shanthi D L	Data science modules related healthcare	Naiberly Technologies Pvt Ltd	10	Guiding project & Teaching the subjects
37	Dr. Chandrashekhar K T	Data Analytics	DIGIPIX Technologies	10	Guiding project & Teaching the subjects
38	Dr. Ambika R S	Application of AI	Tecidexa Technologies	10	Guiding project & Teaching the subjects
39	Dr. Vinutha K	Web development	Power Planet	10	Guiding project & Teaching the subjects
40	Dr. Ravi Kumar B N	Web development	Power Planet	10	Guiding project & Teaching the subjects
41	Dr. Narasimhamurthy M S	AI & ML	Super Intelligence Tech Solutions Pvt Ltd	10	Guiding project & Teaching the subjects
42	Dr. Anil Kumar	Advanced Web Frameworks	Digital Suite Pvt.Ltd	10	Guiding project & Teaching the subjects
43	Dr. Savitha S	Machine Learning using python	DIGIPIX Technologies	10	Guiding project & Teaching the subjects
44	Dr. Basavaraj GN	Machine Learning using python	Karunadu Technologies	10	Guiding project & Teaching the subjects
45	Dr. Karthik SA	Semantic web	Reverse Engineering Insec Pvt Ltd	10	Guiding project & Teaching the subjects
46	Dr. Kshama SB	Semantic web	Naykart Online Solutions Pvt. Ltd.	10	Guiding project & Teaching the subjects
47	Dr. Kantharaju V	Software development Life cycle	Tackle -D private limited	10	Guiding project & Teaching the subjects
48	Dr. Anil G N	Developing a small Mobile app using Android OS	Netenzaa Innovations Pvt. Ltd. Bengaluru	10	Guiding project & Teaching the subjects
49	Dr. Bharathi R	Web Scraping using Python	soft taks group, Bengaluru	10	Guiding project & Teaching the subjects
50	Dr. Mahesh G	Building applications using Tkinter	Aprameyah Technologies Pvt. Ltd., Bengaluru	10	Guiding project & Teaching the subjects
51	Mrs. Durga Devi G Y	Real time web analytics with kinesis	Mistral Solutions Pvt. Ltd. Bengaluru	10	Guiding project & Teaching the subjects
52	Dr. Anjan Krishnamurthy	Building applications using Data Security	Ideal soft pvt.Ltd, Bengaluru	10	Guiding project & Teaching the subjects
53	Mr. Rajesh N V	Sentiment analysis in machine learning	Bronziant Technologies, Bengaluru	10	Guiding project & Teaching the subjects
54	Dr. Radhika K R	R-programming	Pavamana Pvt.Ltd, Bengaluru	10	Guiding project & Teaching the subjects
55	Dr. Srivani P	Data Science Analytics	Askey, Bengaluru	10	Guiding project & Teaching the subjects
56	Dr. Satish Kumar T	RoR and its scope in industries	Pushkala Technologies Pvt Ltd, Bengaluru	10	Guiding project & Teaching the subjects
57	Dr. Dhanalakshmi B K	Cloud computing	Infidata Technologies,	10	Guiding project & Teaching the subjects
58	Dr Archana R A	GPS system and IoT	Fyers, Bengaluru	10	Guiding project & Teaching the subjects
59	Dr. Bhuvaneshwari C M	Machine Learning with python	Walkin Software Technologies, Rajajinagar, bangalore	10	Guiding project & Teaching the subjects
60	Dr. Hemamalini B H	Data Science	Uniq Technologies	10	Guiding project & Teaching the subjects

61	Dr. Sunanda Dixit	Data Analytics on Inventory Systems	V-Aim Groups, B-111, Peenya 3rd Stage, Bangalore - 560058	10	Guiding project & Teaching the subjects
62	Mrs. Durga Devi G Y	IOT	Zingtron Tech Pvt. Ltd.,	10	Guiding project & Teaching the subjects
63	Dr Shruthi J	Data Analytics on Inventory Systems	V-Aim Groups, B-111, Peenya 3rd Stage, Bangalore – 560058	10	Guiding project & Teaching the subjects
64	Mr. Rajesh N V	Data Analytics on Inventory Systems	V-Aim Groups, B-111, Peenya 3rd Stage, Bangalore - 560058	10	Guiding project & Teaching the subjects
65	Dr. Ambika G N	Data Analytics Tools	Bronziant Technologies , Banglore	10	Guiding project & Teaching the subject
66	Dr Dhanalakshmi B K	Machine learning	Infidata	10	Guiding project & Teaching the subject
67	Dr. Pushpa S K	Data Analytics Tools	SkillCurious Consultancy Services	10	Guiding project & Teaching the subject
68	Dr. Sudhamani M V	Data Analytics Tools	Skadibolt pvt. Ltd.	10	Guiding project & Teaching the subject
69	Dr. Sheela Kathavate	Data science: Concept of machine Learning	DigiPix Technologies Pvt. Ltd.	10	Guiding project & Teaching the subject
70	Dr. Surekha K B	Data Analytics Tools	CodeMonk Technologies	10	Guiding project & Teaching the subject
71	Dr. Geeta Anmol Patil	Data Analytics Tools	Skillcurious consultancy services	10	Guiding project & Teaching the subject
72	Dr. Rakesh N	IOT	Impavid Technmologies	10	Guiding project & Teaching the subject
73	Dr. Veena N	Data Science	Skillcurious consultancy services	10	Guiding project & Teaching the subject
74	Dr. Shoba M	Developing voice assistant applications using integrated applications	Skadibolt Private Limited	10	Guiding project & Teaching the subject
75	Dr. Drakshaveni G	Web design and development	TECHINFOGRA SOLUTIONS	10	Guiding project & Teaching the subject
76	Mrs. Mahalakshmi S	Python Programming	Tecidexa Services	10	Guiding project & Teaching the subject
77	Dr. Chandrashekhar K T	Hadoop and Map reduce	DigiPix Technologies Pvt. Ltd.	10	Guiding project & Teaching the subject
78	Dr. P Sudarsanam	Data Analytics on Inventory Systems	Naberly Technologies Pvt Ltd	10	Guiding project & Teaching the subject
79	Dr. GireeshBabu C N	Hadoop and Map reduce	DigiPix Technologies Pvt. Ltd.	10	Guiding project & Teaching the subject
80	Mrs. Ambika R S	AI ML	Mitron Tech, Bangalore	10	Guiding project & Teaching the subject
81	Dr. Swetha M S	Data Analytics	JaiChamundi Tech Pvt Ltd	10	Guiding project & Teaching the subject
82	Mrs. Vinutha K	Data Analytics	JaiChamundi Tech Pvt Ltd	10	Guiding project & Teaching the subject
83	Dr. Narasimhamurthy M S	Cloud/ Embedded/ IOT	Tech Fortune Technologies, Bengaluru	10	Guiding project & Teaching the subject
84	Dr. Mohan BA	Mobile App Development	Eternal Valley Studio	10	Guiding project & Teaching the subject
85	Dr. Kalai Vani	Full stack in java	wipro	10	Guiding project & Teaching the subject
86	Mrs. Shama H M	Pre-Incuabtion abd Incubation facilitation program	Collaboration with Derbi foundation	5	Guiding projects to reach product/service level and teach entrepreneurship
87	Dr. Usha B A	Pre-Incuabtion abd Incubation facilitation program	Collaboration with Derbi foundation	5	Guiding projects to reach product/service level and teach entrepreneurship
88	Dr. Sheela Kathavate	Pre-Incuabtion abd Incubation facilitation program	Collaboration with Derbi foundation	5	Guiding projects to reach product/service level and teach entrepreneurship

89	Dr. Bharathi R	Pre-Incuabtion abd Incubation facilitation program	Collaboration with Derbi foundation	5	Guiding projects to reach product/service level and teach entrepreneurship
90	Dr. Shoba M	Model development using hugging face and open AI APIs	Adalovelace Software Pvt Ltd.	10	Guiding projects to reach product/service level and teach entrepreneurship
91	Dr. Shanthi D L	Data Science	Naiberly Technologies Pvt Ltd	10	Guiding projects to reach product/service level and teach entrepreneurship
92	Dr. Chandrashekhar K T	Data Analytics	DigiPix Technologies	10	Guiding projects to reach product/service level and teach entrepreneurship
93	Dr Girish Babu C N	Data Analytics	DigiPix Technologies	10	Guiding projects to reach product/service level and teach entrepreneurship
94	Dr Surekha K B	IOT	Infidata Technologies	10	Guiding projects to reach product/service level and teach entrepreneurship
95	Dr Veena N	Advanced Web Development	Vivid Infotech Software Solutions (P) Ltd	10	Guiding projects to reach product/service level and teach entrepreneurship
96	Dr. Sridhar Sanshi	IOT	Infidata Technologies	10	Guiding projects to reach product/service level and teach entrepreneurship
97	Prof. S Mahalakshmi	Python Programming	Tecidexa services Pvt Ltd	10	Guiding projects to reach product/service level and teach entrepreneurship
98	Dr Geetha Anmol Patil	Android Applications Development	Boiler plate private Ltd	10	Guiding projects to reach product/service level and teach entrepreneurship
99	Dr. P Sudarsanam	Python Programming	Naiberly Technologies	10	Guiding projects to reach product/service level and teach entrepreneurship
100	Dr Veena N	Data science	Skill Curious Consultancy Services	10	Guiding projects to reach product/service level and teach entrepreneurship
101	Dr Sheela Kathavathe	Machine Learning	Digipix Technologies	10	Guiding projects to reach product/service level and teach entrepreneurship
102	Dr Girish Babu C N	Web Development using CMS Wordpress	Digipix Technologies	10	Guiding projects
103	Mrs. Chethana C	Basics of Think speak with IOT	Digipix Technologies	10	Guiding Projects
104	Dr Anjan K	Datascience and Security	Digipix Technologies	10	Guiding Projects

**6.2 Research and Development Activities (60)**

Total Marks 42.00

**6.2.1 Academic Research (10)**

Institute Marks : 10.00

**Table No. 6.2.1.1: Faculty publication details.**

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	67	38	37
2	No. of peer reviewed conference papers published	52	43	53
3	No. of books/book chapters published	26	19	7

**6.2.2 Ph.D. Student Details (5)**

Institute Marks : 5.00

**Table No. 6.2.2.1: Ph.D. details.**

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of students enrolled for Ph.D. in the Department	31	10	4
2	No. of Ph.D. students graduated in the Department	2	7	4

**6.2.3 Development Activities (10)**

Institute Marks : 10.00

## Indian Patents

- Total Patents: 7
  - Published: 5
  - Granted: 2 (excluding design patents)
  - Design Patents Granted: 2
- Total Indian Granted Patents (including design): 4

## Australian Patents

- Total Patents: 4
- All are Granted

### Granted Patents (Indian) Details

Inventor(s)	Application No	Status	Title	Date	Grant Patent Agency
Dr. Manjunath and Dr. Ashwini	N201941044720	Granted	An Alert system for Railway Track system	28/05/2025	Indian

## Design Patents (IPR)

Inventor(s)	Application No	Status	Title	Date of Grant	Patent Agency
Dr. Gireesh Babu	449194-001	Granted	GOLD JEWELRY WITH INBUILT GPS TRACKER	24/02/2025	IPR: Design Patent
Dr. Shobha	M450582-001	Granted	Energy consumption monitoring device with cost estimate	06/03/2025	IPR: Design Patent

### Published Indian Patents

Inventor(s)	Application No	Status	Title	Date	Patent Agency
Dr. Bhuvaneshwari et al.	2022410	Published	A-PRCSO: Adaptive political rider competitive swarm optimizer based NARX for SO <sub>2</sub> detection	25/11/2022	Indian
Dr. Ambika	202441103171	Published	A SYSTEM AND METHOD FOR CONTROLLING A ROBOTIC ARM USING AI	10/01/2025	Indian
Dr. Arunakumari B N	202141036457	Published	Fruit Classification and Identification Using Advanced Machine Learning Techniques	12/08/2021	Indian
Dr. Radhika K R, Prof. Vidya R Pai, Dr. Arunakumari B N	202141039674	Published	IOT enabled real-time aquarium monitoring system	02/09/2021	Indian
Prof. Vidya R Pai	202241022469A	Published	A Wearing article for navigating Visually Impaired using Machine Learning	06/05/2022	Indian

## Australian Patents (Granted)

Inventor(s)	Application No	Status	Title	Filing Date / Grant Date	Patent Agency
Dr. Sathish Kumar T & Dr. Mahesh G	2021106400	Granted	A Novel method for detecting public not wearing masks using AI	27/04/2021 / 10/11/2021	Australia
Dr. Sunanda Dixith	2021100154	Granted	Automated location identification system using text and image data	31/03/2021 / 31/03/2021	Australia
Mahalakshmi. S	2021106612	Granted	Smart Artificial intelligence based fleet analytic system	23/08/2021 / 24/11/2021	Australia
Mahalakshmi. S	2021100913	Granted	SECURITY TECHNIQUE IN ENERGY HARVESTING IOT DEVICES USING SLOTTED ALOHA WITH NOMA	Granted: 14/04/2021	Australia

### Working Models:

- Wearable navigation for visually impaired
- Managing the about to expire products - A service based website
- NOA- adaptive AI-powered hardware companion with emotional intelligence and human-like empathy.
- Attendance monitoring- Mobile application
- Yukti- A beach suitability application
- Aigle Air (Escalating carbon emissions jeopardize air quality and health, urging transformative solutions for cleaner air and sustainable utilization)

**6.2.4 Sponsored Research Project (15)**

Institute Marks : 0.00

**2023-24 (CAYm1)**

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr Durga Bhavani A		CSE	Pressure Ulcer Prediction and Prevention	VTU	6 months	0.05
						Amount received (Rs.):0.05

**2022-23 (CAYm2)**

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr Durga Bhavani A		CSE	Pressure Ulcer Prediction and Prevention	VTU	6 months	0.05
Mr. Jagadish P		CSE	Morse Code Interpretation From Blinking	VTU	6 months	0.05
Ambika G N		CSE	S.R.A.M (Smart Robotic Arm Manipulator)	VTU	6 months	0.05
						Amount received (Rs.):0.15

**2021-22 (CAYm3)**

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. Srivani P		CSE	Virtual Reality-Based Rural Education For Immersive Learning Experience	KSCST	6 months	0.05
						Amount received (Rs.):0.05

**Total Amount (Lacs) Received for the Past 3 Years: 0.25****Note\*:**

- Only sponsored research projects will be considered. Infrastructure-based projects will not be considered here.

**6.2.5 Consultancy Work (15)**

Institute Marks : 15

## 2023-24 (CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr Shankar R	NA	CSE	RPA microsoft power automate consulting	Technodysis	17	340000.00
						Amount received (Rs.):340000.00

## 2022-23 (CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25

## 2021-22 (CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. Satish Kumar	na	CSE	Embedded C Training	Cisco	2	14000.00
Dr Satish Kumar T	na	CSE	RTOS Training	Mindtree	5	25000.00
Dr. Satish Kumar T	na	CSE	RTOS and Embedded Programming	Aprameyah Technologies Pvt. Ltd.	5	50000.00
Dr. Mahesh G	na	CSE	RTOS and Embedded Programming	Aprameyah Technologies Pvt. Ltd.	5	40000.00
						Amount received (Rs.):129000.00

Total amount (Lacs) received for the past 3 years: 469000.00

Note\*:

- Only consultancy projects will be considered. Infrastructure-based projects will not be considered here.

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#### 6.2.6 Institution Seed Money or Internal Research Grant to its Faculty for Research Work(5)

##### 6.2.6 A Amount received (3)

Institute Marks :

## 2023-24 (CAYm1)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr Dhanalakshmi BK & Dr LAKshmi BN	crab style wheelchair	1yr	15000.00	15000.00	Prototype
Dr. Ambika G.N	Robotic arm	1yr	25000.00	25000.00	Patent is published
			Amount received (Rs.): 40000.00		

## 2022-23 (CAYm2)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project

## 2021-22 (CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project

Total amount (Lacs) received for the past 3 years :

6.2.6 B Amount utilized (2)

Institute Marks : 2.00

Sl. No.	Item	Qty	Vendor	Order Date	Total Amount	Shipping	Tax Included	Payment Method
1	Raspberry Pi 4 Model B 8GB Kit	1	Applied Electronics (Amazon)	02-Nov-2024	₹12,999.00	Included	₹1,982.90	UPI
2	Stereo Camera IMX219-83 8MP	1	Unknown	13-Mar-2025	₹6,124.20	₹90.00	₹934.20	Card/UPI/NetBanking (CashFree)
3	TowerPro MG996R (360°) Servo Motor	1	Unknown	13-Mar-2025	₹373.00	₹49.00	-	Credit/UPI/EMI
4	SG90 Micro Servo Motor	1	Robocraze	Mar 2025	₹238.00	₹10.00	₹36.30	Not shown
5	PCA9685 PWM Driver	1	Robocraze	14-Mar-2025	₹504.99	₹75.00	₹65.59	Not shown
6	TowerPro MG996R (180°) Servo Motor x3	3	Robocraze	14-Mar-2025	₹1,049.97	Free	₹160.16	Not shown

## 7 FACILITIES AND TECHNICAL SUPPORT (100)

Total Marks 100.00

**7.1 Adequate and well equipped laboratories, and technical manpower (40)**

Total Marks 40.00

Institute Marks : 40.00

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	LAB-CR-306 [A	35	Computers with	30 hours	Mr. P. Ashok Ki	Instructor	Diploma in CSI
2	LAB-TR-310 [	35	Computers with	20 hours	Mr. Liju C	Assistant Instru	Diploma in CSI
3	411-A Lab Bloc	35	Computers with	30 hours	Mr. Srinivas Mi	Instructor	BE in Telecomm
4	411-B Lab Bloc	35	Computers with	30hours	Mr. Radhakrish	Assistant Instru	BE. in CSE
5	411-C Lab Bloc	35	Computers with	20 hours	Mr. Ram Moha	Assistant Instru	BE. in CSE
6	410 [Kalpana C	35	Computers with	10 hours	Mrs.Rosemary	Assistant Instru	BE. in CSE
7	511-A Lab Bloc	35	Computers with	28 hours	Mr. Raju T	Assistant Instru	BE. in CSE
8	511-B Lab Bloc	35	Computers with	30 hours	Mr. Punit Dod	Assistant Instru	BE. in CSE
9	BSN-CR-306 [(	35	HP MICRO TO	30 hours	Mr. Shivaprasa	Assistant Instru	Diploma in CSI
10	BSN-CR-307 [	35	Intel Core i7-4t	30 hours	Mr. Adinarayan	Instructor	Diploma in Cor
11	BSN-CR-308 [	35	Intel Core i7-4	30 hours	Mrs. Ragini T M	Supervisor	Diploma in Cor
12	BSN-CR-415 [	35	Intel Core i7-12	30 hours	Mrs. Bhagya	Instructor	Diploma in Cor
13	A-405 [SHAKU	35	Dell Optiplex-5	30 hours	Mr. Murari Srin	Assistant Instru	Diploma in Civi
14	511-C Lab Blo	35	Computers with	30 hours	Mrs. Kavya R	Assistant Instru	B.E in ECE
15	BSN-CR-401	18	Computers with	20 hours	Mr. Vishwanan	Assistant Instru	B.E in CSE

**7.2 Additional Facilities Created for Improving the Quality of Learning Experience in Laboratories (20)**

Total Marks 20.00



Sr. No	Name of the Facility	Details	Purpose for creating facility	Utilization	Relevance to POs/PSOs
1	E-Studio	72-inch 4K Smart Board Display Monitor • Audio-Technica Digital Audio Devices • Bose Audio System • Micro and Elmo Cameras • Elmo Writing Pad • Apple Mac M1 System • M-Audio Voice Recording Interface • Professional Shooting Lights Setup • Sony, Nikon and Panasonic Shooting Cameras	Supports self-paced learning and revision and Students are utilizing the E-Studio facilities for recording events such as annual day celebrations, cultural programs, debates, and guest lectures.	Actively Used	PO5, PO10
2	Drone Kit	Setup for drone development projects with necessary hardware and controllers	Facilitates learning in UAV design and testing	On-demand Use	PSO1, PSO2
3	Hadoop Cluster	Cluster computing setup with Hadoop framework for big data analytics	Enables real-time big data project work	Used for Projects	PO5, PSO1
4	MATLAB R2022b	Licensed MATLAB software with toolboxes used for modeling and simulations	For hands-on exposure in digital signal/image processing	Regularly Used	PO5, PSO1
5	CUDA Jetson Kits	NVIDIA-based kits supporting parallel programming, AI, and machine learning tasks	For hands-on ML model development using GPU computation	On-demand Use	PO5, PSO1, PSO2
6	INDIAN-TECHKEY Lab	R Sensor, Temperature, Sensor (DHT11), 4-Channel Relay, 2-Channel Relay, Motion Sensor (PIR), 16X2 LCD Display, Fan, Touch sensor, 9V battery, 4digit 7-Seg, Soil Sensor, Joystick, Embedded system kit, RF Receiver, and Transmitter kit	Projects on Printed Circuit Board(PCBs) design and fabrication, 3-D printing services, Embedded product development	Fully Utilized	PO5, PO10, PO11
7	Computational Neuroscience and Engineering Research Lab.	1. Open BCI – All in one Bio Sensing R&D Bundle, Ultra Cortex Mark IV Head Set, 16 Channel 10-20 EEG System and dry electrode. 2. Nvidia Tesla V100 Server, 2021, Dell Precision 3650, 2022 Equipped with Intel Xeon 11th Gen Processor, 128GB RAM, 24TB HDD 3. Nvidia Quadro RTX 5000 GPU. This is used for training deep networks by PI and other researchers. 4. MATLAB Campus Wide License, 2024 5. LabView/ MyDaq, My Rio 6. Universal System for AI Infrastructure NVIDIA DGX A100, 2022 8. Emotiv Flex 32 Channel EEG Acquisition System 9. Arduino Edge Control, Portenta Breakout, NCLIA SENSE ME 10. Intel® RealSense™ Depth Camera, 11. Edge AI Device with Jetson Xavier NX module 12. The Sensor Prototype Kit with LoRa® and AI 13. Raspberry Pi IR-Cut OV5647 5MP Camera 14. Analog Discovery Studio	To provide a platform for students to work on inter-disciplinary projects	To provide a platform for students and researchers to work on programs	PO5, PO10, PO11, PO12
8					

**7.3 Maintenance of laboratories and overall ambiance (10)**

Total Marks 10.00



**Laboratory Maintenance:**

Computer laboratories are essential academic infrastructure that support practical learning, software development, and skill development for students. At our department, we prioritize the upkeep of computer labs through systematic maintenance, regular monitoring, and proactive upgrades to ensure uninterrupted academic delivery.

The department maintains a set of well-equipped computer laboratories dedicated to various courses, such as: Principles of Programming Using C Lab, Python Programming Lab, Data Structures Lab, DAA Lab, Computer Networks Lab, Database Management Systems Lab, AI & Machine Learning Lab, UI/UX, Devops lab etc.

Each lab is outfitted with modern desktop systems, high-resolution monitors, appropriate input/output devices, and ergonomic furniture. Internet connectivity is provided via wired LAN and Wi-Fi access, with internet speed of 1 Gbps.

**1) Hardware Maintenance**

**Routine Inspection:** Daily inspections are carried out by the lab instructors to check system booting and peripheral device functioning.

**Preventive Maintenance:** Weekly once cleaning of CPUs, monitors, and peripherals is done to prevent dust accumulation and overheating.

**Upgrades:** Based on performance reviews and academic requirements, systems are upgraded with increased RAM, SSDs, and enhanced graphics cards where needed.

**Fault Logging and Repair:** Any hardware faults are logged, diagnosed, and attended to within 24–48 hours by the IT support team. Components are replaced if needed.

**2) Software Maintenance**

**Operating System Updates:** Weekly update schedules ensure all systems run the latest security patches and updates.

**Software Installation:** All required software tools and packages (e.g., Python, Java, MySQL, MATLAB) are pre-installed and regularly updated.

**Licensing Compliance:** Proprietary software used in labs are duly licensed (e.g., Microsoft Office, Windows OS, MATLAB), and renewal of licenses is tracked by the IT team.

**3. Network Maintenance**

**LAN & Internet Monitoring:** Network administrators continuously monitor network performance, bandwidth usage, and internet uptime to avoid bottlenecks and interruptions.

**4. Lab Usage Management**

**Timetable-based Allocation:** Lab sessions are scheduled as per the departmental timetables. Dedicated slots are reserved for academic, practical's, and project development work.

**Access Control:** Systems are password protected, and user access is monitored. Faculty members supervise lab sessions to maintain discipline and academic focus.

**Log Book Maintenance:** Manual logbooks are maintained to track usage of systems.

**5. Ergonomics and Cleanliness**

**Physical Environment:** Labs are air-conditioned, well-lit, and equipped with adequate ventilation.

**Cleanliness:** weekly once or twice housekeeping ensures cleanliness of systems, furniture, and flooring. Weekly deep cleaning includes wiping monitors, keyboards, and CPU vents.

**6. Human Resource Involvement**

**Lab Technicians:** Each lab is assigned with a qualified lab technician responsible for maintenance, troubleshooting, and inventory management.

**IT Support Team:** A centralized IT support team handles network, software, and hardware escalations and conducts audits.

**7. Compliance**

**Accreditation Readiness:** All labs comply with AICTE/UGC guidelines regarding system-to-student ratio, infrastructure, and software relevance.

**Laboratory Ambience:**

The ambience of our computer labs is thoughtfully designed to ensure a balance of functionality, aesthetics, safety, and accessibility. The following outlines the key features of the computer lab ambience maintained in the department.

**1. Physical Environment and Infrastructure**

**Spacious Layout:** Each computer lab is designed to ensure adequate space between computers, allowing free movement and reducing crowding. The layout conforms to ergonomic standards, providing ample space for students to work individually or in groups.

**Furniture and Ergonomics:** Labs are equipped with ergonomically designed furniture — adjustable chairs and wide tables to accommodate system and Bag racks are provided inside the laboratory for the safe and organized placement of student belongings. . This promotes correct posture and reduces physical strain during prolonged use.

**Lighting:** Ambient lighting is provided through well-distributed ceiling lights, supplemented with natural lighting via windows where available.

## 2. Ventilation and Air Quality

**Air Conditioning:** Most of the computer labs in the department are air-conditioned to maintain an optimal temperature for both users and electronic equipment.

**Ventilation:** Proper ventilation is ensured through windows in labs without air-conditioning, ensuring fresh air circulation and reduction of heat buildup.

## 3. Digital and Visual Aids

**Display Systems:** Each lab includes wall-mounted LED screens or projectors for demonstrations, presentations, and collaborative learning.

**Whiteboards and Notice Boards:** Whiteboards are available for on-the-spot explanations by faculty, and notice boards display lab schedules, usage guidelines, safety instructions, and updates.

## 4. Hygiene and Cleanliness

**Daily Cleaning:** Housekeeping staff ensure daily cleaning of floors, desks, monitors, keyboards, and other frequently touched surfaces.

**5. Display of Vision/Mission of the department and Institution:** The department strives to encourage students and faculties to Promote a culture of research, innovation, and industry collaboration and Instill professional ethics, leadership skills, and a commitment to lifelong learning, preparing them to adapt to evolving global challenges and contribute meaningfully to the community.

RATAN TATA LAB  
[LAB-TR-310]



ARYABHATA LAB  
[LAB-CR-306]



**7.4 Safety measures in laboratories (10)**

Total Marks 10.00

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	<p>LAB-306 [ Aryabhatta Lab] Lab-TR-310 [Ratan Tata Lab] 411-A 411-B</p> <div style="text-align: right; margin-top: -20px;"> <input type="button" value="▲"/>  <input type="button" value="▼"/>  <input type="button" value="↶"/>  <input type="button" value="↷"/> </div>	<p>1. Electrical Safety – All systems are connected to a UPS ensuring uninterruptible power supply to prevent data loss and equipment damage. Also, periodic checks are done for exposed wires, and faulty plugs. 2. Fire Safety – Dry powder extinguishers are installed near the lab entrance for fire safety. 3. Equipment Safety – CCTV cameras are installed in all labs for monitoring the lab to deter misuse or theft. 4. Cyber Safety – All systems have login credentials and admin restrictions to prevent unauthorised access. Also, Computers have windows defender to detect, prevent, and remove malicious software such as viruses, worms, trojans, and spyware. Permission is denied for pen drives. 5. Ergonomic and Physical Safety – All labs have ergonomic chairs and desks helping students to spend long hours in lab comfortably. The labs are well-lit to reduce eye strain. All labs have good airflow and temperature control to prevent overheating. 6. Rules and Supervision – The lab usage guidelines are displayed for safe and responsible computer usage. All labs have a separate instructor to ensure supervision during lab hours. 7. Emergency Preparedness – All labs have a stock of first aid kit for attending minor emergencies immediately. Also, all labs have a master switch (MCB) to cut power in case of emergency.</p>
2	<p>BSN-CR-306 [GUIDO VAN ROSSUM LAB] BSN-CR-307 [ TIM BERNERS LEE LABORATORY ]</p> <div style="text-align: right; margin-top: -20px;"> <input type="button" value="▲"/>  <input type="button" value="▼"/>  <input type="button" value="↶"/>  <input type="button" value="↷"/> </div>	<p>1. Electrical Safety – All systems are connected to a UPS ensuring uninterruptible power supply to prevent data loss and equipment damage. Also, periodic checks are done for exposed wires, and faulty plugs. 2. Fire Safety – Dry powder extinguishers are installed near the lab entrance for fire safety. 3. Equipment Safety – CCTV cameras are installed in all labs for monitoring the lab to deter misuse or theft. 4. Cyber Safety – All systems have login credentials and admin restrictions to prevent unauthorised access. Also, Computers have windows defender to detect, prevent, and remove malicious software such as viruses, worms, trojans, and spyware. Permission is denied for pen drives. 5. Ergonomic and Physical Safety – All labs have ergonomic chairs and desks helping students to spend long hours in lab comfortably. The labs are well-lit to reduce eye strain. All labs have good airflow and temperature control to prevent overheating. 6. Rules and Supervision – The lab usage guidelines are displayed for safe and responsible computer usage. All labs have a separate instructor to ensure supervision during lab hours. 7. Emergency Preparedness – All labs have a stock of first aid kit for attending minor emergencies immediately. Also, all labs have a master switch (MCB) to cut power in case of emergency.</p>

**7.5 Project laboratory/research laboratory /centre of excellence (20)**

Total Marks 20.00



## Centre of Excellence

Sl.NO	Name of COE
1	Centre of Excellence under ICT Academy membership
2	Centre of excellence for drones and UAV and E-yantra
3	SISA centre of Excellence
4	NVIDIA Center of Excellence

Projects/Research Laboratory/COE

Sl.No	Name of the Facility	Specialized Equipment Name	Equipment details	Utilization details from the perspective of PO attainment
1	Eyantra Lab	Microcontroller boards with sensors to enable the faculty and students to do their projects	Fire bird V,ESP32 Development board Raspberry PI,LPC2148 Development Board,Atmega2560 development board,Spark V,P89V51RD2 Development Board,ESP8266 Development Board,Altera Cyclone IV FPGA , DE0-Nano	Ongoing Projects:  Smart stranger alert system using AI. Automated Voice controlled Robotic arm.
2	Aarohan Lab	Workspace is provided to enable faculty and students to do their projects. LCD projectors/Blackboard /working tables are provided	Servo motor, XBee USB adaptor, SNS – 103 soil NPK sensor, ULTRASONIC SENSOR - HCSR04, HTC DM-85T Digital TRMS Multimeter , JK Super Drive 5 Inch Professional and DIY Wire Stripper, KAIWEETS Digital Clamp Meter T-RMS 6000 Counts, MOYESTA 6-in-1 Wire Stripper and Cutter Pliers  Tools For Electricians Wire and Cable Stripping, Cutting, Winding, Crimping Precision Stainless Steel Hand Tool for Electrician Decrustation Tool, VAR TECH 850A SMD Rework station 270W, Generic New 6pcs/Set Anti-Static, APTECH DEALS 100 W Glue Gun with 5 Glue Sticks, Catchex Helping Hand Magnifier Soldering Stand Etc.	Ongoing Projects at Aarohan lab:  Robotic Aerial and Planetary Terrain Operation Rover (RAPTOR)  Smart footwear system for visually impaired community  Crab Style Wheelchair  Solar Power Floating Waste Cleaner for Small Water Bodies  Ultrasonic Parametric Acoustic Array (USPA)  Development of food quality monitoring labels/ stickers  Smart Perfume Dispensary based on smell
3	SISA centre of Excellence - SISA (Information Security Services and Solutions)	PCI DSS, AI sandbox for solution delivery, Cysec Tools- open source tools for solution development	Dedicated space for SISAs Center of Excellence (COE) within its campus, accommodating 10-15 seats. This area will include CCTV surveillance, access control, and high-speed internet to ensure a secure and efficient work environment.	21 students were trained on cyber security solution development with AI powered  All of them got placed in SISA company

Sl.No	Name of the Facility	Specialized Equipment Name	Equipment details	Utilization details from the perspective of PO attainment
4	ARVR Lab	Advanced setup with AMD Ryzen workstation and Oculus Quest 2 for immersive simulations	<p>AMWIN GPU Desktop:</p> <ul style="list-style-type: none"> <li>- 1 x AMD® B650 Chipset and AM5 Socket based WS</li> <li>Motherboard with 4 Memory DIMMs (Max. 128GB RAM)</li> <li>- 1 x AMD Ryzen™ 9 7900X Processor (12Cores / 24Threads / 4.7GHz / 64MB L3 Cache / 170W)</li> <li>- 1 x Liquid-Cooler 240 for Processor</li> <li>- 1 x 32GB DDR5 5200MHz = 32GB RAM</li> <li>- 1 x 500GB NVMe M.2 SSD</li> <li>- 1 x Nvidia GeForce RTX 4060 (8GB) Graphic Card</li> <li>- 1 x ATX/Mid-Tower Chassis (with Fans)</li> <li>- 1 x 750W Power Supply Unit with 80+ Bronze</li> <li>- 1 x USB Keyboard &amp; Mouse</li> <li>- 1 x Windows 10/11 Professional - OEM Pack</li> </ul> <p>Meta Quest 2 Advanced All-in-One VR Headset, 2 x Touch Controller, Charging Cable, 2 x AA Battery, Power Adapter, Glasses Spacer, Silicone Cover</p>	<p>Workshops and trainings with Industry experts and Academician.</p> <p>Industry collaborations with Rayvector Technologies, VyVoxel India Pvt. Ltd., and META &amp; 1M1B (AICTE Partner) with 5 students getting internship in Rayvector Technologies and 1 in 1M1B and 1 student in VyVoxel India Pvt. Ltd.</p> <p>2 Faculties and 18 students trained by VyVoxel India Pvt. Ltd., in Unity VR Development with C# programming.</p>
5	IT Cell	<p>In order to support its employees and students with best IT infrastructure, BMSIT&amp;M has established one of its the best, robust network infrastructure in 2019-2020 to facilitate reliable and high speed internet service to both Students, Faculty and Researchers at the campus and BMSIT&amp;M Hostels.</p>	<p>Both wired and Wi-Fi Internet facility is available in all the buildings of the BMSIT&amp;M with OFC connectivity. All Laboratories in the campus have LAN connectivity.</p> <p>The network support service team is responsible for Supporting, Maintaining, Monitoring and Upgrading both wired and Wi-Fi service and server infrastructure at Campus and hostels.</p> <p>BMSIT&amp;M has set up its own DATACENTER with all advanced equipment like UTM, Core switch, advanced WIFI</p> <p>Bandwidth per User: data per user and bandwidth of 100Mbps upper bandwidth is reserved per user. It is shared as the user increases in the network</p>	<p>Bandwidth Allocation: Each user is allocated up to 100 Mbps, dynamically shared depending on network load.</p> <p>Access Points: Wi-Fi is distributed via numerous access points across academic and hostel blocks, ensuring uninterrupted connectivity.</p> <p>Peak Usage Times: Monitored by the IT Cell using UTM dashboards to optimize performance and ensure quality of service during high-demand hours (e.g., during online labs, hackathons, or exams).</p> <p>User Engagement: On average, 90% of students and faculty actively utilize the network for academic purposes, including access to LMS, digital libraries, coding platforms, and collaborative tools.</p>
6	510 [Lab Block]	Workspace is provided to enable faculty and students to do their projects. LCD projectors/Blackboard /working tables are provided	<p><b>Computers with i5 Processor</b></p> <p>16 GB RAM</p> <p>512GB SSD</p> <p><b>14<sup>th</sup> Generation</b></p> <p><b>LAN Switch</b> :48 port switch (Manageable), Make: Extreme</p> <p><b>Projector:</b> Optoma Projector.</p>	<p>Utilized by students for executing minor/major/SIH projects involving programming, software development, and tool integration.</p>
7	NVIDIA CoE	State of the art NVIDIA Sever to meet the needs of students and faculty members for high performance computing.	NVIDIA DGX A100	Student and Faculty Projects and Consultancy work

Title: CISCO – Programming Essentials in Python course

Dates: 19-21, June 2024

Timings: 9 am to 4 pm

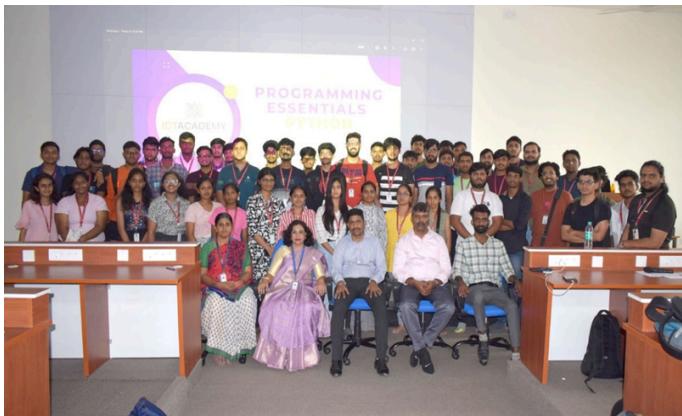
Instructor Led Classes - 16 Hours (03 Days)

Assessment & Certification - 02 Hours

Total Duration - 18 hours

Resource Person: Mr. Vijaya Murugan, ICT Academy, Chennai.

Registered students: 106



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## 8 CONTINUOUS IMPROVEMENT (80)

Total Marks 80.00

### 8.1 Actions taken based on the results of evaluation of each of the COs, POs & PSOs (40)

Total Marks 40.00

**8.1.1 Actions Taken Based on the Results of Evaluation of the COs Attainment (20)**

Institute Marks : 20.00

## 1. Identification of Weak Areas

Based on the evaluation of COs attainment data for CAYm1, the following weaknesses were identified:

- Low attainment in higher-order thinking skills (COs mapped to Bloom's levels of Apply, Analyze, and Evaluate).
- Poor performance in coding and analysis based questions.
- Gaps in understanding interdisciplinary application
- Lack of proficiency in report writing.

## 2. Measures Identified and Implemented

### A. Curriculum Interventions

- **Course Content Revision:** Modules with low attainment were revised to include more real-world applications and case studies.
- **Introduction of Mini-Projects:** Project-based learning was embedded in core courses to reinforce practical understanding.
- **Integration of Industry-Relevant Tools:** Courses were enhanced by including simulation tools (e.g., Wireshark, ns2..) and coding practices relevant to the industry.
- **Interdisciplinary Electives:** New electives on Sustainable development Goals etc, are offered

### B. Pedagogical Initiatives

- **Adoption of Active Learning Methods:** Techniques like flipped classrooms, peer instruction, and think-pair-share were implemented to enhance classroom engagement.
- **Remedial Classes:** Conducted for slow learners based on formative assessments.
- **Outcome-Based Teaching Plans:** Faculty aligned teaching methodologies with specific COs, using targeted instructional strategies.
- **Bloom's Taxonomy Mapping:** All assessments were restructured to ensure balanced representation of Blooms cognitive levels.

### C. Assessment and Feedback Improvements

- **Rubric-Based Evaluation:** Adopted for assignments and projects to ensure objective evaluation and clear feedback.
- **Continuous Internal Assessment (CIA) Enhancements:** Shifted from memory-based to application-based questions.
- **Mid-semester Feedback:** Implemented to adjust teaching pace and clarity based on student input.

### D. Support System Enhancements

- **Faculty Development Programs (FDPs):** Conducted on outcome-based education, digital tools, and innovative pedagogy.
- **Mentoring System Strengthening:** More frequent one-on-one student mentoring for academic and career counseling.
- **Workshops and Seminars:** Organized with experts from academia and industry to bridge knowledge gaps.
- **Library and e-Resources Expansion:** Subscribed to new journals and digital databases exposing students to recent findings in various domains.

## 3. Monitoring and Review

- **Monthly Review Meetings:** Conducted by Class Committee Meetings to track implementation and progress.
- **Student Performance Analysis:** Regularly reviewed to correlate CO attainment with remedial measures.
- **Stakeholder Feedback:** Incorporated from alumni, industry, and students to refine curriculum and delivery.

## 4. Outcome of Interventions

- Noticeable improvement in CO attainment levels in subsequent assessments.
- Enhanced student engagement and satisfaction.
- Increased participation in technical events, internships, and innovation activities.
- Better preparedness for higher studies and job placements.

To ensure effective monitoring and evaluation, predefined attainment levels are set for each CO. Typically, these attainment levels are categorized into three tiers – High, Moderate, and Low which are quantitatively represented by threshold values. These thresholds serve as benchmarks to determine whether a CO has been achieved satisfactorily.

As an Autonomous institution, the following attainment level is set for the First batch of the autonomous for each of the courses.

Description	Attainment level
80% students scoring $\geq$ 60% marks	3 - High

70% students scoring ≥ 60% marks	2 – Moderate
60% students scoring ≥ 60% marks	1 - Low

The Course Coordinators calculate the course outcomes based on the target level set as above. The observations and action plan to improve the CO attainment are deliberated and documented in their course file.

The report will be submitted to the respective Module Coordinator. The module coordinators will suggest the course coordinator about any changes to be made in method of delivery, assignments, CCAs, CO-PO mapping, etc. The course coordinator takes these inputs and incorporates them in the ensuing semester.

The module coordinators submit a consolidated report to the Program Coordinator.

The Program Coordinator conducts a PAC (Program Assessment Committee) meeting along with module coordinators. They go through the reports and discuss about activities to be organized in the program for better attainment of the COs.

The proceedings of the PAC are discussed in the BoS meeting held before the commencement of each semester and their inputs are recorded and implemented wherever necessary.

#### Department of Computer Science and Engineering

<b>Course Name</b>	Data Communication and Networks	<b>Course Coordinator</b>	Dr. Anil G N, Dr. Vidyar Pai
<b>Course Code</b>	21CS57	<b>Academic Year</b>	2023-24
<b>Semester/Section</b>	5	<b>Term</b>	Odd

#### CO Statements:

<b>Cos</b>	<b>At the end of the course, the student will be able to</b>
CO1	Apply the fundamentals of data communication and techniques to solve the given problem to compute the performance of networks.
CO2	Examine Access control mechanisms, reliability and error control using appropriate techniques.
CO3	Analyse the working of routers, its protocols and Internet protocol for the given problem.
CO4	Analyse the various services offered by the transport layer for the given problems.
CO5	Analyse the principles used in the application design and its protocols to improve the application performance and justify solution / architecture for the given case study /problems
CO6	Analyse the given problem using the relevant modern tool to generate the report

**CO-PO-PSO Mapping:**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
CO1	2	1										1	
CO2	2	1										1	
CO3	2	1										1	
CO4	2	1										1	
CO5	2	1										1	
CO6	2				2							1	

**CO Attainment:**

COs	Target	Attained	Observations
CO1	3	2.50	The CO attainment is good. The CO is on apply level.
CO2	3	1.00	The CO attainment is poor. More problems on error detection/control on apply level can be given
CO3	3	1.50	The CO attainment is moderate. Assignments on various routing problems can be given to students like real time applications of routing in aggregator applications
CO4	3	2.00	The CO attainment is good. More problems on transport level can be given to students
CO5	3	2.25	The CO attainment is good. Case studies/innovative questions were given.
CO6	3	0.00	CCA was based on modern tool Lab can be an IPCC course so that the students can work on modern tools in the lab

**Action Plan to improve CO attainment:**

Cos	Action Plan
CO1	More questions may be framed at apply level.
CO2	Questions on Error detection correction and real time applications can be framed

<b>CO3</b>	Questions on Real time examples can be framed so that the students can analyse the scenario
<b>CO4</b>	More Questions can be asked in IA
<b>CO5</b>	Case study questions can be included.
<b>CO6</b>	Lab can be an IPCC course so that the students can work on modern tools in the lab

**Department of Computer Science and Engineering**

<b>Course Name</b>	Theory of Computation	<b>Course Coordinator</b>	Dr. Thippeswamy, Dr.Hemamalini
<b>Course Code</b>	21CS68	<b>Academic Year</b>	2023-24
<b>Semester/Section</b>	6	<b>Term</b>	Even

**CO Statements:**

<b>Cos</b>	<b>At the end of the course, the student will be able to</b>
<b>CO1</b>	Make use of the concept of abstract machines and their power to recognize the languages.
<b>CO2</b>	Apply the finite state machines for modelling and solving computing problems.
<b>CO3</b>	Design context free grammars for formal languages.
<b>CO4</b>	Analyse difference between decidability and undecidability.
<b>CO5</b>	Design the automata using the JFLAP Tool

**CO-PO-PSO Mapping:**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
<b>CO1</b>	2												
<b>CO2</b>	2		1		1							1	
<b>CO3</b>	2				1							1	
<b>CO4</b>	2												
<b>CO5</b>					3			2	2			1	

**CO Attainment:**

<b>COs</b>	<b>Target</b>	<b>Attained</b>	<b>Observations</b>
CO1	3	2.00	The CO attainment is Moderate. The CO is mostly in understand and explain level. In the coming semester, More assignments or questions may be framed at explain level.
CO2	3	2.00	The CO attainment is Moderate. Students are able to understand the FSM but difficult in designing the FSM. More assignments, Practical examples and hands-on tools may improve the attainment.
CO3	3	2.00	The CO attainment is quite good. More analytical problems on finite automata, grammars can be given
CO4	3	0.75	To analyse the real time examples on decidability and un decidability and further to illustrate them with examples
CO5	3	0.75	The CO attainment is poor. Student are able to simulate given design but struggled to debug their own designs.

**Action Plan to improve CO attainment:**

<b>Cos</b>	<b>Action Plan</b>
CO1	To accommodate effective delivery methods, setting up of quality question papers which includes higher end Bloom's levels
CO2	Appropriate Alternative Assessment Tools such realizing TOC concepts through real life examples.
CO3	The CO attainment is quite good. More analytical problems on finite automata, grammars can be given
CO4	To analyse the real time examples on decidability and un decidability and further to illustrate them with examples
CO5	Assignments or projects on this tool may be given to simulate real world problems.

**8.1.2 Actions Taken Based on the Results of Evaluation of the POs/PSOs Attainment (20)**

Institute Marks : 20.00

**General Observation**

- POs related to knowledge and skill are attained, however higher level POs are not attained.
- .

**General Action Plan**

Revision of curriculum based on the requirement of higher level POs

Effective identification and implementation of appropriate Alternate Assessment Tools

Rubrics will be redesigned appropriately in various components with performance indicators to measure all POs (Mini/Micro/Capstone Projects, Industry Internships, Laboratory courses)

Arranging sessions from Industry Practitioners/Alumni's as part of Partial delivery/Guest lectures on relevant topics to address all POs

Inclusion of Industry practitioners into BOS (Curriculum development, implementation, assessment and evaluation)

<b>PO's</b>	<b>Target Level Set</b>	<b>Attainment Level</b>	<b>Action Plan</b>
PO1	2.03	1.66	<ul style="list-style-type: none"> <li>1. Ensure the courses which are mapping on to the PO1</li> <li>2. Emphasis is given more on tutorial session where problems solving exercises are conducted.</li> <li>3. Lesson plan includes solving complex engineering problems with the core concepts of mathematics and science with engineering fundamentals.</li> <li>4. Internal and external question papers (CIE &amp; SEE) contain questions related PO1</li> <li>5. Laboratory experiment reinforce maths and core engineering problems.</li> </ul>
PO2	1.4	1.14	<ul style="list-style-type: none"> <li>1. Include the advanced concepts in program specific core engineering courses</li> <li>2. Internal assessments must include analytical and application based questions</li> <li>3. Lab experiments involve formulating and solving the problems using programming and computational tools.</li> <li>4. Case studies in various engineering courses of curriculum to analyse real world problems.</li> <li>5. Promoting MOOC courses which enable the students to acquire the analytical skills.</li> </ul>
PO3	1.5	0.91	<ul style="list-style-type: none"> <li>1. Mini/Micro/Capstone projects that involve system design for real world applications</li> <li>2. Laboratory work focused on software development life cycle including requirement gathering, design and implementation.</li> <li>3. Promoting the students to participate in events like Hackathons, Open day events, Project exhibitions, IEEE chapters, club's activities at college level and innovations which are encouraging design thinking.</li> <li>4. Practical experiments will be included in the courses to focus more on analysis and design.</li> <li>5. Use of UML, Flowcharts, ER diagrams, and Architectural diagram in design documentations.</li> </ul>

			1. Inclusion of research methodology concepts in advanced course to meet the requirements of PO4. 2. Organising/Attending workshops on research methodology, technical paper writing and experimental design. 3. Documentation of project work using scientific report structure (Abstract, methodology, results and conclusion) 4. Inclusion of high quality open ended experiments in laboratory courses. 5. Promoting students to take part in research based internships to gain better investigation and interpretation skills. 6. Capstone projects involving data collection, hypothesis formulation, testing, and result interpretation. 7. Encouraging to publish research papers in Conferences /Journals based on the outcome of the projects. 8. Assignments that involve analysis of algorithms, data sets, and software performance.
PO4	1.75	1.03	1. Integration of modern tools in curriculum 2. Hands on lab sessions in laboratory experimentation with relevant modern tools 3. Use of simulation and modelling tools wherever it is necessary (MATLAB, Simulink, IoT tools and etc.,) 4. Use of Cloud Computing Platforms in Laboratory /Project works. (Azure, Google Cloud, and AWS) 5. Encouraging the use of LATEX / Technical documentation and reporting. 6. Conduct SDP/Workshops on new and emerging tools 7. Encouraging and promoting students to take up MOOC on modern tools 8. Introduction of short term and long-term internships with credits are helping the student to work on the latest tools used by the industries.
PO5	1.57	1.05	1. Inclusion of additional contents to existing courses like Professional ethics, Constitution of India, and Environmental Studies in curriculum 1. Students projects and case studies focusing on societal needs 2. Arranging expert lectures / Seminars on Environmental and Legal frameworks (IT act., Data protection laws and Cybersecurity laws) 3. Activities under NSS/NCC, Social outreach programs and rural development camps. 4. Alumni talks on the importance of ethical responsibilities and social impact in engineering practices. 5. Implementation of AICTE 100-point activity program in true spirit. 6. Students will be motivated to define the Mini /Micro/Capstone projects problem statements related to engineering and societal applications, which address health, safety, legal and cultural issues.
PO6	1.68	0.65	1. Inclusion of additional contents to existing course on Environmental Studies in curriculum. 2. Students are motivated to develop environment friendly and sustainable solutions by participating in various National level events. 3. Participation of students in initiatives such as Swachh Bharath Abhiyan and Planation drives. 4. Promoting the participation of students in Hackathons and Idea contests related to climate change, smart energy and eco-friendly solutions. 5. Conducting workshops on sustainable design principles and eco-friendly computing practices. 6. Supporting and motivating the students to participate in student's clubs (Green Club/IKEO club) focusing environmental sustainability.
PO7	1.68	0.63	

			1. Extending the course contents of professional ethics and human values 2. Arranging expert sessions and seminars on ethical hacking, Cyber law and data privacy etc., 3. Plagiarism check and academic integrity enforcement for projects, papers and assignments. 4. Issues on Copyright violations are made known to the students during awareness classes on projects and the code of ethics for research has been published on the institutional website. 5. Encouraging the students towards responsible use AI and its algorithms. (Ethical Compliance) 6. Few courses like IPR will focus on professional ethical practices.
PO8	1.76	0.95	1. Formation of students Projects teams for Mini/Micro/Capstone and Case studies/programming assignments. 2. Participation of students in Hackathons, coding contests and innovation challenges in teams which strengthen the team spirit. 3. Peer assessment and peer learning activates in practical sessions and projects. 4. For Mini/Micro/capstone projects, students are allowed to collaborate with other disciplines students which results in a multidisciplinary learning. 5. Organizing various Co-curricular/Extra-curricular activities through NSS and other student bodies where students work in teams. 6. Students are motivated and supported to participate actively in various clubs across the institution. 7. Mock group discussions in placement sessions enable the students to learn soft skills in true spirit.
PO9	2.04	1.23	1. Soft skills training is imparted to students to enhance various aspects of communication. 2. Documentation on Mini/Micro/Capstone projects work will improve written communication skills. 3. Students will be encouraged to participate and present their work in National/International conferences. 4. Providing technical sessions on tools such as Latex and MS Office for enhancing the capabilities of written communication skills 5. English labs are conducted for all the students to improve their communication skills and Interpersonal Skill. 6. Several learning activities are conducted like debate, group discussion, seminars, case study, course project, literature review, 7. Organising various Co-curricular/Extra-curricular activities which provides the platform for all round development of students.
PO10	1.88	1.04	1. Including the additional components into the course Management & Entrepreneurship 2. Providing the project management skills through relevant activities 3. Planning and organizing Real time projects boot camps. 4. Students will be encouraged to do project work by applying all the phases of project management. 5. Organizing talks periodically on Project Management skills to fill the curriculum gaps. 6. Arranging the sessions by industry practitioners on budgeting, resource allocation and time management planning lifecycle and finance.
PO11	1.29	0.68	

			1. The introduction of learning activities based on course projects, case studies, assignments will enhance the independent learning and research capability of the students. 2. Encouraging the students to enrol in NPTEL, SWAYAM, Coursera and other MOOC platforms. 3. The Department motivates the students to participate in Hackathons that will enhance the life-long learning capabilities. 4. Allowing the students to opt for interdisciplinary courses via Open elective category 5. Motivating and supporting the students to involve and work with interdisciplinary teams to gain the attributes of sustainable graduates. 6. Arranging the invited talks on recent trends and technologies by alumni's and other industry practitioners. 7. To Inculcate futuristic technologies to students, sessions are arranged by eminent personalities of the domain, which enables the students understand the requirements of future skills 8. Organising various Co-curricular/Extra-curricular activities which provides the platform for engaging in independent and lifelong learning. 9. Introduction of short term and long-term internships are helping the students to improve their lifelong learning capability. 10. Platforms like technical and cultural clubs will help students to engage in lifelong learning.
PO12	1.33	0.91	

**PSO (Programme Specific Outcome) – CSE (NBA)**

*"Apply foundational knowledge of computer science and engineering to analyse, design, and develop computing solutions across core domains such as algorithms, programming, databases, networking, web technologies, and software engineering. Demonstrate proficiency in modern tools and emerging technologies including Artificial Intelligence, Machine Learning, Data Science, Cloud Computing, IoT, and Cybersecurity to build innovative and effective software systems."*

**Action Plan**

**Conduct Gap Analysis:** Identify specific course outcomes and assessment areas contributing to low PSO attainment through result analysis and feedback from faculty and students.

**Strengthen Core Domain Delivery:** Organize remedial and enrichment classes in subjects like algorithms, programming, DBMS, and networking to reinforce foundational knowledge.

**Implement Mini Projects:** Introduce mandatory mini-projects from the 3rd semester onwards to promote application-based learning in core computing areas.

**Tool-Centric Workshops:** Conduct hands-on workshops on emerging technologies such as Python for ML, R for Data Science, AWS for Cloud etc.

**Integrate MOOC Courses:** Make completion of online courses (NPTEL/Coursera/Udemy) in AI, ML, IoT, Cloud Computing, or Cybersecurity mandatory for skill development.

**Enhance Final Year Project Quality:** Ensure that final year projects involve real-world problem solving using emerging technologies and are monitored regularly by experienced faculty mentors.

**Promote Internship Participation:** Facilitate industry internships and live projects to bridge academic learning with industrial practices, especially in tech-driven domains.

**Organize Expert Talks and Industry Seminars:** Host sessions with professionals and alumni working in AI, ML, Cybersecurity, and IoT to provide exposure to current trends and tools.

**Revise Curriculum Mapping:** Revisit CO-PO-PSO mapping to better align course outcomes with this PSO and ensure proper weightage in assessment tools.

**Continuous Monitoring and Review:** Regularly evaluate PSO attainment through internal audits, assessments, and student feedback; take corrective measures each semester.

\*\*\*\*\*

**PSO-2:**

*"Employ analytical thinking and problem-solving abilities to address real-world challenges with societal impact through the application of computing platforms. Exhibit professional ethics, effective communication, and teamwork skills necessary for success in multidisciplinary and collaborative environments."*

**Action Plan**

**Incorporate Real-World Case Studies: Integrate** societal problem-based case studies into core and elective courses to enhance analytical and problem-solving skills.

**Strengthen Mini and Major Projects:** Make it mandatory for project teams to focus on solving real-world or community-based challenges using computing platforms.

**Conduct Ethics and Professional Conduct Workshops:** Organize sessions on workplace ethics, academic integrity, and social responsibility through guest lectures and role-play.

**Promote Group Assignments and Peer Reviews:** Assign team-based tasks and include peer evaluation to promote collaboration and responsibility.

**Enhance Communication Skills through Presentations:** Require students to present project proposals, reports, and technical papers to improve public speaking and technical articulation.

**Host Interdisciplinary Hackathons:** Encourage participation in team-based events involving students from various departments to build multidisciplinary teamwork skills.

**Include Mock Interviews and Group Discussions:** Conduct periodic sessions in collaboration with the placement cell to simulate industry-style communication and problem-solving.

**Encourage Community Outreach Projects:** Motivate students to undertake socially relevant computing projects under NSS and departmental outreach programs.

**Embed PSO-Specific Assessment Rubrics:** Introduce evaluation rubrics in project reviews and lab assessments that directly measure analytical thinking, ethics, and communication

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**8.2 Academic Audit and actions taken thereof during the period of Assessment (15)**

Total Marks 15.00



In pursuit of excellence in education and to ensure the continuous enhancement of academic quality, it is essential to periodically assess academic practices, processes, and outcomes of the department. The Academic Audit serves as a comprehensive evaluation mechanism that scrutinizes the effectiveness of academic systems, identifies areas for improvement, and ensures that the department's academic processes align with nationally and internationally recognized standards.

The Department of Computer Science and Engineering always strives to impart quality education in a holistic perspective. It is a policy at the institute to conduct comprehensive review of our academic programs, policies and procedures in line with accreditation and ranking statutory bodies. This initiative will help the department to identify areas of strength and opportunities for improvement in the competitive world and ensure compliance with regulatory standards.

#### **Objective of the Audit:**

The main objective of an academic audit is to ensure both quality of academic practices in the Department and attainment of target achievement by implementing quality assurance mechanisms. The department has been continuously audited by the Internal Quality Assurance Cell (IQAC). IQAC Cell works towards realisation of the goals of maintaining the academic standards, quality enhancement and sustenance of the Institution.

In pursuance of the action plan to monitor the attainment of the Vision and Mission, Institution has a mechanism of conducting an "Academic Audit" as a quality sustenance measure for the continuous improvement. **The Academic Audit includes "Internal academic audit" and "External academic audit" with pre-defined quality parameters.**

#### **Scope of the Audit:**

- Review of curriculum design and delivery
- Assessment of teaching and learning process
- Evaluation of student support services
- Monitoring of quality assurance mechanisms in an academic environment
- Identification of best practices and areas for improvement

#### **Methodology of Academic Audit:**

A comprehensive academic audit template has been developed to systematically gather detailed information on various departmental activities. The format is organized into 10 main sections, each comprising multiple sub-sections designed to thoroughly evaluate and assess the departments overall performance. The Academic Audit format will be made known to all the departments very well in advance. The section details present in the format are as follows:

- Section 1: Basic Information
- Section 2: Curricular Aspects
- Section 3: Teaching Learning & Evaluation
- Section 4: Feedback and analysis
- Section 5: Research, Publication and Innovation
- Section 6: Collaborations & Linkages
- Section 7: Student Placements, Higher studies and Entrepreneurship
- Section 8: FDPs / Workshops attended by Faculty members.
- Section 9: Achievements
- Section 10: Budget Details

#### **Process of Audit:**

- I. **Internal Audit:** An internal academic audit is conducted at the end of every semester to ensure quality assurance and continuous improvement across departments. The process is as follows:
  - Initiation and Auditor Selection: The Dean Academics office initiates the process by sending a communication to all faculty members, inviting Expressions of Interest for serving as internal auditors. Based on the received responses, a list of auditors is finalized.
  - Audit Team Formation: Each audit team comprises minimum two faculty members from different disciplines, selected based on their substantial experience in teaching and learning processes. This ensures an unbiased and comprehensive evaluation of departmental activities.

- Audit Notification: Departments are informed of the tentative audit schedule one month in advance. This allows sufficient time for preparation and compilation of records. The specific inspection date is formally communicated to the audit team one day before the visit.
- Departmental Preparation: Departments are required to complete the academic audit template and maintain all supporting documents as per the defined format. These documents must be readily available for review during the audit.
- Audit Execution: The audit team conducts a thorough verification of the submitted documents, evaluates compliance with academic standards, and assesses the department's performance. A detailed report is prepared, outlining strengths and areas for improvement.
- Documentation and Submission: The audit report is signed by both auditors and the Head of the Department (HoD) and is then submitted to the Internal Quality Assurance Cell (IQAC) for record-keeping and further action.
- Review Meeting: Upon completion of audits across all departments, a review meeting is convened by the Principal, involving the Vice Principal, Dean (Academics), IQAC Coordinator, Internal Auditors, and the HoDs of the audited departments. During this meeting, observations and suggestions for improvement are discussed in detail. The proceedings of this meeting are documented for reference.
- Follow-Up and Continuous Improvement: During the next audit cycle, the Action Taken Report (ATR) based on the previous audits findings is verified to ensure implementation of suggested corrective actions.

**II. External Audit:** The External Academic Audit is conducted once every academic year to ensure comprehensive review of departmental academic practices and documentation. The process is as follows:

- Selection of External Auditors: The Principal in consultations with the administrators identifies and invites senior academicians from reputed institutions with expertise in accreditation processes such as NBA, NAAC, and IQAC. Formal invitations are sent, and audit dates are scheduled based on mutual convenience.
- Audit Team Composition: For each department, an audit team is constituted comprising:
  - One external auditor
  - One / Two internal auditor
- Audit Notification: Departments are informed of external audit one month in advance, enabling them to complete and compile all necessary documentation. The final inspection schedule is communicated to the audit team via official email.
- Departmental Preparation: All the departments will fill in the audit document as per the format and have it ready with all the supporting documents for inspection.
- Execution of the Audit: The audit team conducts an in-depth verification of academic records and processes. Based on their review, the auditors Document strengths and areas for improvement, provide constructive feedback and sign the audit report along with the Head of the Department. The finalized report is submitted to the IQAC office for record and further action.
- Immediate Feedback Session: On the same day, a discussion is held between the external auditor and the Principal, in the presence of the concerned Head of Department. Key observations and corrective recommendations are recorded and preserved for follow-up action.
- Institution-Level Review Meeting: After all external audits are completed, the Principal, along with Vice Principal, Dean Academics and IQAC Coordinator, conducts a review meeting with all Heads of Departments.

Sl. No	Assessment Year	Type of Audit (Internal / External)	Date of the Audit	Name and details of the Auditor(s)
1	2024-25	External	19-03-2025	Dr. Jayanna S., SIT,Tumkur
2	2024-25	Internal	18-09-2024	Dr. Siddiq Iqbal, ETE  Dr. Vinod, Civil  Dr. Shanti D L, ISE
3	2023-24	Internal	03.08.2023	Dr. Ambika R,Dept of ECE
4	2022-23	Internal	10-9-2022	Prof. Siddiq Iqbal, ETE,  Dr. Vibha VenkataRamu, Civil

5	2022-23	External	23-01-2023	Dr. Anala M R Professor, Dept of ISE RVCE, Bengaluru
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# BMS Institute of Technology and Management

Department of Computer Science and Engineering

Action Plan for remarks made by Committee of Internal Academic Audit (2023-24)

Date : 03.10.2024

Remark	Action Plan
CO-PO Justification is missing in most of the courses.	<ul style="list-style-type: none"> <li>Faculty Members of the Department of Computer Science and Engineering will be attending the workshop/s on Outcome Based Education either internally or externally or both.</li> <li>Further, the brainstorming sessions are planned for the faculty members on CO-PO/PSO mapping in the meeting/s.</li> <li>HoD, CSE will be conducting the seminar/s , Workshops for the newly appointed faculty members.</li> </ul>
AAT Rubrics with split and evaluation is not found in many courses.	<ul style="list-style-type: none"> <li>Awareness Programme for faculty members on Alternate Assessment Tools(AAT) with emphasis on relevance and significance are planned during December-2024.</li> <li>Evaluation rubrics for each AAT will be made available for all the concerned.</li> </ul>
IA Finalization on blue book – IA split up format shared by Dean Academics should be followed	<ul style="list-style-type: none"> <li>Faculty members have been strictly instructed to follow all the necessary guidelines/rules of BMSIT&amp;M/VTU for Continuous Internal Evaluation (CIE) including IA split-up format which is shared by Dean (Academics).</li> </ul>
Signature of HoD & staff to be done on blue books	<ul style="list-style-type: none"> <li>Faculty members have been strictly instructed to get the signature of respective Cluster-Heads and HoD on the bluebooks.</li> </ul>
Few records were not available for audit.	<ul style="list-style-type: none"> <li>All the supporting documents/records have been maintained in the Central Place at the department of CSE. All the Cluster Heads with their faculty members have worked on the same.</li> <li>Henceforth, a few sample records would be maintained by the faculty members for the purpose of audit.</li> </ul>

Elective strength as per the list is 229 but there are 232 students

- The matter has been taken into consideration seriously and will be verified and will be reported to Dean (AA).

Documents are available in the department, but it should be arranged in proper order	<ul style="list-style-type: none"> <li>All the documents are labelled and will be made available in the proper order.</li> <li>All the Cluster Heads have been informed about the availability.</li> </ul>
Placement documents are not available in the department	<ul style="list-style-type: none"> <li>Placement documents are available in the department</li> </ul>
Check marking of attendance with periodic signature of HoD	<ul style="list-style-type: none"> <li>It has been followed and will ensure the strict compliance</li> </ul>

Academic Coordinator

HoD, CSE

**8.3 Improvement in Faculty Qualification/Contribution (15)**

Total Marks 15.00

Institute Marks : 15.00

Academic Performance	CAYm1 ( 2023-24 )	CAYm2 ( 2022-23 )	CAYm3 ( 2021-22 )
No. of faculty members with Ph.D. degree	50.00	41.00	28.00
No. of publications in peer reviewed journals	67.00	38.00	37.00
No. of publications in conferences	52.00	43.00	53.00

**8.4 Improvement in Academic Performance (10)**

Total Marks 10.00

Institute Marks : 10.00

Academic Performance	CAYm1 ( 2023-24 )	CAYm2 ( 2022-23 )	CAYm3 ( 2021-22 )
Academic Performance Index (API) of the First-Year Students in the Program (Refer to section 4.3)	8.10	8.33	7.07
Academic Performance Index (API) of the Second-Year Students in the Program (Refer to section 4.4)	7.86	7.54	6.45
Academic Performance Index (API) of the Third-Year Students in the Program (Refer to section 4.5)	8.48	7.21	6.23

**9 STUDENT SUPPORT AND GOVERNANCE (120)**

Total Marks 109.00

**9.1 First Year Student-Faculty Ratio (FYSFR) (5)**

Total Marks 2.00





Please provide First year faculty information considering load

Name of the faculty member	PAN No.	Qualification	From Engineering Courses	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)	Date Of leaving(In case Currently Associated is 'No')
Shilpa G	CGTPS1911F	M.Tech	Yes	22/10/2013	Computer Application in Industrial Drives	Assistant Professor	02/07/2014	Yes	Regular	
Suma Umesh	ABBPU2259H	Ph.D	Yes	01/12/2023	Faculty of Electrical and Electronics Engineering Sciences	Assistant Professor	04/08/2008	Yes	Regular	
Chethan A S	AWDPS5808F	M.Sc. (Mathematics) and PhD	No	17/06/2013	Fluid Mechanics	Professor	17/09/2003	Yes	Regular	
Annamma Abr	ACSPA0773A	M.Sc. (Mathematics) and PhD	No	03/10/2002	Fluid Mechanics	Professor	03/08/2010	No	Regular	31/05/2025
Jojo Joseph Idi	AAJPI1312C	M.Sc. (Mathematics) and PhD	No	31/05/1999	Approximation Theory	Professor	04/03/2003	Yes	Regular	
Karabi Sikdar	CHCPS1410H	M.Sc. (Mathematics) and PhD	No	06/05/2004	Queueing Theory	Professor	04/08/2008	Yes	Regular	
Aruna Kumara	BNKPH6891L	M.Sc. (Mathematics) and PhD	No	30/11/2021	Differential Geometry	Assistant Professor	11/05/2022	Yes	Regular	
Anitha Kiran	BCSPK8758C	M.Sc. (Mathematics) and PhD	No	12/04/2023	Queueing Theory	Assistant Professor	16/08/2010	Yes	Regular	
Annapoorna M	DINPS9906P	M.Sc. (Mathematics) and PhD	No	13/07/2018	Graph Theory	Assistant Professor	20/07/2011	Yes	Regular	
S Saranya	FOJPS4471H	M.Sc. (Mathematics) and PhD	No	12/09/2014	Topology	Assistant Professor	13/09/2023	Yes	Regular	
Kallur V Vijaya	ADHPV6207A	M.Sc. (Mathematics) and PhD	No	17/08/2019	Numerical Methods	Assistant Professor	02/07/2014	Yes	Regular	
Nikki Kedia	DTVPK6549B	M.Sc. (Mathematics) and PhD	No	23/12/2023	Fractional Partial Differential Equation	Assistant Professor	10/04/2024	Yes	Regular	
Sreelakshmi T	CNLPS9283B	M.Sc. (Mathematics) and PhD	No	07/07/2022	Fluid Mechanics	Assistant Professor	07/07/2014	Yes	Regular	

Sarjoj Revanka	ASXPR3576K	M.Sc. (Mathematics) and PhD	No	17/11/2018	Fluid Mechanics	Assistant Professor	10/04/2024	Yes	Regular	
Pushpa B V	ARZPP9937F	M.Sc. (Mathematics) and PhD	No	09/01/2018	Fluid Mechanics	Assistant Professor	01/07/2019	No	Regular	16/04/2022
Arnab Bhattach	BCCPB7233F	M.Sc. (Mathematics) and PhD	No	18/02/2021	Fluid Mechanics	Assistant Professor	02/08/2021	Yes	Regular	
Puneetha	AXBPN7347K	M.Sc	No	22/08/2014	Mathematics	Assistant Professor	10/06/2024	Yes	Regular	
Priyanka Pal	BXLPP8812L	M.Sc. (Mathematics) and PhD	No	05/04/2021	Fuzzy Automata Theory	Assistant Professor	21/10/2021	Yes	Regular	
Shankar Naray	GPPPS1503Q	M.Sc. (Mathematics) and PhD	No	14/06/2023	Fluid Mechanics	Assistant Professor	10/09/2024	Yes	Regular	
Varun V L	ANXPV1383M	M.Sc. (Mathematics) and PhD	No	14/07/2018	Fluid Mechanics	Assistant Professor	24/09/2024	Yes	Regular	
Sumati Thareja	AKLPT5570B	M.Sc. (Mathematics) and PhD	No	11/08/2023	Machine Learning	Assistant Professor	09/12/2024	Yes	Regular	
Vishnuvardhan	AVWPV4883F	M.Sc. (Mathematics) and PhD	No	20/11/2017	Differential Geometry	Assistant Professor	29/05/2025	Yes	Regular	
Rakesh Bharat	ERKPB1514B	M.Sc. (Mathematics) and PhD	No	19/12/2024	Topology	Assistant Professor	02/06/2025	Yes	Regular	
Neha D S	AYFPN1530K	M.Sc	No	14/12/2018	Fluid Mechanics	Assistant Professor	27/08/2018	Yes	Regular	
Ramakrishnapj	ANSPR9760M	M.Sc. and Ph.D. (Chemistry)	No	30/04/2010	Inorganic Chemistry	Professor	18/06/2018	Yes	Regular	
Jyothi Roy Chc	AOUPC9060N	M.Sc. and Ph.D. (Chemistry)	No	23/02/2015	Physical Chemistry	Associate Professor	20/07/2018	No	Regular	12/08/2023
Jyothi C Abbar	AOIPA6732K	M.Sc. and Ph.D. (Chemistry)	No	22/08/2012	Physical Chemistry	Associate Professor	28/06/2019	Yes	Regular	
Bincy Rose Vel	AFXPV5052R	M.Sc. and Ph.D. (Chemistry)	No	01/06/2019	Nano materials	Associate Professor	11/10/2006	Yes	Regular	

Sudheer Kuma	BYLPS6202A	M.Sc. and Ph.D. (Chemistry)	No	20/12/2014	Materials Science	Associate Professor	02/07/2007	Yes	Regular	
Swetha G A	BRHPS6731F	M.Sc. and Ph.D. (Chemistry)	No	07/04/2022	Electrochemistry	Assistant Professor	01/09/2010	Yes	Regular	
Suresh Kumar	BMWPS6731F	M.Sc. and Ph.D. (Chemistry)	No	24/08/2014	Inorganic Chemistry	Assistant Professor	05/07/2019	Yes	Regular	
Jeevan Chakra	ATQPJ8185J	M.Sc. and Ph.D. (Chemistry)	No	04/08/2021	Organic Chemistry	Assistant Professor	04/12/2023	Yes	Regular	
A Vijaya Bhask	AVTPA2685F	M.Sc. and Ph.D. (Chemistry)	No	21/02/2014	Chemistry	Assistant Professor	05/12/2023	Yes	Regular	
Udayabhanu	AMFPU4607E	M.Sc. and Ph.D. (Chemistry)	No	10/10/2020	Inorganic Chemistry	Assistant Professor	01/04/2024	Yes	Regular	
Madhukara Na	BTLPM1217N	M.Sc. and Ph.D. (Chemistry)	No	18/03/2020	Inorganic Chemistry	Assistant Professor	09/09/2024	Yes	Regular	
Srilakshmi B A	EJUPA6745R	M.Sc	No	16/09/2023	Biotechnology	Assistant Professor	30/09/2024	Yes	Contractual	
Dr.Jagadesh.Y.	AHZPJ0704G	Ph.D	Yes	18/03/2019	Thermal Science and Engineering	Assistant Professor	04/03/2013	Yes	Regular	
Mr.T.N. Pravee	AEFPT0767E	M.Tech	Yes	17/11/2000	Production Engineering Systems	Associate Professor	30/08/2004	Yes	Regular	
Mr.K.Chandras	AJBPV9899H	M.Tech	Yes	01/12/2006	Industrial Engineering	Assistant Professor	25/06/2007	Yes	Regular	
Dr.Avinash G	BQPPA8998D	Ph.D	Yes	25/07/2017	Thermal Science and Engineering	Assistant Professor	08/07/2019	Yes	Regular	
Dr.Nagamadhu	ALZPN5793K	Ph.D	Yes	20/11/2020	Machine Design	Assistant Professor	25/10/2021	Yes	Regular	
Ramya K P	BZUPR5373K	M.Sc	No	15/08/2010	Biochemistry	Assistant Professor	24/02/2024	Yes	Contractual	
Dhananjaya N	AQAPD2393P	M.Sc. (Physics) and Ph.D.	No	18/07/2013	Material Science	Professor	13/08/2010	Yes	Regular	
Lokesh R	ACEPL7417N	M.Sc. (Physics) and Ph.D.	No	10/11/2012	Solid state physics	Associate Professor	07/08/2015	Yes	Regular	
Kavitha C	BJIPK4667H	M.Sc. (Physics) and Ph.D.	No	01/10/2008	Material Science	Associate Professor	07/09/2017	Yes	Regular	

Yashaswini	AEVPY7467G	M.Sc. (Physics) and Ph.D.	No	05/08/2021	Condensed Matter Physics	Associate Professor	15/02/2010	Yes	Regular	
Ashwini K R	AYKPA4877B	M.Sc. (Physics) and Ph.D.	No	13/09/2022	Material Science	Assistant Professor	12/08/2010	Yes	Regular	
Daruka Prasad	AHFPB9192E	M.Sc. (Physics) and Ph.D.	No	20/02/2017	Nuclear Physics and Material science	Associate Professor	24/09/2013	Yes	Regular	
Basavaraj B R	ASSPB8744Q	M.Sc. (Physics) and Ph.D.	No	27/02/2019	Solid State Physics	Assistant Professor	01/07/2019	Yes	Regular	
Harish Sharma	BSXPA3479H	M.Sc. (Physics) and Ph.D.	No	11/03/2016	Material Science	Assistant Professor	30/09/2023	Yes	Regular	
Sandra Dias	BFCPP3678D	M.Sc. (Physics) and Ph.D.	No	24/09/2016	Material Science	Assistant Professor	18/03/2024	Yes	Regular	
Chandra Shakl	BFCPP3678D	M.Sc. (Physics) and Ph.D.	No	03/11/2018	Material Science	Assistant Professor	15/02/2024	Yes	Regular	
Nayana L	CBTPN8041G	M.Sc	No	15/09/2021	Materials Science	Assistant Professor	03/10/2024	Yes	Contractual	
Janhavi V	ATXPJ3090R	M.Sc	No	08/06/2017	Atmospheric Science	Assistant Professor	03/10/2024	Yes	Contractual	
Raghunandan	AZRPR0265L	Ph.D	Yes	04/01/2022	Wireless sensor Network AI and Embedded systems	Assistant Professor	09/07/2014	No	Regular	09/05/2025
Asha K.	BBKPK2715G	Ph.D	Yes	30/10/2021	Photonics and Integrated optics	Assistant Professor	30/10/2021	Yes	Regular	
Prathiba N	AZMPP9207H	Ph.D	Yes	24/01/2025	Signal Processing Embedded Systems	Assistant Professor	28/08/2013	Yes	Regular	
Madhu Palati	ALTPP0102A	Ph.D	Yes	23/12/2016	Electrical and Electronics Engineering Sciences	Assistant Professor	27/01/2017	No	Regular	04/04/2025
Char	AKUPA9747Q	Ph.D	Yes	03/12/2015	Engineering Geology	Assistant Professor	27/01/2020	Yes	Regular	
Deepak	CJEPD6612C	Ph.D	Yes	12/06/2020	Structural Engineering	Assistant Professor	27/01/2020	Yes	Regular	
Marsh	AVGPB7975A	Ph.D	Yes	29/10/2021	Traffic and Transportation Engineering	Assistant Professor	15/07/2021	Yes	Regular	
Vidya R	BKUPP4887P	M.Tech and Ph.D.	Yes	14/07/2023	Computer Network Security	Assistant Professor	03/07/2012	Yes	Regular	

A Mari Kirthimē	AKBPA7798J	M.Tech	Yes	02/06/2005	Computer Network	Assistant Professor	16/08/2012	Yes	Regular	
Mahesh G	AIVPG7290H	M.Tech and Ph.D.	Yes	26/03/2018	Wireless Networks	Professor	06/07/2018	Yes	Regular	
Mahalakshmi S	AWJPM3270H	M.Tech	Yes	19/12/2008	Soft Computing	Assistant Professor	13/08/2012	Yes	Regular	
Veena N	AMGPN2579M	M.Tech and Ph.D.	Yes	05/08/2020	Brain Computer Interface	Assistant Professor	07/09/2015	Yes	Regular	
Amitha S K	HLEPS8263P	M.Tech	Yes	03/05/2014	Computer Networks HPC Cloud Computing	Assistant Professor	13/05/2024	Yes	Regular	
Malini M	AROPM4265C	M.Tech	Yes	01/06/2012	Image Processing Deep Learning	Assistant Professor	02/04/2024	Yes	Regular	
Tejaswini B J	AIUPT3094R	Ph.D	No	03/06/2025	Business Law	Assistant Professor	03/03/2008	Yes	Regular	
Sri Pragalbh R	DGHPP6464B	MA	No	04/03/2021	MUSIC AND BHARATHANATYAM	Assistant Professor	21/11/2023	Yes	Contractual	
Sneha Naveen	AHYPN2397L	B.E.	No	01/01/2004	Music	Assistant Professor	07/01/2022	Yes	Contractual	
Mr TG Srigane	EJCPS8011J	M.Tech	Yes	08/04/2012	Computer Integrated manufacturing	Assistant Professor	01/08/2011	Yes	Regular	
Prashanth N A	AOQPP4931B	Ph.D	Yes	28/08/2020	Electrical Engineering	Assistant Professor	16/07/2014	Yes	Regular	
Kavita B Harih̄e	AFKPH2321G	Ph.D	No	01/07/2021	English Literature	Assistant Professor	23/12/2020	Yes	Contractual	
Chaithanya K F	CLNPC6792B	MA	No	01/09/2024	English language and Literature	Assistant Professor	13/11/2024	Yes	Contractual	
Shivakumar H	AYQPS9303Q	MA	No	01/01/2011	KANNADA	Assistant Professor	01/01/2002	Yes	Contractual	
Aparna Katti	APEPR0639B	Ph.D	No	31/07/2022	Music	Assistant Professor	09/10/2024	Yes	Contractual	
Sudhindra	BXKPS0808J	M.Phil	No	01/01/2013	Yoga	Assistant Professor	07/01/2022	No	Contractual	09/09/2022
krishnappa S	BIYPK1865L	MA	No	01/01/2024	Kannada	Assistant Professor	11/07/2021	Yes	Contractual	
Rani M S	CEBPR7646E	M.P.Ed	No	01/06/2017	Physical Education	Assistant Professor	01/01/2013	Yes	Regular	
Radha N	CYZPR6719J	M.Sc. and Ph.D. (Chemistry)	No	24/09/2021	Materials Chemistry	Assistant Professor	30/09/2024	No	Regular	06/05/2025
Mallikarjun Pat	ATKPP7764K	M.P.Ed	No	07/07/1995	Basket Ball and Sports training	Assistant Professor	05/07/2004	Yes	Regular	

Anjana Sinha	CGFPS9457N	Ph.D	No	15/06/2010	Environmental Engineering	Assistant Professor	24/02/2024	Yes	Contractual	
Sai Niranjan R	CMBPS3904E	MBA	No	16/12/2015	Information Technology	Assistant Professor	14/09/2022	Yes	Regular	
Vishwanth M r	AZNPR9654E	MBA & Ph.D	No	10/10/2023	Marketing	Assistant Professor	16/11/2023	Yes	Regular	
Sandhya Devi	LQCPS5491J	M.A and Ph.D	No	01/01/2024	English Literature	Assistant Professor	18/05/2023	No	Contractual	14/11/2024

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4= S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage=((NS1*0.8) + (NS2*0.2))/RF
2022-23(CAYm2)	840	42	33	21	73
2023-24(CAYm1)	1080	54	34	21	58
2024-25(CAY)	1680	84	47	22	50
<b>Average Percentage</b>					60.34

**9.2 Mentoring system (5)**

Total Marks 5.00



### MENTORING SYSTEM

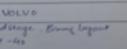
In order to help the students resolve both academic and other personal / psychological issues, BMSIT&M has introduced proctoring/mentoring system since inception. Students of all departments are brought under this system from the date of joining the college. In order to monitor the progress of students, faculty members are designated as Mentors and Proctor-Books are provided. Each Mentor is allotted with around 20 students under the mentoring system. Mentors serve as guides and role models, offering academic guidance, career advice, and emotional support to their mentees. Through regular interactions, mentors provide personalized assistance to the individual needs of their mentees, helping them prevail academic challenges and develop essential life skills. One of the primary objectives of the Mentoring system is to address academic issues faced by the students. Mentors work closely with their mentees to identify areas of academic difficulty and provide targeted support to help them overcome obstacles. By offering personalized academic guidance, mentors empower mentees to achieve their full academic potential and succeed in their studies. Following are the objectives of the Mentoring system:

- To address the grievances of students and to enable them to perform better in their academics.
- To monitor constantly the attendance of students, academic performance, identification of slow learners and fast learners.
- To enable them to maintain good relations with teachers and other fellow beings.
- To inculcate good practices in students so that they can become responsible citizens of the society.

Mentoring at the Department level is being monitored by a Dept. Proctor Coordinator. Mentoring at the Institute level is monitored by a central team of Chief Proctor Coordinator and Dean, Students' welfare. Parents are periodically intimated through student management system. Presently the parents can monitor the attendance status and academic performance of their wards using login id and password in the official website.

Mentor is the first point of contact for all academic requirements like Course registration, exam applications, grievances, leaves etc.

Student activities like Academics, Curricular, Co-curricular, Extra Curricular achievements and Social activities are recorded in the Student Mentoring System. Student Mentors (Faculty members) assess students continuously and their Academic progress and all their activities are discussed and noted in the Proctor-Books. Any discrepancies such as disciplinary issues, health issues, sense of insecurity, lack of attendance etc are discussed and counselled with care. Based on the Proctor's inputs HODs will identify few faculty who would help the students to perform the experiments beyond working hours.

 <b>BMS INSTITUTE OF TECHNOLOGY &amp; MANAGEMENT</b> (An Autonomous Institution, Affiliated to VTU, Belagavi) Avalahalli, Doddaballapur Main Road, Bengaluru - 560064 Ph No.: 080 - 68730429   Email: principal@bmsit.in	
<b>PROCTOR SYSTEM</b> <b>UNDERGRADUATE PROGRAM</b> <b>STUDENT INFORMATION RECORD</b>	
Student Name: <b>DISHA S</b>  USN: <b>24UG1845683-T</b>  Program: <b>CSE BE</b> Year of Admission: <b>2024</b>  Department: <b>CSE</b>  Proctor Name: <b>Dr. Annapoorni Pak</b>  Designation:	
<b>Student Information Sheet</b>	
Q1 Full Name: <b>DISHA S</b> Q2 USN: <b>24UG1845683-T</b> Q3 Date of Birth: <b>01-05-2006</b> Q4 Blood Group: <b>B+</b> Q5 CET - IJK: <b>CET - IJK</b> Q6 Sex (MF): <b>F</b> Q7 Phone Number: <b>8212233346</b> E-mail: Q8 Father's Name: <b>H.Suresh</b> Occupation: <b>Logistic manager at VOLVO</b> Address: <b>VIT Projects, 15th main, 2nd stage, Banashankari 4th Stage, Bangalore - 40</b> Contact Number: <b>9822551850</b> E-mail: <b>www.suresh@gmail.com</b> Signature:   Q9 Mother's Name: <b>G.Kamala Bai</b> Occupation: <b>Housewife</b> Address: <b>VIT Projects, 15th main, 2nd stage, Banashankari 4th Stage, Bangalore - 40</b> Contact Number: <b>9441804296</b> E-mail: <b>Gkamala.bai@gmail.com</b> Signature:   Q10 Local Guardian's Name: Occupation: Address: Contact Number: E-mail:  Please inform the PROCTOR if any changes in the address or telephone number mentioned in T.A.R	
Q11 Category of Admission: <b>Management</b> Payment: <b>✓</b> CRT: <b>✓</b> Q12 Accommodation: <b>Day Scholar</b> Hostel: <b>✓</b> Paying Guest: <b>✓</b>	

Mentorship from Seniors to Juniors is also in place. A senior-to-junior mentorship program is a structured mentorship where a senior student will guide the junior students from Placement preparation perspective and how he/she should plan his/her placement season.

 ಡಿಎಲ್.ಎಸ್. ಕಾಂಪ್ಯೂಟ್ ಮತ್ತು ಇನ್‌ಫೋರ್ಮೇಟಿಕ್ಸ್ ಸಾಹಿತ್ಯ ಲಯ  
BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT  
(Autonomous Under VTU)

# Senior to Junior Mentorship

Talk by :

**Amrutha T Madihalli**  
Technical Intern at  
Siemens's Helthineers  


**Aman Tripathi**  
Python backend developer at  
Namaste Credit  


Organised by :  
Placement cell  
and  
SPOCs of Dept  
of ISE

 May 18, 2024  
 6:00 PM

 **BMS Institute of Technology & Management**

Placement Cell And PCOS Of Department  
of Electronics and Communication  
Engineering

**PREP TaLK BY**

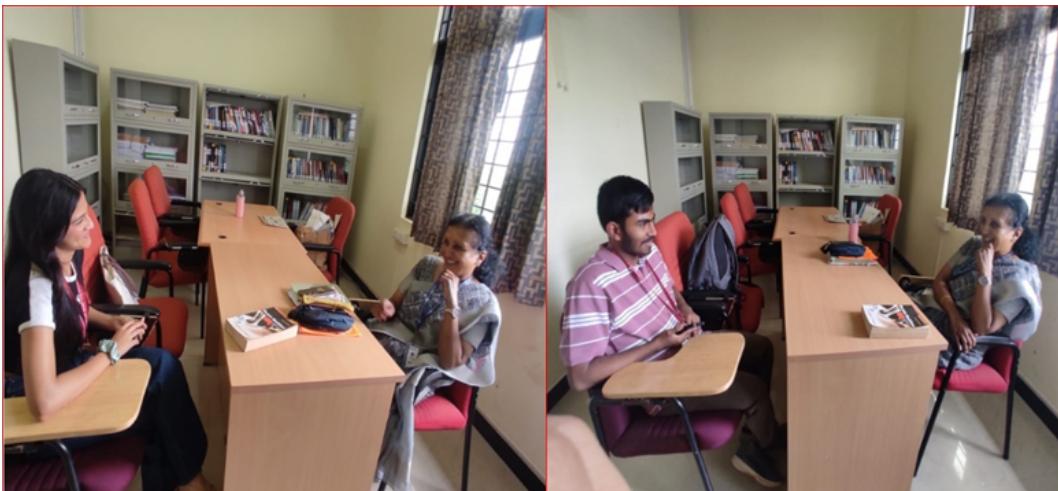


Divyani Jain  
ANZ- 13LPA

**Monday, April 3, 6 pm**

<https://meet.google.com/mzm-vmxy-acp>

Mrs. Chetana Srinivas was appointed as a Students' Counsellor by the Institute in July, 2016. She visits BMSIT&M campus on Tuesday and Friday (working days) from 1.30 PM to 4.30 PM. Students who face various adjustments problems which include behavioral or psychological issues are being counselled by her both **offline** and **online**. She provides counselling for academics, personal and behavioural issues. Students having academic deficits are being guided by her using 'Effective Study Skills' and 'Time-table management' techniques. Stress reduction, methods of deep-breathing and positive affirmation are also used. Students having Exam Anxiety are being counselled by her using Cognitive Behavioural Therapy and Relaxation technique. Art therapy and client-centred therapy are also being utilized for counselling **staff** having academic and personal stress. She has also counselled students who have indulged in malpractice in Internal tests & SEE in meetings arranged by Dr Prashant Sir, HOD EEE.



### **Efficacy of the Mentoring System**

The prevailing mentoring system helps us in the following ways:

- Enhances the teaching-learning process making it more student-centric
- Provides impartial advice and encouragement to students
- Assists in problem solving and improves self-confidence of students
- Provides individual and personal care to the students
- Improves students' performance in internal assessment test and semester end exam
- Reduces the risk of failures and drop-outs and improves academic performance.
- Promotes improvement in attendance percentage of students
- Helps to identify students interests and create opportunities of growth in relevant areas.
- Motivates students to participate in various co-curricular and extracurricular activities
- Promotes decision making abilities that support students' goals, abilities and aspirations and helps students to take better control of their career
- Develops a supportive relationship between students and staff
- Facilitates information gathering and dissemination
- Creates a positive work environment
- Promotes effective utilization of college infrastructure and resources
- Facilitates better placement.

#### **Mentor Details**

#### **Mentor/ Mentee Count**

Year	2024-2025	2023-24	2022-23	2021-22
No. of Mentors	265	229	196	189

<b>No. of Mentees</b>	5444	4335	3905	3808
<b>No. of Mentees/Mentor</b>	around 20			
<b>Frequency of the meeting</b>	Once in a week	<b>Once in a week : Friday afternoon</b>		
<b>Counsellor visiting the Campus</b>	<b>Tuesday &amp; Friday between 1.30 pm and 4.30 pm</b>			

**Count of Mentees/Staff/Parents benefitted by the Counselling**

<b>Year</b>	<b>2024-2025 (Until May, 2025)</b>	<b>2023-24</b>	<b>2022-23</b>	<b>2021-22</b>
<b>No. of Mentees</b>	13	28	90	32
<b>No. of Staff</b>	-	03	06	01
<b>No. of Parents</b>	03	03	01	-

Following are the few initiatives taken for students' & staff mental health well-being:

**1. Interaction of the Counsellor with the Girls & Boys hostel students and with the students residing in PG**

**Glimpses of the interaction:**



Main Girls hostel visit was conducted by Mrs Chetana Srinivas, Counsellor (BMSIT&M) on 7<sup>th</sup> October 2024. Main Boys hostel meeting on 8<sup>th</sup> October 2024. PG, Boys and Girls meeting on 18<sup>th</sup> October 2024. The objective for all was to 'Facilitate Hostel Adjustment', Provide 'Academic Guidance' and 'Overview of Counselling'. The important factors, 'Communication, Kindness, Empathy, sharing' were discussed for 'Hostel Adjustment'. For crafting 'Academic Success', 'Time-management' and 'Effective Study' were shared. 'Overview of Counselling' was discussed to provide 'Orientation to counselling' criterion to seek counselling and access to counselling was discussed.

**2. Interaction of the Counsellor with the Hostel Mess Staff**

The meeting with hostel mess staff was conducted by the Counsellor Mrs Chetana Srinivas on 15/10/2024.

Topics discussed were:

1. Enhancing Family Relationship.
2. Health and Hygiene maintenance.
3. Diabetic, dietary and physical exercises were shared.

All were enthusiastic and supported 'Good discussion'. They are contented with their job and salary.

### **3. Interaction with the III Semester lateral entry students**

The Counsellor Mrs Chetana Srinivas interacted with the lateral entry students on 15<sup>th</sup> December, 2023 at 1.30 pm in the 2<sup>nd</sup> Floor Seminar Hall of the Academic Block.

Students got to know about the short, medium and long-term goals, time management and how to manage failure in exams as well as interpersonal issues wisely. Mrs Chetana gave an overview of counselling which included meaning of counselling, objectives, criterion for seeking counselling and types of counselling. Techniques to manage stress such as deep breathing was also shared with the students. The interaction encouraged the students to set goals and work towards achieving it.

#### **Glimpses of the Interaction :**



4. A Town-Hall meeting was conducted on 23<sup>rd</sup> May, 2025 for II semester students who are facing issues in adapting to the engineering environment and examination system. Some students have failed in subjects though they have the potential to score good marks. In this regard, Principal addressed and counselled the students having more than two backlogs in the first semester. Vice Principal, Deans, COE and HODs also were present during the meeting.

1. Principal had one to one interaction with the students to understand their problems and addressed many problems on spot.
2. Dr. Thippeswamy G, HoD, CSE took concerns of all the students one by one.

Students expressed the following reasons for their failure in the first semester.

1. Addicted to mobile phones
2. Unable to adjust with this environment.
3. Lack of concentration
4. Issues at home

Solution:

1. Principal addressed all the problems and informed some of them to meet Professional

Counsellor if required.

2. Students were advised to concentrate on studies and meet the concerned Course-Coordinator to clarify the doubts.
3. It was decided to conduct Remedial classes for few courses.

#### **CASES WHICH DEMONSTRATE CLOSING OF LOOP**

##### **I PROCTORING (by Proctors)**

Sl. No	Name of the student	Branch/Semester
1.	Student C	VI Sem, ECE
a.	Action	Counselled by the Proctor and informed the parents through mail and over phone
b.	Proctored for	Shortage of attendance
c.	Outcome	Improvement in attendance got the eligibility as on 17.06.25 for the semester end exam.
2.	Student C	V Sem, ECE
a.	Proctored for	Shortage of attendance and less than 50% IA1 marks in subject like DSP
b.	Action	Counselled by the Proctor
c.	Outcome	Improvement in attendance got the eligibility as on 17.06.25 for the semester end exam.
3.	Student C	V Sem, ECE
a.	Proctored for	Has backlogs in BPLCK105B and BESCK204E
b.	Action	Counselled by the Proctor
c.	Outcome	Cleared the backlogs.
4.	Student C	IV Sem, ECE
a.	Proctored for	Shortage of attendance and less than 50% IA1 marks in subject like BSP
b.	Action	Counselled by the Proctor
c.	Outcome	Improvement in attendance and got the eligibility for SEE later on and IA2 Marks also improved compared to IA1[e.g. in Basic signal processing, she scored in IA1 17 marks and in IA2 it is 28.]
5.	Student C	II Sem , CSE-1
a.	Proctored for	Poor attendance
b.	Outcome	Attending the class regularly and has also taken the Lab Exam
6.	Student S	II Sem , CSE-1

a.	Counselled for	Poor attendance
b.	Outcome	Attending the class regularly and has also taken the Lab Exam
7.	Student T	IV Sem, ISE
a.	Proctored for	Shortage of attendance / Depression
b.	Action	Spoken to the student. Motivated to attend classes.
c.	Outcome	Attendance and performance in IA is improved.
8.	Student N	VIII Sem, ISE
a.	Proctored for	Academic performance
b.	Action	Student was finding difficulty in studying mathematics courses. Spoke to Dr. Aruna Kumar mathematics faculty and informed Nikitha to meet sir to get her concepts clarified.
c.	Outcome	Student has attempted exams with clarity.

**II COUNSELLING (by Professional Counsellor)**

Sl. No	Name of the student	Branch/Semester
1.	Student P	2 <sup>nd</sup> Sem , CSE
a.	Counselled from	March 2025 to May 2025 (5 sessions)
b.	Counselled for	Emotional , Thought , behavioral disturbances.
c.	Counselling technique used	1.Client-Centered technique. 2.Cognitive behavioral technique.
d.	Outcome	1.Feeling empowered. 2.Academic and nonacademic area of life improved.
2.	Student S	6 <sup>th</sup> Sem ECE.
a.	Counselled from	March 2025 to May 2025(7sessions).
b.	Counselled for	1.Academic improvement. 2.Personal issue.
c.	Counselling technique used	1.Client centered therapy. 2.Effective study skills. 3.Time table management.

d.	Outcome	1 Result improved to 8.57 SGPA in V Sem from 8.5 SGPA in IV Sem 2. Personal issues solved by client centered therapy.
3.	Student N	4 <sup>th</sup> Sem EEE
a.	Counselled from	March 2025 to May 2025(6 sessions).
b.	Counselled for	Childhood trauma.
c.	Counselling technique used	1, Inner child healing. 2. Meditation technique.
d.	Outcome	1. Reduced personal distress by 60 percent. 2. Improved mental health.
4.	Student R	7 <sup>th</sup> sem Civil
a.	Counselled from	Feb 2024 to Dec 2024
b.	Counselled for	Academic defective, lack of confidence.
c.	Counselling technique used	1. Effective Study Skills 2. Timetable management Meditation and deep breathing technique.
d.	Outcome	8.4 SGPA in 6 semester, earlier result was 7.6 in 5 semester, cleared two arrears
5.	Student S	5 <sup>th</sup> semester ECE
a.	Counselled from	February to November 2024
b.	Counselled for	Exam fear, lack of confidence
c.	Counselling technique used	1.Client centered therapy 2. Effective study skills. 3. Time table management.
d.	Outcome	SGPA increased from 7 in III Sem to 8.5 in IV Sem and emotional issues were resolved.
6.	Student S	7 <sup>th</sup> semester, Civil
a.	Counselled from	August 2024 to December 2024

b.	Counselled for	Emotional disturbances Due to relationship issues And interpersonal disturbances.
c.	Counselling technique used	1.gestalt therapy 2.Client – centered therapy.
d.	Outcome	1.Improvement in interpersonal relationship. 2.stability in emotional area.

Feedback was taken from the students about the Proctoring/Counselling system. Following Questions were asked which were measured on Likert Scale.

1. My Proctor was effective and good at the job.
2. Did the Proctoring helped in overcoming the academic problems?
3. Whether Proctoring done periodically in the allotted hour by your Proctor?
4. Have you been counselled by the Professional Counsellor?
5. If Counselled by the Professional Counsellor, were you benefitted?
6. Overall feedback on Proctoring session.

Following observations were made on the inputs given by the students:

723 students gave their feedback regarding the Proctoring system. It can be noted that 58.92 % of the respondents gave a very good rating and 5.46 % of respondents gave a satisfactory rating and only 1.04 % of the respondents gave a very poor rating. The overall feedback given by students for the mentoring system is satisfactory.

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### 9.3 Feedback Analysis (10)

Total Marks 10.00

**9.3.1 Feedback on Teaching and Learning Process and Corrective Measures Taken, if any (5)**

Institute Marks : 5.00

### **Feedback collection process on TLP**

The feedback collection is done through an online student management system. At BMSIT&M, student feedback on faculty members is taken twice in each semester: once after the first 15 days from the commencement of the semester and again at the conclusion of the semester. All students provide feedback on various aspects of the teaching and learning process adopted by the faculty.

**1) Scheduling Feedback Dates:** The specific dates for feedback collection on TLP are predetermined and published in the academic calendar (calendar of events). This ensures that all stakeholders, including students, faculty, and administrative staff, are aware of the timeline and can prepare accordingly.

**2) Communication for Faculty Coordinator Nomination:** The feedback process begins with an official communication sent to all departments, requesting the nomination of faculty coordinators. These coordinators are responsible for overseeing the feedback process within their respective departments, ensuring smooth execution of the feedback process.

**3) Student Notification and Secure Access:** All students are informed about the feedback process through multiple communication channels, such as email, SMS, and WhatsApp, to guarantee wide reach and timely notification. The faculty coordinators provide instructions on how to access the feedback portal. To maintain confidentiality and data security, the student management system incorporates multifactor authentication. Feedback is collected comprehensively for all academic activities, including theory classes and laboratory sessions.

**4) Duration and Monitoring of Feedback Submission:** The entire feedback collection process typically concludes within one week from its start date. During this period, faculty coordinators actively monitor the progress of feedback submissions through an online dashboard, enabling them to identify number of students who are yet to submit feedback and send reminders if necessary. This monitoring helps in ensuring maximum participation and timely completion.

**5) Feedback Analysis:** Upon completion of feedback collection, the responses are systematically analysed using a standardized 5-point rating scale to quantify student perceptions. The analysis involves calculating the average score percentage based on the total feedback received. This metric helps quantify overall faculty performance and highlights areas for improvement in teaching and learning processes.

**6) Dissemination of Feedback Reports to Faculty:** Once the feedback analysis is done, all faculty members receive notifications via email or WhatsApp informing them to download their individual feedback reports which are available in their respective login. These reports provide detailed insights into their teaching effectiveness as perceived by students.

**7) Access to Feedback Reports by Department Heads and Higher Administration:** Feedback reports are made accessible to the respective Heads of Departments (HoDs) in their respective logins. The consolidated reports summarizing feedback across all departments are made available to the Principal and Vice Principal in their respective logins.

### **Average Percentage of students who participate**

Academic Year	Percentage of Students who Participated in Feedback
2020-21	92.05%
2021-22	90.95%
2022-23	95.20%
2023-24	94.03%
2024-25	69.90% (Ongoing)

### **Specify the feedback analysis process**

The feedbacks are analysed based on a set of questionnaires defined by the Institute. All theory courses are evaluated based on a set of 12 questionnaires and laboratories are evaluated based on a set of 5 questionnaires.

Each of these questionnaires is rated by students on a five-point scale, with 1 representing the lowest level of satisfaction and 5 representing the highest.

The feedback scale is defined as follows:



An average score percentage is calculated based on all submitted responses using the following formula:

$$\text{Feedback \%} = (\text{S5} \times 5 + \text{S4} \times 4 + \text{S3} \times 3 + \text{S2} \times 2 + \text{S1} \times 1) / (\text{TOTAL} \times 5) \times 100$$

Where:

- **S5** is the number of responses with Score 5.
- **S4** is the number of responses with Score 4.
- **S3** is the number of responses with Score 3.
- **S2** is the number of responses with Score 2.
- **S1** is the number of responses with Score 1.
- **TOTAL** is the total number of feedback responses

#### **Sample Report and Calculations**

Competency	Rating-5	Rating-4	Rating-3	Rating-2	Rating-1	Total %
How effectively did the teacher explain technical concepts and course content?	0	1	0	0	0	80
How effective was the teacher's communication in delivering the subject matter?	0	0	1	0	0	60
How effectively did the teacher use teaching aids (e.g., presentations, videos, models) to support learning?	0	0	0	1	0	40
How appropriate was the pace of content delivery for your understanding?	0	0	0	0	1	20
How well did the teacher encourage and inspire students to engage with the course?	0	1	0	0	0	80
How approachable and willing was the teacher to assist students when needed?	0	0	0	0	1	20
How punctual was the teacher in attending classes?	1	0	0	0	0	100
How effectively did the teacher use real-world examples and case studies to make the subject more relatable?	0	0	1	0	0	60
How accessible was the teacher to students during working hours for queries and discussions?	0	0	0	1	0	40

To what extent did the faculty cover the syllabus as prescribed by the institution?	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>
How fair was the evaluation process by the faculty?	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>
To what extent did the faculty discuss the evaluation/assessment feedback to help you improve your performance?	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>60</b>
<b>Total</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>61.66%</b>

Calculations: S5 = 2, S4 = 3, S3 = 3, S2 = 2, S1 = 2, TOTAL = 12 (1 Full Response Considered)

$$\text{Feedback \%} = \frac{2 \times 5 + 3 \times 4 + 3 \times 3 + 2 \times 2 + 2 \times 1}{12 \times 5} \times 100$$

Feedback \% = 61.66%

#### Basis of reward/ corrective measures during the assessment period

**Reward:** Student feedback is a key factor in faculty evaluation under the Performance Based Appraisal System (PBAS) and Career Advancement Scheme (CAS). Good feedback for the faculty will fetch good annual appraisal which will have a direct bearing on his/her annual increment and promotion based on CAS.

**Corrective measures:** If a faculty gets feedback less than 75% (previously 60%), then he/she will be counselled by a committee to ascertain the root cause of the performance. He/she will be encouraged to attend faculty development programs. He/she will also be advised to take some training sessions if required. The committee gives suggestions, counselling, and support to the concerned faculty for teaching-learning performance improvement. As per institutional norms, persistent underperformance is subject to stricter consequences. A faculty member who receives feedback scores below 75% (previously 60%) on six continuous occasions will forfeit their annual salary increment. If this pattern continues and the faculty member obtains such low feedback twelve times continuously, the institution reserves the right to initiate compulsory retirement proceedings in accordance with applicable policies. This corrective mechanism ensures accountability while providing faculty with opportunities and resources to improve their performance, thereby maintaining high standards of teaching and learning within the institution.

#### Number of corrective actions taken

Academic Year	Number of Faculty Members with Feedback < 60% who were counselled	
	Feedback-1	Feedback-2
2020-21	3	NIL
2021-22	NIL	NIL
2022-23	2	6
2023-24	2	5
2024-25 *	14	16

\* < 75% from 2024-25

#### Exhibit the details of analysis done

The feedback given by students is on various aspects of the teaching learning process adopted by the faculty for theory and laboratories. Each faculty member is expected to attain a minimum overall student's feedback of 75% (previously 60%) in each of the course taught by them, every semester. The following are theory and laboratories questionnaire used to take feedback from students.

#### Theory Feedback Questions

1. How effectively did the teacher explain technical concepts and course content?
2. How effective was the teachers communication in delivering the subject matter?

3. How effectively did the teacher use teaching aids (e.g., presentations, videos, models) to support learning?
4. How appropriate was the pace of content delivery for your understanding?
5. How well did the teacher encourage and inspire students to engage with the course?
6. How approachable and willing was the teacher to assist students when needed?
7. How punctual was the teacher in attending classes?
8. How effectively did the teacher use real-world examples and case studies to make the subject more relatable?
9. How accessible was the teacher to students during working hours for queries and discussions?
10. To what extent did the faculty cover the syllabus as prescribed by the institution?
11. How fair was the evaluation process by the faculty?
12. To what extent did the faculty discuss the evaluation/assessment feedback to help you improve your performance?

#### **Lab Feedback Questions**

1. How consistently was the teacher available for the entire duration of the lab session to provide guidance?
2. How effectively did the teacher demonstrate experiments to help students understand procedures?
3. How effective was the regular viva-voce in enhancing your understanding of lab concepts?
4. How consistently did the teacher evaluate lab records, observations, and sketchbooks in a timely manner?
5. How fair and transparent was the evaluation process?

A sample information recorded in the feedback portal reflecting the student's feedback for the academic year 2024-25 is shown below.

Faculty Name	Subject Name	Semester	Section	Batch	Feedback %
Faculty-1	Generative AI Lab	6	A	B4	90.16%
				B3	91.04%
Faculty-2	5G Technology	6	A	-	93.38%
Faculty-3	Advanced Java Lab	4	C	B2	88.64%
Faculty-4	Discrete Mathematical Structures	4	A	-	91.78%
Faculty-5	Quantum Computing and Photonics Lab	2	CSE-1	B3	95.04%
Faculty-6	PCB Design Laboratory	4	A	B2	69.04%
				B3	67%
Faculty-7	Analysis and Design of Algorithms	4	D	-	72.84%
Faculty-8	Introduction to Cloud Computing	2	-	-	63.42%

#### **Feedback collection process on facilities**

The feedback collection on academic facilities is done through an online student management system. Feedback on facilities is taken once at the end of academic year during even semester. All students provide feedback on various facilities in the college.

**1) Scheduling Feedback Dates:** The specific dates for feedback collection on academic facilities are predetermined and published in the academic calendar (calendar of events). This ensures that all stakeholders, including students, faculty, and administrative staff, are aware of the timeline and can prepare accordingly.

**2) Communication for Faculty Coordinator Nomination:** The feedback process begins with an official communication sent to all departments, requesting the nomination of faculty coordinators. These coordinators are responsible for overseeing the feedback process within their respective departments, ensuring smooth execution of the feedback process.

**3) Student Notification and Secure Access:** All students are informed about the feedback process through multiple communication channels, such as email, SMS, and WhatsApp, to guarantee wide reach and timely notification. The faculty coordinators provide instructions on how to access the feedback portal. To maintain confidentiality and data security, the student management system incorporates multifactor authentication. Feedback is collected comprehensively on all academic facilities of the college.

**4) Duration and Monitoring of Feedback Submission:** The entire feedback collection process typically concludes within one week from its start date. During this period, faculty coordinators actively monitor the progress of feedback submissions through an online dashboard, enabling them to identify students who have yet to submit feedback and send reminders if necessary. This monitoring helps in ensuring maximum participation and timely completion.

**5) Feedback Analysis:** Upon completion of feedback collection, the responses are systematically analysed using a standardized 5-point rating scale to quantify student perceptions. The analysis involves calculating the average score percentage based on the total feedback received. This metric provides a clear indication of overall satisfaction with academic facilities and helps identify specific areas that require improvement.

**6) Access to Feedback Reports by Higher Administration:** Feedback reports are made accessible to the Principal and Vice Principal in their respective logins enabling them to take appropriate actions.

#### **Feedback analysis and corrective actions**

The feedback analysis process is same as that used for teaching learning process. The following is the questionnaire used to take infrastructure / facilities feedback.

1. Campus facility - Ambience
2. Campus facility - Parking
3. Campus facility - Drinking water
4. Campus facility - Toilet
5. Campus facility - Rest room
6. Canteen - Cleanliness
7. Canteen - Quality of food
8. Library facility - Adequacy of books
9. Library facility - Journals
10. Library facility - Reference and reading room
11. Library facility - Reprographic facility
12. Internet Facility
13. Banking Facility
14. Encouragement for Innovative Research activity (like hobby club)
15. Sports Facility
16. House keeping

17. Electrical Maintenance
18. Security facility
19. Accounts Section
20. Estate Office (Project Engineer)
21. Central office (Establishment section)

The feedback obtained is analysed and passed on to the respective personnel in-charge for corrective actions / improvements.

#### **Corrective Actions**

##### **1) Accounts Section**

2022-23	2023-24	Average
78.46%	77.47 %	77.97%

The above is the score of accounts section for the last two years in the feedback on college facilities. While the scores obtained indicates satisfactory level of service, there is room for improvement. In response, the college has taken the following measures:

- a) Staff Sensitisation:** Accounts staff have been sensitized to be soft spoken, ensure clarity in fee-related matters, and enhance responsiveness to student queries.
- b) Process Simplification:** Steps have been taken to streamline fee payment and refund processes. Clear guidelines and updated information are being prominently displayed on the college website and notice boards.
- c) Helpdesk Establishment:** A dedicated helpdesk has been set up during peak periods (such as admission and examination fee deadlines) to reduce waiting times and assist students efficiently.

These measures aim to improve the efficiency, transparency, and overall experience of students interacting with the accounts section.

##### **2) Banking facility**

2022-23	2023-24	Average
83.22%	76.50 %	79.86%

The above is the score of banking facility for the last two years in the feedback on college facilities. While the scores obtained reflects a generally acceptable level of satisfaction, the college recognizes the need for improvements to better serve students. Accordingly, the following measures have been initiated:

- a) Improved Service Timings:** In coordination with the bank, efforts have been made to extend service hours during high-demand periods such as fee payment deadlines and scholarship disbursements.
- b) Increased Staffing During Peak Hours:** Additional staff support has been requested during busy times to reduce wait times and ensure faster service.
- c) ATM Maintenance and Uptime:** Regular monitoring of the on-campus ATM has been implemented to ensure functionality and minimize downtime, with prompt reporting and follow-up on any technical issues.
- d) Student Awareness:** Information regarding banking services, timings, and procedures has been made more accessible through student notice boards and digital platforms to avoid confusion and delays.

These actions aim to enhance the overall banking experience for students and ensure greater convenience and reliability.

##### **3) Campus facility**

	2022-23	2023-24	Average

<b>Ambience</b>	<b>91.16%</b>	<b>78.73 %</b>	<b>84.95%</b>
<b>Drinking Water</b>	<b>74.60%</b>	<b>75.61 %</b>	<b>75.12%</b>
<b>Parking</b>	<b>76.48%</b>	<b>78.39 %</b>	<b>77.44%</b>
<b>Rest Room</b>	<b>74.74%</b>	<b>69. 40 %</b>	<b>72.07%</b>
<b>Toilet</b>	<b>76.34%</b>	<b>69.34 %</b>	<b>72.84%</b>

The above is the score of various campus facility for the last two years in the feedback on college facilities. While most areas reflect moderate satisfaction, certain aspects clearly need improvement. In response, the college has undertaken the following measures:

#### a) Campus Ambience

- Landscaping and greenery maintenance have been enhanced.
- Additional seating and shaded areas are being developed to improve the campus environment.

#### b) Drinking Water

- Regular checks and maintenance of water purifiers and coolers have been scheduled.
- More drinking water units are being installed in high-traffic areas.

#### c) Parking Facilities

- Parking spaces have been reorganized for better space utilization.
- Signage and security have been improved to manage vehicle flow and safety.

#### d) Rest Rooms and Toilets

- Deep cleaning and sanitation schedules have been increased.
- Maintenance staff have been instructed to monitor hygiene more closely throughout the day.
- Renovation work is being planned for older restrooms to improve infrastructure and usability.

These measures are aimed at addressing student concerns and enhancing the overall campus experience.

#### 4) Canteen

	<b>2022-23</b>	<b>2023-24</b>	<b>Average</b>
<b>Cleanliness</b>	<b>70.38%</b>	<b>74.52 %</b>	<b>72.45%</b>
<b>Quality of food</b>	<b>60.64%</b>	<b>69.01 %</b>	<b>64.83%</b>

The above is the score of canteen for the last two years in the feedback on college facilities. These scores indicate the need for focused improvements to meet student expectations. In response, the college has implemented the following corrective measures:

#### a) Improvement in Cleanliness

- A dedicated cleaning schedule has been introduced to maintain hygiene throughout the day.
- Regular inspections by the campus maintenance team are increased to ensure compliance with cleanliness standards.

#### b) Enhancing Food Quality

- The canteen vendor has been instructed to review and improve food preparation practices, with an emphasis on freshness and nutrition.
- A food quality monitoring committee, including student representatives, has been formed to provide regular feedback.
- Menu items are being revised with more variety and healthier options being introduced.

These steps are aimed at providing a cleaner and more satisfactory dining experience for students.

#### 5) Central Office (Establishment Section)

<b>2022-23</b>	<b>2023-24</b>	<b>Average</b>

83.14%	78.15 %	80.65%
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The above is the score of central office for the last two years in the feedback on college facilities. While the scores obtained reflects a generally positive perception, the college is committed to further enhancing the efficiency and responsiveness of the section. Accordingly, the following measures have been implemented:

**a) Improved Responsiveness**

- Staff have been sensitized to handle student queries more promptly and courteously.

**b) Process Transparency**

- Clear information regarding procedures, required documents, and timelines has been displayed on notice boards and the college website to avoid confusion.

**c) Digitalization of Services**

- Efforts are underway to digitize key processes to reduce paperwork and minimize student waiting time.

These initiatives aim to make the Establishment Section more student-friendly, transparent, and efficient in handling administrative matters.

**6) Electrical Maintenance**

2022-23	2023-24	Average
78.18%	78.15 %	78.17%

The above is the score of electrical maintenance for the last two years in the feedback on college facilities. While the scores obtained indicates satisfactory level of service, there is scope for improvement to ensure uninterrupted and safe electrical infrastructure. In response, the college has initiated the following measures:

**a) Faster Response Time**

- A dedicated team has been assigned to address electrical complaints promptly.

**b) Preventive Maintenance**

- Regular inspections and preventive maintenance of electrical fixtures, classroom lighting, and power backups are done to reduce breakdowns.

**c) Upgradation of Infrastructure**

- Outdated wiring, switches, and fixtures are being replaced in a phased manner to improve safety and reliability.

These steps aim to enhance the safety, reliability, and efficiency of electrical services on campus and improve the overall student experience.

**7) Encouragement for Innovative Research Activity (like hobby club)**

2022-23	2023-24	Average
79.48%	73.05 %	76.27%

The above is the score of encouragement for innovative research activity for the last two years in the feedback on college facilities. While the scores obtained indicates moderate student satisfaction, the college recognizes the importance of fostering creativity, innovation, and hands-on learning. To enhance this area, the following measures have been undertaken:

**a) Strengthening Clubs and Innovation Cells**

- Existing clubs are being revitalized with structured activities, regular meetings, and mentorship from faculty members.
- New clubs aligned with emerging technologies and student interests are introduced.

**b) Funding and Support**

- Financial and logistical support is being extended for student-led projects, participation in competitions, hackathons, and project exhibitions.
- A grant system is developed to encourage prototype development and research-based student initiatives.

**c) Collaboration and Mentorship**

- Collaborations with industry experts, alumni, and external organizations are being promoted to provide guidance and exposure to real-world problem-solving.

These initiatives are aimed at creating a vibrant, supportive environment for innovation and research at the student level.

**8) Estate office (Project Engineer)**

2022-23	2023-24	Average
79.92%	77.11 %	78.52%

The above is the score of estate office for the last two years in the feedback on college facilities. While the scores obtained reflects a generally positive perception, the college is committed to continual improvement in infrastructure development and maintenance. Based on the feedback, the following corrective actions have been implemented:

**a) Faster Response to Maintenance Issues**

- A streamlined complaint system has been introduced to ensure timely response and resolution of infrastructure-related concerns raised by students.

**b) Regular Monitoring and Upkeep**

- Periodic inspections of campus buildings, classrooms, and common areas is done to proactively identify and address maintenance needs.

**c) Improved Communication and Coordination**

- The Estate Office has enhanced coordination with other departments to ensure smoother execution of repair and renovation projects without disrupting academic activities.

These steps aim to improve the efficiency, responsiveness, and quality of services provided by the Estate Office, contributing to a better campus experience for students.

**9) Housekeeping**

2022-23	2023-24	Average
83.52%	77.72 %	80.62%

The above is the score of housekeeping for the last two years in the feedback on college facilities. While the scores obtained indicates a satisfactory level of cleanliness and upkeep, the college is committed to achieving higher standards. Based on the feedback, the following measures have been implemented:

**a) Enhanced Cleaning Schedules**

- Cleaning frequency has been increased in high-traffic areas such as classrooms, corridors, restrooms, and common spaces.

**b) Monitoring and Supervision**

- A supervisory team has been assigned to conduct regular inspections and ensure adherence to cleanliness standards across the campus.

These actions are aimed at maintaining a clean, hygienic, and pleasant environment across the campus to support a better academic and living experience.

**10) Internet Facility**

2022-23	2023-24	Average
84.74%	68.21 %	76.48%

The above is the score of internet facility for the last two years in the feedback on college facilities. While the scores obtained indicates a need for a significant improvement in connectivity, speed, and accessibility. In response, the college has initiated the following corrective actions:

**a) Network Infrastructure Upgrade**

- Steps are being taken to upgrade the existing network infrastructure, including increasing bandwidth and installing additional access points to improve coverage and speed.

**b) Regular Monitoring and Maintenance**

- A dedicated technical team has been assigned to monitor network performance and address connectivity issues promptly.

**c) Wi-Fi Access Expansion**

- Wi-Fi coverage is being expanded to all key academic and residential areas, ensuring consistent access for students and staff.

These measures aim to provide a faster, more reliable, and accessible internet experience that supports academic, research, and communication needs on campus.

**11) Library facility**

	2022-23	2023-24	Average
<b>Adequacy of books</b>	88.22%	79.60 %	83.91%
<b>Journals</b>	87.16%	78.98 %	83.07%
<b>Reference and Reading Room</b>	87.9%	79.53 %	83.72%
<b>Reprographic Facility</b>	84.7%	78.71 %	81.71%

The above is the score of library for the last two years in the feedback on college facilities. While the scores obtained reflects a good level of satisfaction, the college is committed to further enhancing the library experience. Accordingly, the following corrective measures have been undertaken:

**a) Enhancement of Book and Journal Collections**

- Regular updates to the book and journal inventory are being made based on curriculum changes and student suggestions.
- Additional copies of high-demand titles are being procured to improve availability.

**b) Improvement of Reading Room Environment**

- The reading room is being upgraded with better lighting, ventilation, and seating arrangements to ensure a more comfortable and conducive study environment.

**c) Upgradation of Reprographic Facility**

- The reprographic section is being equipped with faster and more reliable machines to reduce wait times.

These measures aim to create a more resource-rich, accessible, and student-friendly library environment that supports academic success and research.

**12) Security Facility**

2022-23	2023-24	Average
83.42%	80.15 %	81.79%

The above is the score of security facility for the last two years in the feedback on college facilities. While the scores obtained reflects a generally high level of satisfaction, the college is committed to ensuring a completely safe and secure campus environment. In response to the feedback, the following measures have been implemented:

**a) Enhanced Campus Surveillance**

- Additional CCTV cameras have been installed in key areas to improve monitoring and deter any untoward incidents.

**b) Increased Patrolling and Vigilance**

- Security personnel have been assigned to conduct regular patrols, especially during early morning and late evening hours.

**c) Identity Verification and Access Control**

- Entry and exit points are being more strictly monitored, with proper identity checks to prevent unauthorized access.

These measures aim to strengthen campus security, ensure student safety, and maintain a peaceful academic environment.

**13) Sports Facility**

2022-23	2023-24	Average
81.78%	70.37 %	76.08%

The above is the score of sports facility for the last two years in the feedback on college facilities. While the scores obtained reflects moderate satisfaction, it also highlights the need for improvement in promoting physical activity and sports engagement among students. In response, the college has initiated the following actions:

**a) Upgradation of Sports Infrastructure**

- Maintenance and improvement of existing sports grounds and courts have been prioritized to ensure better playing conditions.
- Efforts are underway to add new sports equipment and upgrade gym facilities.

**b) Encouragement of Student Participation**

- Intra-college tournaments and inter-departmental competitions are being organized to boost student interest and involvement in sports.

**c) Appointment of Coaches and Trainers**

- Qualified coaches are being engaged to provide structured training and mentorship in selected sports disciplines.

These initiatives aim to provide improved facilities, encourage active participation, and promote a healthy lifestyle among students through sports.

The following is the extract of feedback on facilities from 360-degree feedback for the academic year 2024-25.

Sl No.	Questions	Percentag e
1	How satisfied are you with the support provided by the training and placement section for your career growth?	76.65%
2	How would rate the sports facilities provided by the Institution?	77.63%
3	How would rate the institutions encouragement and support for innovative activities?	81.70%
4	How would rate the speed and reliability of the internet facilities on campus?	72.90%
5	How would you rate the overall quality of the library facilities?	85.63%
6	How would you rate the quality of food served in the Coffee Kuteera?	83.97%
7	How would you rate the quality of food served in the Food Court?	78.04%
8	How would you rate the cleanliness and maintenance of the rest rooms on campus?	83.79%
9	How would you rate the availability and quality of drinking water on campus?	86.61%

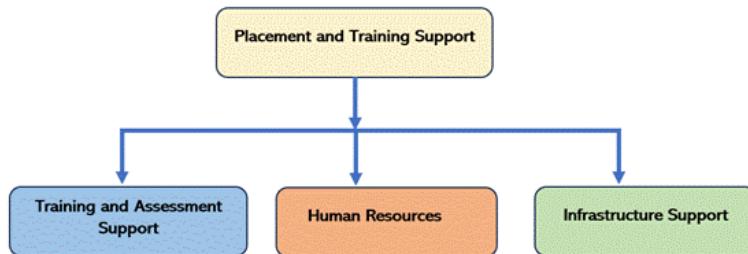
10	How would you rate the ambience of campus facilities?	84.96%
----	-------------------------------------------------------	--------

**9.4 Training and Placement Support (10)**

Total Marks 10.00



**1. Training and Placement Support:** Training Programs designed to equip students with the skills and knowledge necessary for a specific job, followed by assistance in securing that job. This support often involves Quantitative Aptitude/Coding/Technical trainings, soft skills development, and guidance on clearing the interviews, Human Resources and Facilities.



#### Training and Assessment Support

**Academic Year 2024-25:** The Career Readiness Classes (CRC) was embedded in the timetable 4 hours for every section for 1<sup>st</sup> and 2<sup>nd</sup> Semester. 3 hours for 3<sup>rd</sup> and 4<sup>th</sup> semester students to learn the technical foundation and advanced skills. At the end of the session, the assessment is conducted on HackerEarth platform which assess their level of understanding on the topics studied and area of improvement on certain topics. The detailed outline of the activities is listed below:

#### List of Events/Activities for the Academic Year 2024-25

Semester of Study	Topics to Study and Assessment	Number of Hours	Remarks
1	Quantitative Aptitude - Easy Level and Medium Level	36	Training By Inhouse Contract Employees
	LinkedIn session	2	By Face Company
	Assessment on HackerEarth Platform	2	HackerEarth platform - Aptitude Assessments
2	Advanced Quantitative - Medium and Difficulty Level	36	
	Resume Building Session	2	
	Assessment on HackerEarth Platform	2	HackerEarth platform - Aptitude Assessments
3	Technical - Career Readiness Classes	36	Coding for IT Branches and core domain subjects for Core Engineering
	Assessment on HackerEarth Platform	2	HackerEarth platform - Aptitude Assessments
4	Technical - Career Readiness Classes	36	Advanced Coding for IT Branches and core domain subjects for Core Engineering
	Problem Solving Techniques through Programming	18	Elite Batch Training by Ex Google Employee (Mr. Channa)
	Assessment on HackerEarth Platform		HackerEarth platform - CRC Assessments
5	Problem Solving Techniques through Programming	18	Elite Batch Training by Ex Google Employee (Mr. Channa)
	Fortnight Assessments	2	2 Hours Each assessment
	Soft Skill Training	10	By Tantum Company
6	Company Leadership Talks	2	Once in fortnight (Selected Companies)
	Mock Assessments and Mock Interviews		Mock Assessments for all and Mock Interviews for needy students
	Video Resume Submission		All Students should submit
	Project Video Submission		All Students should submit
	Summer Internships		According to company Requirements
7	Placement Season -1		For all the Eligible Students of BMSIT&M according to the company requirements
	Need Based Training and Counseling		Needy Students will call for special Training and Counseling
8	Placement Season -2		Remaining Students and those who will get eligible after 7th semester examination
	Need Based Training and Counseling		Needy Students will call for special Training and Counseling

Note:

- The 1<sup>st</sup> and 2<sup>nd</sup> Semester Career Readiness Classes is conducted by contractual employees hired exclusively for this purpose.
- The 3<sup>rd</sup> and 4<sup>th</sup> Semester career readiness classes are conducted by passionate inhouse faculty members, The content is drawn from GATE Syllabus of respective branches.
- Soft Skills Training and Resume Validation is Given by a company M/s.Tantum
- The Assessment is done on HackerEarth Platform (SaaS Model Subscription) – Spending Budget Close to 15 to 20 Lakhs Per Year

- Sample Timetables**

**1<sup>st</sup> Semester Timetable**


BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT  
(Autonomous Institute affiliated to VTU, Belagavi)  
Yelahanka - Bengaluru - 64

SEMESTER BRANCH	I : CSE	I SEMESTER B.E. TIME TABLE FOR THE ACADEMIC YEAR 2024 – 2025 w.e.f 30/09/2024							
		(Chemistry group)		SECTION CLASSROOM		CSE-2 : LB-CR-301			
8.30 – 9.30	9.30 – 10.30	10.30 – 10.40	10.40 – 11.40	11.40 – 12.40	12.40 – 1.30	1.30 – 2.30	2.30 – 3.30	3.30 – 4.30	
MONDAY	MATLAB	B R E A K	CHE	ICO	L U N C H B R E A K	PLC-I			
	CAED THEORY		ESC-I	P&T-T1			ENGL		
	CHE		PLC-I	ESC-I					
	MAT		CHE	P&T-T1					
	SPH		MAT	P&T-T1			CAED LAB		
	CHEL						PLC-I LAB		
SATURDAY	P&T-T1			IIC ACTIVITIES					

Course Name	Course code	Credits Distribution				Course Name	Course code	Credits Distribution			
		I	T	P	Credits			I	T	P	Credits
Multivariate Calculus and Linear Algebra	24MATCS11	3	0.5	0.5	4	Programming Language Course-I	24PLC15X	2	0	1	3
Materials Chemistry for Energy and data processing	24CHIECS12	3	0	1	4	Communicative English	24ENG16	0	0	1	1
Computer Aided Engineering Drawing	24CED13	2	0	1	3	Indian Constitution	24CO17	1	0	0	1
Engineering Science Course-I	24ESCI4X	3	0	0	3	Scientific Foundations of Health	24SFH18	1	0	0	1

\*2<sup>nd</sup> and 4<sup>th</sup> Saturdays are holiday.

\*Refer the scheme of I sem for various ESC-I and PLC-I courses.

\*CAED lab will be held in Room no 420, fourth floor, Academic Block.

\*P&T-Placements & Training

**2<sup>nd</sup> Semester Timetable**


BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT  
(Autonomous Institute affiliated to VTU, Belagavi)  
Yelahanka - Bengaluru - 64

SEMESTER BRANCH	II : CSE	REVISED II SEMESTER B.E. TIME TABLE FOR THE ACADEMIC YEAR 2024 – 2025 w.e.f 17/03/2024 (Physics group)							
		SECTION CLASSROOM		CSE-II : LB-CR-201					
8.30 – 9.30	9.30 – 10.30	10.30 – 10.40	10.40 – 11.30	11.30 – 12.30	12.30 – 1.25	1.25 – 2.20	2.20 – 3.15	3.15-4.10	
MONDAY	MATLAB	T E A R E A K	PHY	POP	P&T	L U N C H B R E A K	KAN		
	POP		ETC-II	ENGL	P&T		P&T		
	POP		ESC-II	PHYL	P&T		P&T		
	MAT		PHY	MAT	ETC-II		ETC-II		
	IDT		MAT	POP	ESC-II		ESC-II		
	PHY		ETC-II		PROCTORING				
SATURDAY	IC ACTIVITIES		DEPARTMENT ACTIVITIES						

Course Name	Course code	Credits Distribution				Course Name	Course code	Credits Distribution			
		I	T	P	Credits			I	T	P	Credits
Ordinary Differential Equations and Numerical Methods	BMATCS21	3	0.5	0.5	4	Emerging Technology Course-II	BEITC25X	3	0	0	3
Quantum Computing and Photonics	BPHTC22	3	0.5	0.5	4	Communication English	BIENG126	0	0	1	1
Principles of Programming using C	BPOP23	3	0	1	3	Samskruthi Kannada / Batak Kannada	BHK27	1	0	0	1
Engineering Science Course-II	BSCE24X	3	0	0	3	Innovation and Design Thinking	BDOT128	0	0	1	1

LAB 1<sup>st</sup> & 2<sup>nd</sup> Semesters are held.

\*Refer the scheme of II Sem for various ESC-II and ETC-II courses.

\*P&T-Placements & Training.

Time table officer

**3<sup>rd</sup> Semester Timetable**

		BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT															
		DEPARTMENT OF ARTIFICIAL INTELLIGENCE, AND MACHINE LEARNING															
		Academic Year: 2024-25 (2024-25)															
3rd Sem C Sec		Class Time Table				BSN-CR-411(CSE-SH)											
With Effect From: 17/09/2024						Version:01											
		I 9.30-9.50	II 9.30-10.30	10.30-10.50	III 10.50-11.50	IV 11.50,-12.50	12.50-1.45	V 1.45-2.40									
MONDAY		3C Sem DS Lab A2 3C Sem OS Lab A1		Maths-CS		OS		DSA		Maths-CS (T)	-		VI 2.40-3.35		VII 3.35-4.30		
TUESDAY		3C Sem DS Lab A1 3C Sem OOPJAVA A2		3C Sem DDCO Lab A1 3C Sem OS Lab A2		LUNCH BREAK		Maths-CS		Proctoring	-		-		-		
WEDNESDAY		OOPJAVA	DDCO	OS		OOPJAVA		Maths-CS (T)		NSS,PE,Yoga	-		-		-		
THURSDAY		3C Sem DDCO Lab A2 3C Sem PMG A1		DSA		DDCO		SCR		-		-		-			
FRIDAY		DSA	OS	Maths-CS		DDCO		3C Sem OOPJAVA A1 3C Sem PMG A2		-		-		-			
SATURDAY		IC ACTIVITIES		PLACEMENT ACTIVITIES				-		-		-		-			
Note: No Classes on 2nd and 4th Saturday of every Month									-		-		-		-		
COURSE NAME	COURSE CODE	CREDITS	FACULTY	COURSE NAME	COURSE CODE	CREDITS	FACULTY										
Mathematics for Computer Science (Maths-CS)	BCS1SH	4	Dr.Arunkumar H	Social Connect and Responsibility (SCR)	BCS1CR07	1	Dr.Bharathi M A										
Digital Design & Computer Organization (DDCO)	BCS3D0	4	Dr. Shashankundar M	AFC - III Project Management with Git (PMG)	BCS3DSC	1	Mr.Shibali Tamboli										
Operating Systems (OS)	BCS303	4	Mr.Sankha Unchikatti	National Service Scheme (NSS)	BNSSC059	1	Mr.Shibali Tamboli										
Data Structures and Applications (DSA)	BCS304	3	Mr.Shibali Tamboli	(Physical Education (PE) (Sports and Athletics)	BPSEN055	1											
Data Structures Lab(DSL)	BCS1M05	1	Mr.Shibali Tamboli, Dr.Anushka Bharat & Mrs.Nagla S	Yoga(Y)	BVOK039	1											
Java - OOP with Java (OOF Java)	BCS306A	3	Mr.Rajendra G														
TIME TABLE OFFICER	HEAD(TTO)	10.15-11.15	HEAD(TTO)	10.15-11.15	HEAD(TTO)	10.15-11.15	HEAD(TTO)										
CHIEF TIME TABLE OFFICER	HEAD(TTO)	10.15-11.15	HEAD(TTO)	10.15-11.15	HEAD(TTO)	10.15-11.15	HEAD(TTO)										
PRINCIPAL	HEAD(TTO)	10.15-11.15	HEAD(TTO)	10.15-11.15	HEAD(TTO)	10.15-11.15	HEAD(TTO)										

4<sup>th</sup> Semester Timetable

Proctored Assessment Plan for 2026 Graduating Batch



**BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT**

Autonomous Institute under VTU

Doddaballapur Main Road, Avalahalli, Yelahanka, Bengaluru-560119

Training and Placement Section

Email Id: placement@bmsit.in

Phone: 080-68730426/450

Date: 27.03.2025

To,  
The Principal,  
BMSIT&M  
Bengaluru – 64.

**Subject:** Approval Request to Conduct Proctored Assessment for 2026 Batch. - Quantitative Aptitude, Logical Reasoning & Data Interpretation.

Respected Sir,

With reference to the above subject, we request your approval to conduct proctored assessment for the 2026 batch as per the schedule below:

- 11th April 2025: CV & ME
- 15th April 2025: CSE & EEE
- 16th April 2025: ISE & ETE
- 17th April 2025: ECE & AIML

The tests will be held in APJ Lab and Savitribai Phule Lab from 2:30 PM to 4:00 PM on the respective dates. This Schedule will not hamper much academic schedules.

Note: The objective of this assessment is to ensure the students will clear ITES company drives & the questions are drawn from old Capgemini/TCS/Cognizant companies' papers.

We kindly request your permission to proceed with the arrangements and ensure the availability of the labs for the mentioned schedule. Your approval will be greatly appreciated to facilitate a smooth and efficient assessment process.

Thank you for considering our request. We look forward to your positive response.

Thanking you,

(Prof. Ambika R Subhash)  
Training and Placement Officer

(Dr. Manjunath T N)  
Dean, Career Guidance

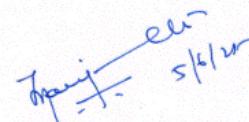
PRINCIPAL

Encl: Assessments Topics

**Proctored Assessment Plan for 2027 Graduating Batch**

BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT					
2027 BATCH 4TH SEM ASSESSMENT SCHEDULE DETAILS					
Sl. No.	Date	Day	Timings	Branch- Sections	No of Students
1	16.06.2025	MONDAY	10:40AM-12:30PM	CSE	269
2	17.06.2025	TUESDAY	10:40AM-12:30PM	AIIML	195
3	18.06.2025	WEDNESDAY	10:40AM-12:30PM	ISE	256

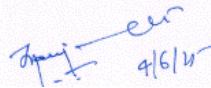
Seat Allotment			
Sl. No.	Date	Section	Venue
1	16.06.2025 MONDAY	CSE	APJ ABDUL KALAM LAB, 4TH FLOOR, LAB BLOCK
2	17.06.2025 TUESDAY	AIIML	APJ ABDUL KALAM LAB, 4TH FLOOR, LAB BLOCK
3	18.06.2025 WEDNESDAY	ISE	APJ ABDUL KALAM LAB, 4TH FLOOR, LAB BLOCK


  
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 5/1/25

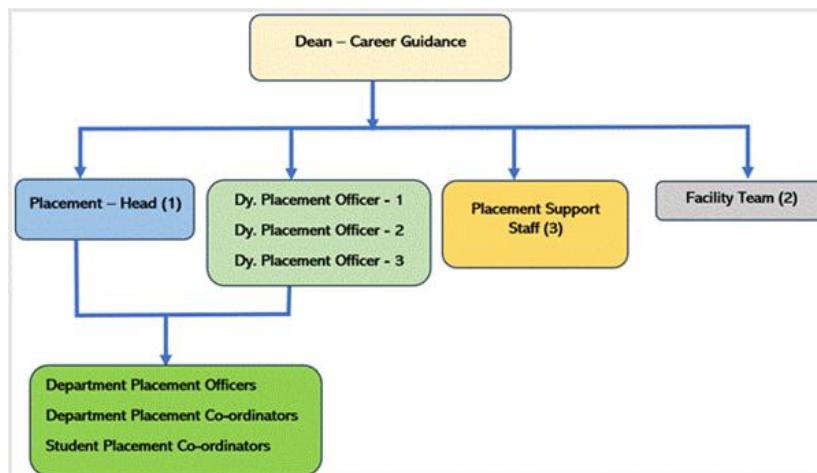
Proctored Assessment Plan for 2028 Graduating Batch

BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT					
2028 BATCH 2ND SEM ASSESSMENT SCHEDULE DETAILS					
Sl. No.	Date	Day	Timings	Branch- Sections	No of Students
1	16.06.2025	MONDAY	2:30PM-4:30PM	CSE-4, CSE-10, CSE-12, CSE-13, AIML-5, AIML-4	400
			12:30PM-2:00PM	CSE 2, CSE 6, CSE 8, CSE-15, ECE-3	350
2	17.06.2025	TUESDAY	2:30PM-4:30PM	CSE-1, CSE-7, CSE-11, CSE-14, AIML-3, AIML-6	400
3	18.06.2025	WEDNESDAY	2:30PM-4:30PM	AIML-1, CSBS, ECE-1, ECE-2, CSE-3, CSE-5, CSE-9	440
4	19.06.2025	THURSDAY	2:30PM-4:30PM	AIML-2, EEE, ME, CV	250

Seat Allotment			
Sl. No.	Date	Section	Venue
1	16.06.2025 MONDAY	CSE-12, AIML-4, AIML-5	APJ ABDUL KALAM LAB, 4TH FLOOR, LAB BLOCK
		CSE-4	CR - 401, CR-402, 4TH FLOOR, LAB BLOCK
		CSE-10	TR-408, TR - 409, 4TH FLOOR, LAB BLOCK
		CSE-13	SAVITHRI BAI PULE LAB, 4TH FLOOR, LAB BLOCK
2	17.06.2025 TUESDAY	CSE-2,CSE-6, CSE-8	APJ ABDUL KALAM LAB, 4TH FLOOR, LAB BLOCK
		ECE-3	CR - 401, CR-402, 4TH FLOOR, LAB BLOCK
		CSE-15	SAVITHRI BAI PULE LAB, 4TH FLOOR, LAB BLOCK
3	18.06.2025 WEDNESDAY	AIML-1, CSBS, ECE-1	APJ ABDUL KALAM LAB, 4TH FLOOR, LAB BLOCK
		ECE-2	CR - 401, CR-402, 4TH FLOOR, LAB BLOCK
		CSE-3	TR-408, TR - 409, 4TH FLOOR, LAB BLOCK
		CSE-5	SAVITHRI BAI PULE LAB, 4TH FLOOR, LAB BLOCK
4	19.06.2025 THURSDAY	CSF-9	CR - 304, CR-305, 3RD FLOOR, LAB BLOCK
		EEE, CV, ME	APJ ABDUL KALAM LAB, 4TH FLOOR, LAB BLOCK
		AIML-2	CR - 401, CR-402, 4TH FLOOR, LAB BLOCK


  
 4/6/24

1. **Human Resources at Placement Office:** There is a full-fledged placement department in the institution. It is headed by the Dean - Career Guidance (senior faculty member) and full time Placement Head along with Dy. Placement Officers, Department Placement Officers, Department Placement Co-ordinators and Student Placement Co-ordinators and supported by support staff. It is well equipped with modern communication facilities to interact with the industry and students for the prompt and quick response. The department is Wi-Fi enabled along with necessary Physical Infrastructure.



**2. Infrastructure & Facilities Gallery**

Placement office has sufficient Infrastructure to support campus placement drives which includes Facility for Pre-Placement Talks, Company Assessments, Group Discussion Rooms, Interview Rooms.







A. P. J. Abdul Kalam - Assessment Centre

## 2. Calendar of Scheduled Trainings

A Comprehensive calendar is prepared keeping Institute Level Academic Calendar as basis which outlines planned Placement / training activities for Students.  
Below snapshots shows different Calendar of Scheduled Placement/ Training Activities:

**2025 Graduated Batch – During 6<sup>th</sup> Semester**

	<b>BMS Institute of Technology and Management</b> Autonomous Institute under VTU Post Box No. 6443, Avalahalli, Doddaballapur Main Road, Yelahanka, Bengaluru-560 064. Training and Placement Section		
Email Id: placement@bmsit.in			Phone: 080-68730426/450
<b>2025 Batch: Placement Calendar of Events during 6th Semester</b>			
SL. No.	Date	Particulars	Description/Details/Results
1	02.05.2024 To 04.05.2024	Student Placement Co-ordinator Selection Process	<ul style="list-style-type: none"> <li>▪ Registration</li> <li>▪ Written Test-Aptitude</li> <li>▪ Group Discussion</li> <li>▪ Interview</li> </ul>
2	16.05.2024 to 18.05.2024	21hrs of Placement Training Sessions for all UG branches	<p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>▪ Recap of all control structures + basic data types.</li> <li>▪ Stack/queues, Heap.</li> <li>▪ Linked-list, Binary Trees.</li> <li>▪ Binary Search Tree, Greedy..</li> <li>▪ Object-oriented in campus only.</li> <li>▪ Readiness: Laptop, Internet access, etc.</li> </ul>
3	24.05.2024	"Diagnostic Test"	
4	03.06.2024 to 07.06.2024	<b>4 LPA TEST</b> (HackerEarth Platform)	<ul style="list-style-type: none"> <li>▪ Students who score above 50% score in 4 LPA Test are eligible to take 7 LPA test &amp; up-to 7 LPA placement opportunities.</li> <li>▪ Students who score below 50% score in 4 LPA Test must clear the 4 LPA test compulsorily in a given timeframe, unless you clear, you will be eligible up-to 4 LPA only.</li> </ul>
5	17.06.2024 to 21.06.2024	<b>7 LPA TEST + (4 LPA TEST)</b> (HackerEarth Platform)	<ul style="list-style-type: none"> <li>▪ Students who score above 50% score in 7 LPA test are eligible to take 10 LPA test &amp; up-to 10 LPA placement opportunities.</li> <li>▪ Students who score below 50% score in 7 LPA test have to take another 7 LPA test during 10 LPA test to get eligible to attend above 7 LPA placement opportunities.</li> </ul>
6	01.07.2024 to 06.07.2024	<b>10 LPA TEST + (7 LPA &amp; 4 LPA TEST)</b> (HackerEarth Platform)	<ul style="list-style-type: none"> <li>▪ Students who score above 50% score in 10 LPA test are eligible for ≥ 10 LPA placement opportunities.</li> <li>▪ Students who score below 50% score in 10 LPA test have to take another 10 LPA test to get highest CTC placement opportunities.</li> </ul>

7	11.07.2024	Coding Challenge-1	<b>Grade-1</b> 4 LPA	<b>Grade-2</b> 7 LPA	<b>Grade-3</b> 10 LPA		
8	18.07.2024	Coding Challenge-2	<b>Grade-1</b> 4 LPA	<b>Grade-2</b> 7 LPA	<b>Grade-3</b> 10 LPA		
9	31.07.2024	Coding Challenge-3	<b>Grade-1</b> 4 LPA	<b>Grade-2</b> 7 LPA	<b>Grade-3</b> 10 LPA		
10	<i>July-Aug. 2024 onwards.....</i>	<b>Placement Process</b>					
11	Dec. 2024	11hrs of Placement Training	<b>For unplaced students</b>				
12	03.08.2024	Announcement of winner Assessment 1,2,3	<b>Cash Prize for Top 18 Performers</b>				

*Raghunandan* 4/4/24  
(Dr. Raghunandan G H)  
Dy. Placement Officer

*Ambika* 4/4/24  
(Prof. Ambika R Subbaiah)  
Training and Placement Officer

*T.N.* 4/4/24  
(Prf. Mapjunath T N)  
Dean, Career Guidance

*Principal* 8/4/24  
PRINCIPAL

### 2025 Graduated Batch – During 5<sup>th</sup> Semester

<p><b>BMS Institute of Technology and Management</b>    <b>Autonomous Institute under VTU</b>  Post Box No. 6443, Avathalli, Doddaballapur Main Road, Yelahanka, Bengaluru-560 064.  <b>Training and Placement Section</b>  Email Id: placement@bmsit.in Phone: 080-68730426/450</p>			
<p><b>2025 Batch: Placement Calendar of Events-Odd Sem</b></p>			
Sl. No.	Date	Particulars	Details
1.	05.01.2024 & 06.01.2024	HackerEarth Assessment-1	<p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>• Logical Reasoning</li> <li>• Quantitative Aptitude</li> <li>• Coding (Matrix &amp; Array)</li> </ul>
2.	16.02.2024 & 17.02.2024	HackerEarth Assessment-2	<p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>• Quantitative Aptitude</li> <li>• Verbal Ability</li> <li>• Coding (DSA &amp; Strings)</li> </ul>
3.	May 2024	Remaining 30 hours of Placement Training	Training to all the students

  
(Dr. Chandrashekappa A.)  
Dy. Placement Officer-Competency Building

  
(Prof. Ambika R Subhash)  
Training and Placement Officer

  
(Dr. Manjunath. T. N.)  
Dean Career Guidance

  
PRINCIPAL

2025 Graduated Batch – During 4<sup>th</sup> Semester

<p><b>BMS Institute of Technology and Management</b>    <b>Autonomous Institute under VTU</b>  Post Box No. 6443, Avalahalli, Doddaballapur Main Road, Yelahanka, Bengaluru-560 064.  <b>Training and Placement Section</b>  Email Id: placement@bmsit.in Phone: 080-68730426/450</p>			
<p><b>2025 Batch: Placement Calendar of Events</b>  <b>Academic Year 2023-24 (4<sup>th</sup> Semester)</b></p>			
Sl. No.	Date	Particulars	Details
1.	05.06.2023 To 08.06.2023	1 <sup>st</sup> Phase Training	Placements Aspirants 1 <sup>st</sup> Phase Training all students of 2025 Batch
2.	28.07.2023	HackerEarth Assessment-1	<p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>• Logical Reasoning</li> <li>• Quantitative Aptitude</li> <li>• Coding (Array)</li> </ul>
3.	18.08.2023	HackerEarth Assessment-2	<p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>• Quantitative Aptitude</li> <li>• Verbal Ability</li> <li>• Coding (Matrix &amp; Strings)</li> </ul>
4.	25.08.2023	Infosys Springboard Certification Course Submission	Course Java Foundation Certification

  
(Prof. Ambika R Subhash.)  
Training and Placement Officer

  
(Dr. Manjunath T.N.)  
28/6/23  
Dean, Career Guidance

  
PRINCIPAL  
28/6/23

**2024 Graduated Batch – During 6<sup>th</sup> Semester**

	<b>BMS Institute of Technology and Management</b>		
<b>Autonomous Institute under VTU</b>			
Post Box No. 6443, Avalahalli, Doddaballapur Main Road, Yelahanka, Bengaluru-64.			
<b>Dept. of Training and Placement</b>			
Email Id: placement@bmsit.in		Phone: 080-68730426/450	
<b>2024 Batch : Calendar of Events</b>			
Academic Year 2021-22 (Even Sem)			
<b>SL No.</b>	<b>Date</b>	<b>Particulars</b>	<b>Details</b>
1.	30.7.2022	Demo by Training Vendors and finalization of Training Vendors	Demo to all students of 2024 batch
2.	30.7.2022	Assessment-1	Quantitative Aptitude
3.	6.8.2022	Assessment-2	Verbal Ability
4.	13.8.2022	Assessment-3	Reasoning Ability
5.	20.8.2022	Assessment-4	Coding Assessment
6.	21.8.2022	Infosys Springboard Certification Course Submission	Courses Learn and Master C Programming for Absolute Beginners

*Raghunandan G H* *Dr. Raghu*  
(Dr. Raghuandan G H) 27/7/22  
Dy. Placement Officer-Competency Building

*T N* *Manjunath T N*  
(Prof. Manjunath T N) 27/7/22  
Training and Placement Officer

  
**PRINCIPAL**

2024 Graduated Batch – During 5<sup>th</sup> Semester



## BMS Institute of Technology and Management

Autonomous Institute under VTU

Post Box No. 6443, Avalahalli, Doddaballapur Main Road, Yelahanka, Bengaluru-560 064.

### Training and Placement Section

Email Id: placement@bmsit.in

Phone: 080-68730426/450

#### 2024 Batch: Placement Assessment Syllabus

Sl. No.	Date	Syllabus
1.	31.10.2022 to 05.11.2022  HackerEarth Assessment-1	<p><b>Logical Reasoning:</b></p> <ul style="list-style-type: none"> <li>Alphanumeric series.</li> <li>Reasoning Analogies.</li> <li>Artificial Language.</li> <li>Blood Relations.</li> <li>Calendars.</li> <li>Cause and Effect.</li> <li>Clicks.</li> </ul> <p><b>Quantitative Aptitude</b></p> <ul style="list-style-type: none"> <li>Pipes and Cisterns</li> <li>Probability</li> <li>Profit and Loss</li> <li>Coding (Array)</li> </ul>
2.	07.11.2022 to 12.11.2022  HackerEarth Assessment-2	<p><b>Quantitative Aptitude</b></p> <ul style="list-style-type: none"> <li>Ratio, Proportions and Partnerships</li> <li>Sets</li> <li>Simple and Compound Interest</li> <li>Simplification and Approximation</li> <li>Speed, Distance and Time</li> <li>Time and Work</li> </ul> <p><b>Verbal Ability</b></p> <ul style="list-style-type: none"> <li>Reading Comprehension.</li> <li>Cloze Test.</li> <li>Sentence Rearrangement.</li> <li>Antonyms and Synonyms.</li> <li>Error Detection.</li> <li>Idioms and Phrases.</li> </ul> <p><b>Coding (Matrix &amp; Strings)</b></p>
3.	05.12.2022 to 10.12.2022  HackerEarth Assessment-3	<p><b>Logical Reasoning</b></p> <ul style="list-style-type: none"> <li>Coding-Decoding.</li> <li>Critical path</li> <li>Cubes and cuboids</li> <li>Data Sufficiency</li> <li>Decision Making</li> <li>Deductive Reasoning/Statement Analysis</li> <li>Dices</li> <li>Directions</li> </ul> <p><b>Quantitative Aptitude</b></p> <ul style="list-style-type: none"> <li>Progressions</li> <li>Races</li> <li>Simple and Compound Interest</li> <li>Simplification and Approximation</li> </ul> <p><b>Coding (DSA &amp; Strings)</b></p> <p style="text-align: right;"><i>[Handwritten signature]</i> 28/10/22</p>

<b>BMS Institute of Technology and Management</b>			
<b>Autonomous Institute under VTU</b>			
Post Box No. 6443, Avalahalli, Doddaballapur Main Road, Yelahanka, Bengaluru-560 064.			
<b>Training and Placement Section</b>			
Email Id: placement@bmsit.in		Phone: 080-68730426/450	
<b>2024 Batch: Placement Calendar of Events during 6th Semester</b>			
SL No.	Date	Particulars	Description/Details/Results
1	15.03.2023 to 18.03.2023	21hrs of Placement Training Sessions for all UG branches	<p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>Recap of all control structures + basic data types.</li> <li>Stack/queues, Heap.</li> <li>LinkedList, Binary Trees.</li> <li>Binary Search Tree, Greedy.</li> </ul>
2	24.03.2023	"Diagnostic Test"	<ul style="list-style-type: none"> <li>On proctored way in campus only.</li> <li>Readiness: Laptop, Internet access, etc.</li> </ul>
3	31.03.2023	<b>4 LPA TEST</b> (HackerEarth Platform)	<ul style="list-style-type: none"> <li>Students who score above 50% score in 4 LPA Test are eligible to take 7 LPA test &amp; up-to 7 LPA placement opportunities.</li> <li>Students who score below 50% score in 4 LPA Test must clear the 4 LPA test compulsorily in a given timeframe, unless you clear, you will be eligible up-to 4 LPA only.</li> </ul>
4	28.04.2023	<b>7 LPA TEST +</b> (4 LPA TEST) (HackerEarth Platform)	<ul style="list-style-type: none"> <li>Students who score above 50% score in 7 LPA test are eligible to take 10 LPA test &amp; up-to 10 LPA placement opportunities.</li> <li>Students who score below 50% score in 7 LPA test have to take another 7 LPA test during 10 LPA test to get eligible to attend above 7 LPA placement opportunities.</li> </ul>
5	12.05.2023	<b>10 LPA TEST +</b> (7 LPA & 4 LPA TEST) (HackerEarth Platform)	<ul style="list-style-type: none"> <li>Students who score above 50% score in 10 LPA test are eligible for <math>\geq</math> 10 LPA placement opportunities.</li> <li>Students who score below 50% score in 10 LPA test have to take another 10 LPA test to get highest CTC placement opportunities.</li> </ul>
6	26.05.2023	Coding Challenge-1	<b>Grade-1</b>
7	02.06.2023	Coding Challenge-2	<b>Grade-2</b>
8	09.06.2023	Coding Challenge-3	<b>Grade-3</b>
9	July-Aug. 2023 onwards...	Placements Season will start	Placement Process
10	Dec. 2023	11hrs of Placement Training	For unplaced students

*Chandrashekappa A.*  
(Dr. Chandrashekappa A.)

Dy. Placement Officer-Competency Building

*Manjunath T.N.*  
(Prof. Manjunath T.N.)

Training and Placement Officer

*Principal*  
PRINCIPAL

**BMS Institute of Technology and Management**

Post Box No. 6443, Avalahalli, Doddaballapur Main Road,  
Yelahanka, Bengaluru-560 064.

**Dept. of Training and Placement**

Email Id: placement@bmsit.in

Phone: 080-68730426/9900130748

**2023 Batch: Calendar of Events**

Sl. No.	Date	Particulars	Details
1.	18.3.2022	Demo by Training vendors and finalization of Training vendors	Demo to all the students of 2023 Batch
2.	4.4.2022 to 9.4.2022	Coding Training of 36 hours	Training to all the students
3.	9.4.2022	Coding Assessment-1	<b>Topic:</b> Array, Matrix
4.	12.4.2022	Announcement of winners of Assessment-1	Cash prize for top 5 performers
5.	18.4.2022	Diagnostic Test-1	<b>Topic:</b> Aptitude, Coding, Domain Specific
6.	23.4.2022	Coding Assessment-2	<b>Topic:</b> String, Searching & Sorting
7.	26.4.2022	Announcement of winners of Assessment-2	Cash prize for top 5 performers
8.	29.4.2022	Counselling of weak performers	
9.	13.5.2022	Coding Assessment-3	<b>Topic:</b> LinkedList, Binary Trees
10.	17.5.2022	Announcement of winners of Assessment-3	Cash prize for top 5 performers
11.	20.5.2022	Diagnostic Test-2	<b>Topic:</b> Aptitude, Coding, Domain Specific
12.	28.5.2022	Coding Assessment-4	<b>Topic:</b> Binary Search Trees, Greedy
13.	31.5.2022	Announcement of winners of Assessment-4	Cash prize for top 5 performers
14.	10.6.2022	Coding Assessment-5	<b>Topic:</b> Stacks & Queues, Dynamic Programming, Bit Manipulation
15.	14.6.2022	Announcement of winners of Assessment-5	Cash prize for top 5 performers
16.	20.6.2022	Company Specific Test-1	
17.	24.6.2022	Company Specific Test-2	
18.	29.6.2022	Company Specific Test-3	
19.	1.7.2022	Company Specific Test-4	
20.	6.7.2022	Diagnostic Test-3	<b>Topic:</b> Aptitude, Coding, Domain Specific
21.	13.7.2022	Company Specific Test-5	
22.	22.7.2022	Company Specific Test-6	
23.	25 to 28 July 2022	Remaining 36 hours of Training	Training to all the students

**(Dr. Ragunandan G H)**

Dy. Placement Officer-Competency Building

**(Prof. Mahjunath T N)**

Training and Placement Officer

**3. Career Guidance and Effectiveness of Career Guidance**

Career guidance helps students to make decisions about their career and higher education by providing tailored support and information. It's a process that empowers individual student to understand their strengths, explore career options, and develop a plan for their future. It involves self-assessment, exploration of options, decision-making, and future planning, often facilitated by Career Guidance Office.

**Process Followed:**

1. Taking Student Aspirations in the first year, Interested in Placements, Higher Education and Entrepreneurship. (Option is given to change at any point in time)
2. Plan the Training Programs for the students who are interested in Placements and Higher Education (This will help to clear GRE and other competitive exams)
3. Assessments are conducted periodically on HackerEarth Platform to know the competencies
4. Bucketing the students based on the Assessments scores
5. Planning **Elite Batch** training for fast learners
6. Planning Training for **Below Cut-off scored students** (Slow Learners)
7. Nudging the Top Performers with the cash incentives
8. Video Resume Preparation Support / Project Representation support
9. LinkedIn Profile Creations Support
10. Senior to Junior Mentorships

11. Peer Learning Sessions
12. Alumni Mentorships
13. Mock Interviews and Company Specific Assessments
14. Need Based Training

- **Student Aspiration Sheet:**

**UG-BMSIT\_2025\_BATCH\_DATABASE REGISTRATION-FORM-FINAL**

Section 1 of 7

Dear Students  
Greetings from Training and Placement Cell

Placement Cell requires your key details in order to communicate with visiting organizations for campus recruitment. In this regard you are required to carefully provide the details through this form.

This form is to have the complete database of each student to enable us to consolidate the same and share the required information with the recruiters.

You are required to provide the accurate and correct details, especially your personal mail IDs and Mobile Numbers, as per the following form and instructions there on.

NOTE: ENTER KEY DETAILS OF THE FORM like NAMES, ADDRESS, HOMETOWN ETC. IN UPPERCASE (CAPITAL LETTERS)

**Responses**

86 responses

Choose your Aspiration as per your selection in the signed Undertaking Form you have attached Above

86 responses

Copy chart

Aspiration	Percentage
Placement	96%
Higher Education	2%
Entrepreneur	1%
Others	1%

- **Assessment Platform**

The screenshot shows the BMS Institute of Technology's assessment management system interface. At the top, there are tabs for Assessments, Interviews, Upload, Profiles, Library, Reports, and Hackathons. A search bar allows filtering by test names or tags. Below the search bar, a section displays the status of a recent test: '2026 batch BCE DSAAT\_16.06.2025 test'. It shows 89 invitees, 1 invited, and 0 taken the test. A link to 'View candidate report' is provided. On the left sidebar, there are filters for Test status (Ongoing, Completed, Drafts, Archived), Created by (All, Any time), and Test type (All). The main content area shows a detailed view of a candidate's performance. The candidate's name is SAMARTH SRINIVAS 18Y22E045, and they have a total score of 300/300. A message indicates that a qualified score is not specified. Below this, a 'Global Benchmarking' section compares the candidate's performance against others. The 'Skill-wise performance' chart shows the candidate's proficiency levels across various skills: Basic programming, Maths, Java, Python, Number Theory, and Mathematics. The chart has a Y-axis labeled 'Score (%)' and an X-axis labeled 'Skill'.

- Nudging the Top Performers using Cash Incentives:



All the students who perform well in the Assessments we nudge them with cash incentives

- Elite Batch Training (Fast Learners):

An Exclusive Elite Batch Training will be provided to crack highest packages by Ex.Google Employee about 18 Hours, the strategy is to make all the students to write optimal code to solve the given problem.

- Training for Below Cut off scored Students (Slow Learners):

A Need Based / Comprehensive Training is planned for the students who could not score the given cut off marks, this is aimed to strengthen the fundamental concepts and preparing them to write optimal code to solve the given problem

- Soft Skills Training

Soft skills training focuses on developing non-technical, interpersonal abilities that enhance workplace performance and collaboration. Key areas include communication, teamwork, time management, emotional intelligence, leadership, adaptability capabilities.

- **Peer Learning**

Peer learning an approach where students learn from each other, It involves students collaborating in pairs or small groups to discuss coding problem concepts and share knowledge.

- **Senior to Junior Mentorship**

A senior-to-junior mentorship program is a structured initiative where a senior student guides the junior students on the placement process and his success story and gives the tips to crack the campus drive.

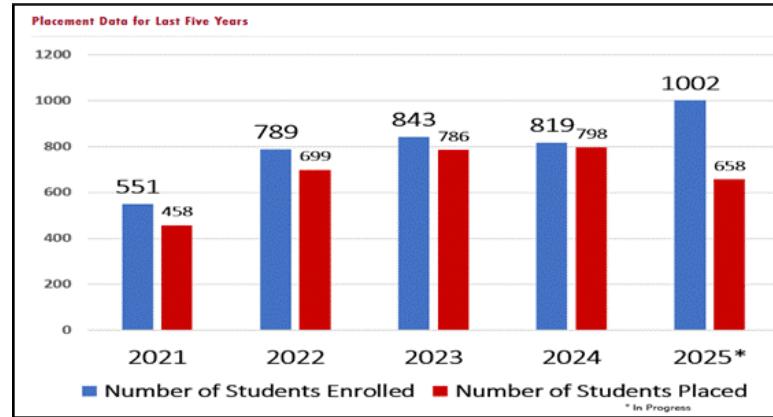
- **Alumni Mentorship**

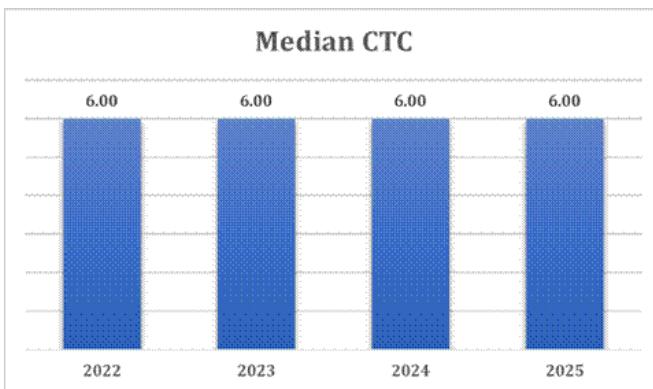
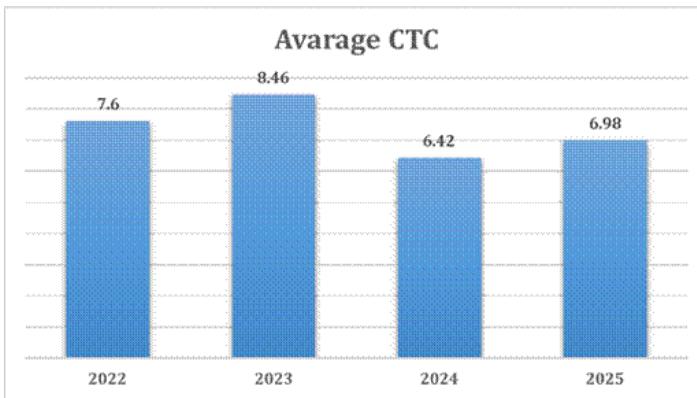
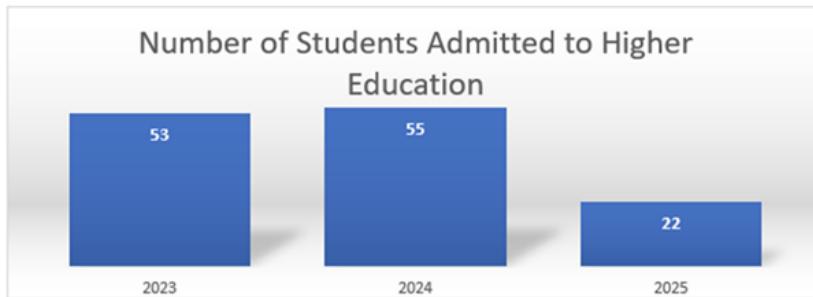
An alumni mentorship program connects current students with alumni to provide guidance and support on how to solve problems and questions asked in his interviews and his success plan.

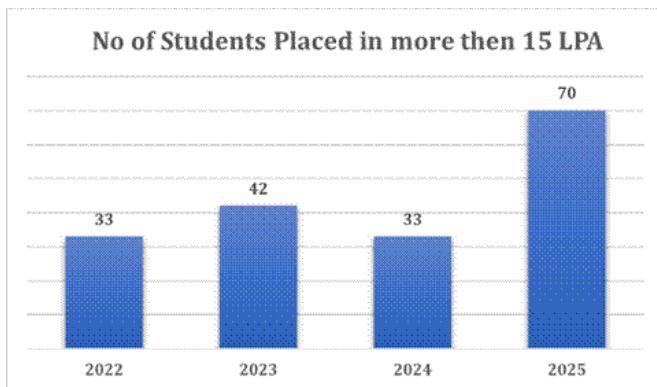
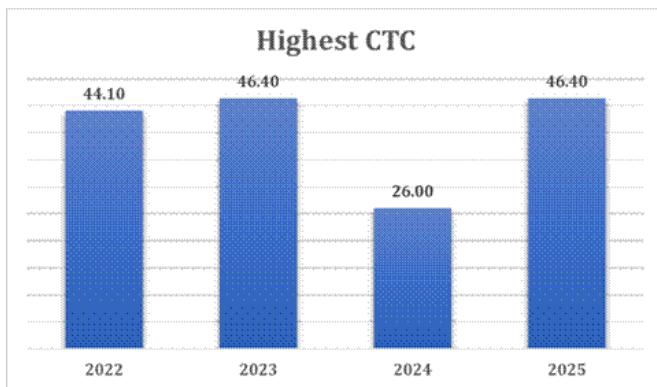
### **Effectiveness of Career Guidance**

The Percentage of eligible UG/PG students' placements for the past four passed out batches is provided hereunder:

Year	2021-22	2022-23	2023-24	2024-25
Overall % of eligible students placed (UG)	91.17	93.88	85.38	81.46
Overall % of eligible students placed (PG)	74.39	84.48	61.16	56.18







#### 4. Industry Interaction exclusively for pre-placement/Internship/placement/ counselling

The following list of Interactions had happened to establish the connects with the companies exclusively for pre-placement/Internships:

Sl No	Date	Organization	Event	Remarks
1	24.06.2025	Automation Anywhere	Automation Academic Alliance	Partnered with AA for RPA
2	17.06.2025	PWC AC	Campus Conclave	PWC is Big 4
3	10.06.2025	Amagi	Academic Partnership Discussion	Amagi is GCC Plan for Academic Partnership
4	06.06.2025	Burns & McDonnell	Corporate Connect 2025	Electrical Recruiter
5	03.06.2025	BFSI Conclave	Experiential Learning Programme	Opportunities in BFSI
6	27.04.2025	8 Companies	SILLICON - SYNERGY	Opportunities for ECE and ETE, EEE Students
6	11-12-2024	EPICORE	Campus Connect	Plan for Next Hiring
7	26.07.2024	112 Organization	Yugma-2024	Industry Connect Program Meet and Greet
8	16.12.2024	Unisys	Unisys Innovation Program	Collaboration for Academics and Opportunities
9	06.08.2024	HirePro	Corporate Connect	Hiring Trends and Plan for Vendor recruitments
10	17.04.2024	Kyndryl	Collaborative Session	Explore Possible Opportunities for Next Seasons
11	02.11.2023	Salesforce	Education Summit	Introduction of Salesforce
12	02.11.2023	SAP TechEd	TechEd Event	SAP Experience Day - They hire from us
13	10.10.2023	Cognizant	Digital Nature Technoverse	Cyber Security Skills - Niche Talent
14	09.08.2023	LТИMindtree	AR-VR Facility.	AR-VR Facility Introduction
15	14.07.2023	98 Companies	Yugma-2023	Industry Connect Program Meet and Greet
16	21.07.2023	Accenture	Industry Academy Interaction	Plan for Next Hiring
17	12.04.2023	SapLabs	Diversity Program	Diversity in the hiring
18	12.04.2023	Polaris	TPO Greet and Meet Program	Meet and Greet and Feedback on our Grads
19	28.02.2023	TCS	Industry Academy Interaction	Meet and Greet
20	11.01.2023	Turing Minds	TPO Greet and Meet Program	Meet and Greet

### Interactions Gallery

**M/s. SapLabs Diversity Program:** SAP Diversity Program on 12<sup>th</sup> April 2023



**M/s. Polaris TPO Greet and Meet Program:** Polaris TPO Greet and Meet Program on 12<sup>th</sup> April 2023.



**Industry Connect Programme-Yugma-2023:** An Industry Connect Programme – Yugma 2023 Conducted on 14.07.2023



**Accenture Academy Interaction:** M./s Accenture company Industry Academy Interaction TPO meeting on 21<sup>st</sup> July 2023 to discuss the placement drive 2023 strategy plan and market trends



**M./s LTIMindtree:** The Principal and Professors are visited on 09th Aug 2023 LTImindtree AR-VR Facility.



**M./s Cognizant:** Cognizant Digital Nature Technoverse 2023 on 10<sup>th</sup> October 2023



**M./s Salesforce Education Summit:** Salesforce Education summit on 02.11.2023.



**M./s SAP TechEd:** SAP TechEd Event on 02.11.2023.



**M./s Kyndryl Collaborative:** Kyndryl Collaborative Company Drive Process on 17.04.2024.



M./s HirePro: 2025 Batch HirePro Campus Drive on 06.08.2024.



M./s Unisys Innovation Program: Unisys Innovation Program on 16.12.2024.



M./s Burns & McDonells: Burns & McDonells Corporate Connect on 06.06.2025.



##### 5. Support for Higher Study

BMSIT & M established Higher Education Facilitation Centre (HEFC) in October 2018 to provide trustworthy, reliable, and authentic information, resources, and advice to prospective students for getting admission to Higher Studies abroad.

###### Resources at HEFC

###### 1. Books and CDs:

- Test Prep (GRE, GMAT, TOEFL, IELTS)
- How to craft effective Sop's, CVs, Resumes
- Directory of Engineering Programs in the US

###### 2. Online resources:

- Subscription to US NEWS
- Scholarship updates are sent periodically to registered students.

###### 3. Handouts

- Guidelines on Graduate Education, LoRs, Sop's
- Brochures of universities/programs in different countries

#### 4. Profiles

Profiles of successful students, including GRE/TOEFL/GPA scores and universities where they secured admission/financial assistance

#### 5. Events

- Seminars, workshops featuring practitioners and experts in the field
- About 15 such workshops and sessions were conducted with Education USA, DAAD- Germany, IDP, SI-UK, University of Colorado, Arizona State University, University of Southern California and many more.
- Students from BMSCE were also part of these sessions.

#### 6. Advice/Guidance

Individual counselling, review of Sop's, help with choosing universities, financial planning

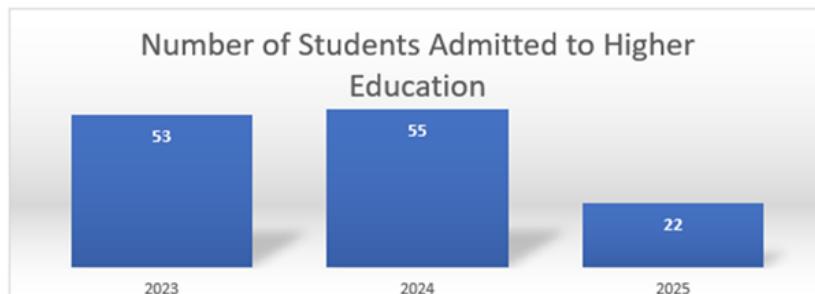
#### 7. Visas - Help students navigate the student visa process.

Link to register to our database: [bit.ly/HEFCApplication](https://bit.ly/HEFCApplication)

#### Outcome / Impact:

##### **HEFC facilitated the admission process for students and alumni.**

Students secured admissions to universities such as Carnegie Mellon University, University of California- San Diego, Worcester Polytechnic Institute, University of Colorado, Arizona State University, Purdue University, North-eastern University, University of California- Irvine, Johns Hopkins University, University of Pennsylvania, Suny Buffalo, Brunel University, Loughborough university, Anglia Ruskin University, Offenburg University, Macquarie university and many more.



#### 9.5 Start-up and Entrepreneurship Activities (5)

Total Marks 5.00



**"Empowering Students and faculty to Innovate, Dare, and Succeed in Entrepreneurship"**

BMSIT&M established BICEP - BMS Innovation Centre and Entrepreneurship Park - Incubation centre to encourage students and faculties to catalyse development of innovation-driven enterprises. The Centre has been recognized and approved as the Host Institute to set up a Business Incubator (BI) by the Ministry of MSME, Govt. of India. It is recognised as Institute Innovation Council (IIC) by the ministry of education, Govt. of India since 2018 and has been rated annually up to 4.5 out of 5 stars. The institute has devised and works as per the NISP (National Innovation Startup Policy) 2019 as per the mandate from AICTE for HEIs. NIRF positioned BMSITM in the band of 151-300 in the innovation category in the year 2023. BICEP spans a dedicated area of **385 sq. meters**, providing ample work space for incubation, and entrepreneurial activities. Additionally, the **Aarohan Hardware Innovation Lab**, supporting student prototypes and hardware innovations, covers **70 sq. meters**, equipped for hands-on experimentation and prototyping. Further Skill lab and AICTE Idea lab supports innovation and prototype development.

BICEP promotes innovation at the institute and conducts activities to engage its students to get first-hand experience in innovation and entrepreneurship. It provides a comprehensive and integrated range of support including space, mentoring, training programs, networking and an array of other benefits. BICEP Aarohan – hardware innovation laboratory provides major tools and components for hardware innovative projects. Aarohan houses CoE of UAV and E-Yantra robotics (IIT Mumbai). Financial support is extended to students and faculty members through BICEP for innovative project execution, participation in technical and entrepreneurial competitions at state and national level.

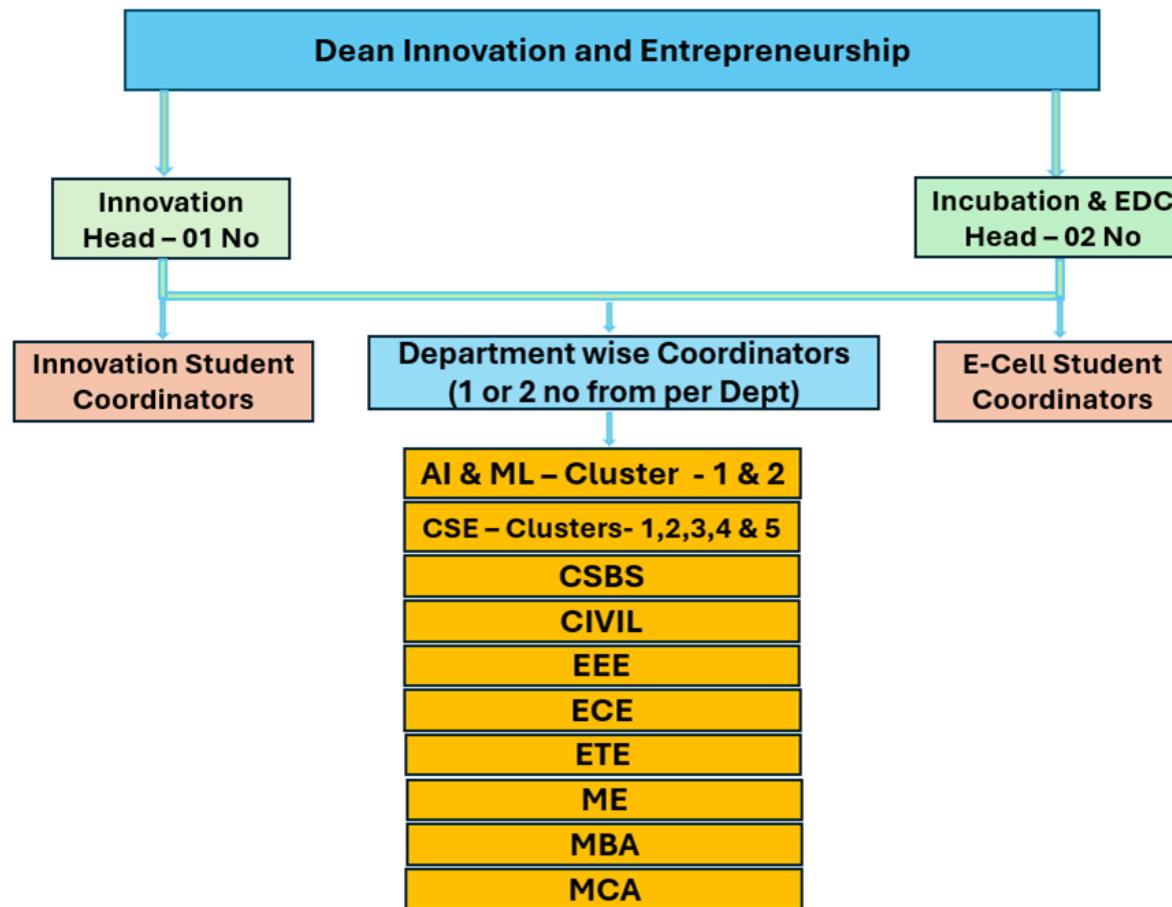
The Centre offers training in ideation, business planning, entrepreneurship, marketing, business communication, intellectual property, idea pitching etc. BICEP is supported by a pool of 20+ experienced mentors from technical, business and legal background. The centre has a dedicated Principal CA advisor to deal with all queries related to company formation and mandatory compliances. It is further supported by the AICTE IDEA lab established in the year 2025.

BICEP is housed with faculties and students' start-ups in the domain of technology in waste management, EdTech, Drones and IT Services. The housed start-up comprises Karnataka Startup Elevate winner, Smart India Hackathon Winner, IIT Madras funded and Startup India DPIIT Recognition.

**Infrastructure Details:**

- **Work Place:** Ready to use office space with furniture, connectivity, networking, office support and common facilities like meeting room, fax, copier etc. Fourteen workspace cubicles with 2-6 seating capacity, four rooms, two meeting halls, one conference room with AV support is available.
- **Library:** Access to the institution library
- **Technical Support:** Faculties of BMSIT&M provide necessary technical support
- **Laboratory, Workshop, & Testing Facilities:** The incubatees will have access to R&D laboratories, workshops and testing/characterization facilities available on campus

**BICEP TEAM**

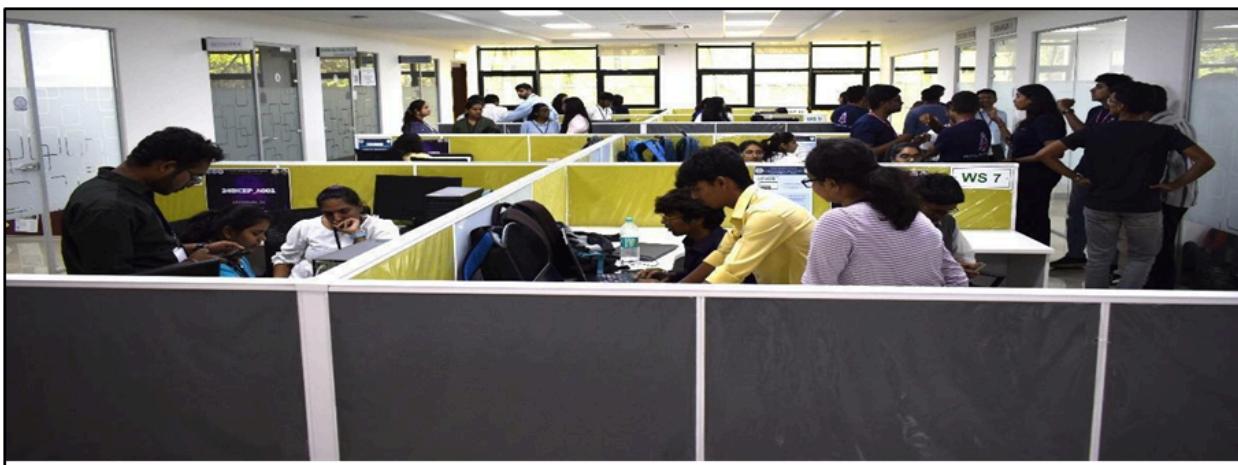


Further, to support our incubated startups through external funding and grants, BMS has established a section 8 company BIG Foundation fosters innovation through rigorous research and collaborative efforts, leveraging domain expertise to develop impactful products and technologies, which has all 7 institutions under BMS trust as working centres.

**BICEP Entrance**



BICEP: Workspace



BICEP - Conference hall



BICEP - Aarohan laboratory workspace

**Budget utilized last 3 Years**

Year	Budget Allocated	Budget Utilized
2022-2023	47,00,000/-	10,60729
2023-2024	30,20,000/-	31,03,215/-
2024-2025	43,75,000/-	32,35,596/-
2025-2026	63,10,000- (33,10,000/- BICEP + 30,00,000/- AICTE IDEA Lab)	67,214 till date

**Innovation/incubation Activities:**

**2025**

S.N	Title	Number of participant s	Prize (if any) in rupees (details attached as annexure)	Financial Assistance	Organized by	Date
1	Advert 2.0	17 Teams	<p><b>1st Place:</b> Team 'WeMarketStuff' won first place and was awarded a cash prize of Rs.3000.</p> <p><b>2nd Place:</b> Team 'Groot' was awarded a cash price of Rs.2000.</p> <p><b>3rd Place:</b> Team 'Jazba-e-Junoon' was awarded a cash prize of Rs.1000.</p>	6000/-	BICEP, BMSIT&M	24.05.2025
2	Pitch Off Competition	20 Teams	Prize Money Rs. 3000/- for 3 teams	3000/-	BICEP, BMSIT&M	27.05.2025
3	Match Quest – Aeroclub		<p>1st Place – "Final Destination" Rs. 3,000/-</p> <p>2nd Place – "Skybot" Rs.2,000/-</p> <p>3rd Place – "Aviatrix" Rs. 1,000/-</p>	6000/-	BICEP, BMSIT&M	19.05.2025

4	Dronacharya 2.0 – Drone Building Hackathon!	1	<b>Team Members:</b> ETE students: Tharun Susri B, Sahil Sourav and Shankar Reddy  ECE students: Tanish R and Sharath S C  1st place and a cash award of Rs. 8,000	6500/-	Vidya Vikas Institute of Engineering and Technology , Mysore	02.04.2025
5	InnovateX 3.0 – Presidency University	1	<b>Team:</b> Sahil Sourav, Tharun Susri B S, Shankar Reddy, Tanish R, and Sharath S C	8000/-	Presidency College	15.04.2025 to 17.04.2025
6	9th National Techno-Exhibition - Ambedkar Institute of Technology	1	ECE students Shishir, Kartik Patil, and Subhash. First Place cash award Rs. 25,000	-	Ambedkar Institute of Technology , Bengaluru	13.04.2025
7	ANVESHANA 2025 – National Level Prototype Competition	10	Team Motor Heads: Secured 1st Place Rs. 50,000/-		BMSIT&M	28.03.2025
8	Department Level Hackathon	-	19,000/- Per Department totaling to Rs. 1,50,000/-	1,50,000/-	BMSIT&M	27.03.2025

9	Anveshana Samsung National Science and Engineering Fair 2025	1	<b>Team Spatika</b> Mr. Tarun Patil – 1BY23EC113 Mr. Sri Srujan Hari T – 1BY23EC106 Mr. Nitish K S – 1BY23EC052 Mr. Harshitha K V – 1BY23EC049 3rd place Cash Award Rs.30000/-	Facilities Provided by Aarohan Lab	Bengaluru	17.02.2025 &19.02.2025
10	Meraki 14th Edition – International Business Competition 2025	1	<b>Team :AIGLE AIR</b> Chandu RT (1BY22IS043) Abhinav Gupta (1BY22IS005) Aradhyaswami SS (1BY22IS401) Chiranth Moger (1BY23IS058) Ayush Mahato (1BY22CS034)	-	Delhi	15.02.2025
11	Code Red 25hrs Hackathon	50	Dr Ambedkar Institute Of Technology Jss Science And Technology University Pes University Rvce College Nitk Surathkal	85,000/-	BMSIT&M	9.01.2025 &10.01.2025

2024

S.N	Title	Number of participant s	Prize (if any) in rupees (details attached as annexure)	Financial Assistance	Organized by	Date
1	Hackday Pondy	1	<p>Team :AIGLE AIR</p> <p>Chandu RT (1BY22IS043)</p> <p>Abhinav Gupta (1BY22IS005)</p> <p>Aradhyaswami SS (1BY22IS401)</p> <p>Chiranth Moger (1BY23IS058)</p> <p>Ayush Mahato (1BY22CS034)</p> <p>3rd Prize Cash Award Rs. 25,000/-</p>	14942/- Travel and Components for participation	SMVCE, Pondicherry	28.12.2024
2	SIH competition	04	various nodal centers	77,711/-	Different places	1.12.2024 to 15.12.2024
3	Industry 4.0 Technologies	1	5,00,000/-	-	Aviratha Digital Lab. Jerbi Fundation seed fund	01.10.2024
4	"Sparkathon" 24hr hardware technical hackathon.	1	B Suraj and Rushil M M ECE 1st Sem	1180/- Registration amount	Rajarajeshwari College	24.10.2024 to 25.10.2024
5	BOOTCAMP: INNOVATION, DESIGN, AND ENTREPRENEURSHIP	1	05 days boot camp AIML	10214/-	Ministry of Education (Government of India), AICTE, and the Ministry of Education's Innovation Cell	23.09.2024 to 27.09.2024
6	Manthan Business plan competition	1	Dostbin Rs. 50,000/-	-	FKCCI, Bengaluru	11.07.2024

7	ELCIA Tech Summit	1	-	Rs. 9000	IIT banglore	6.07.2024 to 25.07.2024
8	Summer of Projects	20	<b>Prize Pool Rs.</b> <b>4500/-</b> 1st prize Rs 2,000/- Alan Biju, Harshitha K V, Shruthi A ECE Dept  2nd prize  Rs.1,000/- Keerthi Narayan M V, Ajay D Bhat, Sri Srujan Hari T, Aniruddh M ISE, EEE & ECE Dept  Consolation prize Rs. 1,500/- Hemanth and Alan Biju (active participants) EEE & ECE	-	IEEE-BICEP, BMSIT & M	29.06.2024

			1st prize Rs 5,000/- Sai Chetana Reddy NS, Rakshita M Ali, Sakshi Nittukar, Srushti Shingri			
9	Innovation Gauntlet - Squid Game Edition	15	CSE Dept  2nd prize Rs. 3,000/- Sarvesh Patil, Samarth Joshi, Tanav Shivkumar, and Samarth Vasisht AIML Dept  3rd place Rs. 2,000/- Kritesh Yadav, Mayur, Anish S Land, and Aditya Raj  AIML & CSE Dept  Consolation Rs. 1,000/- Shankar Reddy, Tharun Susri, and Mrinal Midha. ETE Dept	-	Innovation Cell BMSIT&M	25.06.2024
10	Sristi Innovation Challenge	15	Rs. 48000/- Prize Money and 50000/-	16,900/- supported for registration	Atria Institute of Technology	24.05.2024 to 26.05.2024

11	Start Up Premier league 2.O	25	Rs. 10000/- 1st prize: Team Mandalorians: Prekshak Sai G H and team (ETE Dept) Rs. 5,000/- 2nd Prize: Team 2GB: Samarth Vashisht and team (AIML Dept) Rs. 3,000/- 3rd Prize: Team IdeaFactory: Soumit Das and team (ECE Dept) Rs. 2,000/-	Ecell BMSIT&M	14.05.2024
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12	Control: SIMULINK & IoT Challenge	10	1st Prize: Team - Baljeet Kumar Patel, Jatin Sharma, Kulajeet Barman, Saksham Agarwal and Simma Leeladithya. Rs. 3000/-  2nd Prize: Team - Alan Biju, Ashil Jermine George, Akshat Jaiswal, Anish Anand Pulsay, A Nitish Rs. 2000/-  3rd Prize: Team - Chiranthan Gangadharapp a, Deepak Suresh, B. Kavin, B. Mohith. Rs. 1000/-	-	Innovation Cell, BMSIT&M	19.04.2024 and 20.04.2024
13	Carbon Zero Challenge 4.0 All India Eco- innovation and Entrepreneurship contest	1	Dostbin Rs. 5,00,000/- Seed Fund	-	IIT madras	25.04.2024
14	KPIT SPARKLE 2024 Finale	1	22816 students  6083 Faculty	PUNE	05.03.2024  07.03.2024	
15	Elevate Call – Dostbin Solutions Pvt Ltd.	1	23,00,000/-	-	Karnataka State grant in aid	07.03.2024
16	Anveshana National Level Competition	25	Rs. 25000 3rd prize Dostbin 25000/- Consolation prize for other teams	-	Incubation Centre BMSIT&M	23.02.2024

<b>17</b>	ISBR Business School competition	1	Rs. 25,000/- (1st Prize) Dostbin	-	ISBR Business School	10.02.2024
<b>18</b>	Drone Workshop	1	-	7099/-	BICEP	20.01.2024 to 23.01.2024
<b>19</b>	Code red 24hrs Hackathon	15	Rs. 16000/- Team ELITE		E-cell BMSIT&M	13.01.2024 to 14.01.2024
<b>20</b>	BICEP Logo competition	15	Rs. 3000 / - Mehak and Team	NIL	Innovation Centre, BMSIT&M	06.01.2024

**2023**

S.N	Title	Number of participants	Prize (if any) in rupees (details attached as annexure)	Financial Assistance	Organized by	Date
1	Indian Kart Race	1	5000/-	Rs 2,87,500 / -	Buddh International Circuit, Noida	30.10.2023
2	FKCCI Manthan 2023		10,000/- (1 Team) Dostbin	Rs 3,000/- (Rs 1000/- each for 3 teams) 3 teams participated	Sir M V Auditorium FKCCI	20.09.2023
3	Pre-Incubate	4		2,45,000 / -	Dostbin Solutions Pvt Ltd.	22.11.2023
4	India Startup Festival 2023	4	25,000 (1 Team) Dostbin	NIL	TAL Transform ers	6.08.2023
5	SEEDBRAINS 2.0	3	50,000 (1 Team) Dostbin	NIL 05 teams participated	Cambridge Institute of Technology,	

6	National Level Project Competition	32	1,00,000 (1 team) Dostbin 13 teams participated	Rs 8,000/- (Rs 1000/- each for 8 teams)	Ramaiah Institute of Technology	20.04.2023
7	KAVACH-2023, <a href="https://kavach.mic.gov.in/">https://kavach.mic.gov.in/</a>	20		NIL	Ministry of Education	30.03.2023
8	YUKTI Innovation Challenge 2023, <a href="https://yukti.mic.gov.in/">https://yukti.mic.gov.in/</a>	160 teams		NIL	Ministry of Education	Throughout the year
9	National Startup reverse pitch fest	120 (40 teams)	Rs. 3,200/- 1st Prize 1500 / - (Team BMS) Shri Adithya M and Team – ISE Dept 2nd Prize 1000 / - (Predators) Raghav Kumar Jha - ISE Dept 3Rd Prize 700 / - (Titans) - Devanshee Sharma and Team – CSE Dept		Innovation Centre, BMSIT&M	24.02.2023

**2022**

S.N	Title	Number of participants	Prize (if any) in rupees (details attached as annexure)	Financial Assistance	Organized by	Date

1	State level project exhibition	3	Rs. 50,000/- 1st Place (Team Autonomous underwater vehicle for seafloor mapping)	-	VTU	01.08.2022
2	SIH National Level Hackathon	156 (26 teams)	1,00,000 (Team Nounce-1st place) 50,000 (Code 18-1st place split with another team) 75,000 (1st place split with other team)	25,000 (3 teams)	IES college, Bhopal. Excel engineering college, Erode. BITS, Ranchi. (Ministry of Education)	26.08.2022 27.08.2022
3	SIH Internal Hackathon	89	-	13 teams	Innovation Centre,BMSIT&M	06.4.2022 12.04.2022

Total Fund Supported by BICEP: 25,10,361/-

Total Prize Money Received: 13,36,500/-

Total Grant Received: 51,00,000/-

2022 Faculty Driven Project:

Series 1				
Sl No	Faculty Name	Project Titled	Amount Released	Year
1	Prof. Dwarakanath G V Department of MCA	Pet Care System	15,500/-	Phase - 1 July - 2022
2	Dr. Seema Singh Department of ETE	Home Based Compost Machine with extendable ECU	36,000/-	
<b>Total</b>			<b>51,500/-</b>	

Series 2				
Sl No	Faculty Name	Project Titled	Amount Released	Year

1	Prof. Nirupama B K Department of MCA	Smart Perfume Dispensary based on smell	28,500/-	<b>Phase - 2 July - 2023</b>
2	Dr. K Suresh Kumar Department of Chemistry	Development of food quality monitoring labels/ stickers	29,000/-	
<b>Total</b>		<b>57,500/-</b>		

<b>Series 3</b>				
<b>Sl No</b>	<b>Faculty Name</b>	<b>Project Titled</b>	<b>Amount Released</b>	<b>Year</b>
1	Dr. Ravichandra K R Department of ME	RAPTOR	1,00,000/-	<b>Phase - 3 March - 2024</b>
2	Dr. Dhanalakshmi Department of CSE	Crab style wheelchair	15,000/-	
3	Dr. Vijayalakshmi Department of ECE	Smart footwear for visually impaired community	35,000/-	
4	Dr. Shilpa Hiremath Department of ECE	Solar powered floating waste cleaner for small water bodies	11,345/-	
<b>TOTAL</b>		<b>1,61,345/-</b>		

<b>Series 4</b>				
<b>S.No</b>	<b>Faculty Name</b>	<b>Project Titled</b>	<b>Amount Released</b>	<b>Year</b>
1	Ambika	"Autonomous voice-controlled arm robot"	25,000/-	<b>Phase - 4 July - 2024</b>
<b>TOTAL</b>		<b>25,000/-</b>		

### **Impact after Faculty Driven Project**

<b>Sl. No</b>	<b>Faculty Name</b>	<b>Project Titled</b>	<b>Total Amount</b>	<b>Amount Released</b>
1	Dr. Seema Singh Department of ETE	Home Based Compost Machine with extendable ECU	2,45,000 /-	2,45,000/-

2	Dr. Seema Singh and 3 students of ETE Department	Prizes won at different seven platforms including IIT madras and India start up foundation	2,35,000/-	2,35,000/-
3	Dr. Seema Singh Department of ETE (Grant-in-Aid) form Karnataka Elevate 2023	Home Based Compost Machine with extendable ECU	23,00,000/-	-
4	Dr. Seema Singh Department of ETE (Seed Money) form IIT Madras 2024	Home Based Compost Machine with extendable ECU	5,00,000/-	5,00,000/-

## Start-up recognized by DPIIT/startup India

Name of Venture	Year of recognition by DPIIT/startup India	DPIIT Registration No
Fluxlink India Private Limited	2021-22	DIPP85374
Naari Pads Innovations	2022-23	DIPP110146
Dostbin Solutions Private Limited	2023-24	DIPP151800
Aviratha Digital Labs Private Limited	2023-24	DIPP187612
Deloai Private Limited	2023-24	DIPP189197
Bhismas Aero Private Limited	2023-24	DIPP188000
Marine Edge	2023-24	DIPP188156

BICEP: Board of Entrepreneurs



## Achievements of our incubate:

1. **DOSTBIN** team bagged prizes and funds worth Rs. 31 Lakhs including Startup Karnataka **Elevate funds and IIT Madras carbon zero challenge**. Virtually incubated at **IIT Bengaluru, NSRCEL-IIM Bengaluru and NASSCOM TechWe**. It was recognized as a top **10 waste management startup by Industry outlook** in August 2024. It was showcased at various platforms like Startup Mahakumbh, New Delhi, NASSCOM Technology leadership forum, Mumbai, BBMP Blugreen showcase. It was encouraged by Honourable CM of Maharashtra, Deputy CM of Karnataka. The Make in India hardware product featured in Moneycontrol article on Startup Mahakumbh.

### 2. **DELOAI:**

- Smart India Hackathon winner of 2022 and have **7+ happy clients** in 1<sup>st</sup> year of existence
- New Client Onboarded

They are thrilled to welcome Protech International, an esteemed Australian company, to our growing client portfolio. Looking forward to a successful collaboration!

- iSchool+ Launch

Our edtech product iSchool+ officially launched on April 5th. Currently in pilot mode across 2 schools for this academic year. They are excited to refine and expand based on real-time classroom feedback.

- CareerPrep – Upcoming Launch

They are actively developing a new product: CareerPrep – a platform focused on coding interview preparation and mock test simulations for students and job seekers.

- Campus Collaborations in Progress

They are engaging with placement departments of several reputed engineering colleges, including:

1. BMSIT
2. SJCIT
3. City Engineering College
4. KSIT
5. Sai Vidya Institute of Technology

### 3. **Marine Edge Technologies Private limited: Community of 10k+ students across all social media platforms**

#### 4. **Bhismas Aero Private Limited :**

- Certified by the DGCA (Directorate General of Civil Aviation)
- And have client from English movie named "Whats up with an Indian men"

#### 5. Margroms Private Limited:

- Margros now works with 10 active restaurants, marking consistent growth.
- They are on board Resato91, the biggest and most iconic restaurant in Jakkur.
- Launched their own café, Harvey's Café, in Chikkaballapura opposite SJCIT College.
- Expanded their footprint across both urban and tier-2 locations.
- Delivering impactful results through marketing, branding, and digital strategy.
- Margroms continue to scale rapidly in the F&B industry.

6. Aviratha Digital Lab private limited: Aviratha Digital Labs Pvt. Ltd. is an innovative technology company focused on sustainable agriculture, digital transformation, and advanced technology integration. Established with a vision to redefine innovation and technology integration, the company specializes in Industry 4.0 solutions, including AI, IoT, metaverse, blockchain, automation, and cloud computing.

Aviratha is committed to leveraging cutting-edge technologies to provide scalable, sustainable, and impactful solutions across industries, with a special emphasis on agriculture, hydroponics, and immersive education.

#### Innovations at various stages of Technology Readiness Level

SN o	Startup Name	Innovation Name	TRL
1	Dostbin Solutions Private Ltd	Home Composting Machine	System prototype demonstration in an operational environment
	DELOAI PRIVATE LIMITED	Education Industry and Education Technology	Actual system completed and qualified through test and demonstration.
2	Naari Pads Innovations	Naari pads	Actual system proven through successful mission operations
3	AVIRATHA DIGITAL LABS PRIVATE	Augmented + Virtual Reality	System/subsystem model or prototype demonstration in a relevant environment.
4	BHISMAS AERO PRIVATE LIMITED	Education Industry and Education Technology	System/subsystem model or prototype demonstration in a relevant environment
5	Marine Edge Technologies Pvt Limited	Education Industry and Education Technology	Actual system completed and qualified through test and demonstration.
6	Fluxlink India Private Limited	Industrial Robots and Automation	Actual system completed and qualified through test and demonstration.

#### Start-up Seed Fund from govt organization:

S.N o	Name of the Start-up	Seed Fund Received in Rs	Name of Government Organization providing Seed Funding	Year of Receiving the Fund	Type of Investment
1	Dostbin Solutions pvt ltd	23,00,000	Karnataka – Elevate	2023-24	POC
2	Aviratha digital labs Private limited	5,00,000/-	JERBI Foundation	2023-24	Prototyping

3	Fluxlink India Private Limited	18,00,000/-	Karnataka – Elevate	2021-22	Prototyping
4	Naari Pads	18,00,000/-	Karnataka – Elevate	2023-24	POC
5	Dostbin Solutions PVt Ltd	5,00,000/-	IIT Madras	2023-24	Prototyping

Courses: Autonomous curriculum of the institute offers 40+ courses (laboratories) in line to Innovation, Design thinking, Management and Entrepreneurship, Startup Management, latest technology and trends for multidisciplinary fields.

List of Courses are:

Sl No	Academic year	Title of Course	Course Code
1	2023-2024	Management and Entrepreneurship	21HSS51
2	2023-2024	Digital Marketing	BME456B
3	2023-2024	Innovation/Entrepreneurship/Societal Internship	21INT53
4	2023-2024	Entrepreneurship & Startup Management	22MBA3C1
5	2023-2024	Innovation and Design Thinking	BIDTK158
6	2023-2024	Project and Finance Management	21HSS61
7	2023-2024	Management & Organizational Behaviour	22MBA1C1
8	2023-2024	Business Analytics and statistics	22MBA1C6

BIG Foundation:

B.M. Sreenivasaiah Innovators Guild Foundation (BIG Foundation) is a Section 8 company and an initiative of the BMS Educational Trust, established on August 23, 2023 (CIN No: U72100KA2023NPL177720). BIG Foundation fosters innovation through rigorous research and collaborative efforts, leveraging domain expertise to develop impactful products and technologies.

At BIG, they cultivate an entrepreneurial spirit and support start-ups by providing tailored incubation facilities, consultancy services, and enhanced industry-institute interactions. They serve as a platform for innovation, incubation, research, consultancy, and entrepreneurship.

Their mission also includes generating alternative revenue streams for the group of institutions by fostering public-private partnerships, industry collaborations, auxiliary services, and social media promotions.

Associated Institutes are:

1. BMS College of Engineering
2. BMS College of Architecture
3. BMS Institute of Technology and management
4. BMS college for Women
5. BMS college of Law

6. BMS College Commerce and Management

7. BMS School of Architecture

Objectives:

- Be the platform for innovation, incubation, research, consultancy and entrepreneurship.
- To generate alternative revenues for the group of institutions through public-private partnerships, industry collaboration, auxiliary services, and social media promotions.
- To promote “ Work Integrated Learning Programs ” across disciplines in order to fortify the culture of work-life balance amongst students.
- To recognize , award, reward & invest outstanding / promising start -ups and enablers of the start -up ecosystem who can be economic engines of tomorrow.
- Enable overseas collaboration to help both students and faculty up skill.

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**9.6 Governance and Transparency (25)**

Total Marks 25.00



**Preamble:**

- v. The strategic plan of BMSIT&M has been developed through a participative, structured, and evidence-based approach, with active involvement from all departments and key stakeholders. The plan aligns with the institutional mission, emerging trends in technical education, and national policies such as NEP 2020. The strategic plan of the institute is then placed before the Board of Governors for their approval. The Honourable BoG has approved the same during its 51<sup>st</sup> BoG meeting.

**v. Procedure followed in developing the Strategic Plan:**

The strategic plan of BMS Institute of Technology & Management (BMSIT&M) was developed through a participatory and data-driven approach. The following systematic procedure was adopted:

**1. Initiation of Strategic plan:** A meeting was conducted at the institute level comprising Principal, Vice Principal, Deans, HoDs to oversee the development of the plan.

**2. Department-Level SWOC Analysis:** Each academic department conducted a SWOC analysis (Strengths, Weaknesses, Opportunities and Challenges) to assess its present status and growth potential.

**3. Consolidated Institute-Level SWOC Analysis:** The department-level inputs were analysed to derive a comprehensive institute-level SWOC.

**4. Formulation of Strategic Goals:** From the SWOC findings, the institution framed **Short-Term Goals (1–3 years)** and **Long-Term Goals (4–6 years)** focusing on:

- Addressing weaknesses
- Leveraging opportunities
- Overcoming challenges

**5. Action Plan Development:** A detailed implementation plan was created for each goal, outlining:

- Strategic initiatives and sub-activities
- Responsible departments
- Resource allocation
- Timelines and milestones

**6. Approval from Board of Governors:** The detailed strategic plan for the period 2024 - 2029 was discussed and ratified by the Honourable BoG during its 51<sup>st</sup> meeting.

**7. Communication and Implementation:** The plan was communicated to all departments and sections. Each department was tasked with aligning its operational plans and academic activities with the strategic objectives of the institution.

**8. Monitoring and Review Mechanism:** To ensure sustained progress

- A yearly review of the strategic plan implementation is conducted.
- Departments submit annual reports on their achievements against planned targets.
- The institute level committee evaluates progress, identifies deviations, and recommends corrective actions.

**Strategic Plan (2024-2029) Implementation****Short-term Goals (2024-2026)****1. Academic Excellence**

- **Revision of the curriculum based on industry requirements** – The curriculum for 2024 batch of UG and PG is revamped in line with the requirements of GCC that include program specific Mathematics, Physics, Chemistry courses, one-year industry/research internship, practical oriented IDT and English courses, Ability enhancement courses etc.

- Deputation of faculty to industry / R and D organizations for upskilling on emerging technologies and innovative teaching methods** - The faculty members are deputed to upskill in the emerging technologies through FDPs / Certificate courses / Industry internships. Six faculty members from Civil Engineering, two faculty members from ECE and three faculty members from Mechanical Engineering programs are deputed for AICTE PG Diploma courses at premier institutions including IISc., IITs, IIITs, NITs. In addition, two faculty members from CSBS and ECE are trained by the industry on real-time technologies by QNX for delivering industry specific courses to students.
- Creation of digital content to enhance learning experience of students** – Institute has a well-established e-Studio for creating digital repository of specific courses which are uploaded into Institute's YouTube Channel. This helps students to access the course content anytime from anywhere, enhancing their learning. The BMSIT&M YouTube Media can be accessed at <https://www.youtube.com/@bmsitmedia8115> (<https://www.youtube.com/@bmsitmedia8115>)

## 2. Research and Development

- Providing financial incentives for faculty and students publishing SCI/WoS/Scopus indexed journals falling under Q1-Q4 quartiles** – Institute has been encouraging its faculty members and students to innovate and publish their work with reputed journals through its policies from time to time. In this connection, the research policy is recently revised to provide financial incentives for quality publications and patents with reimbursement of registration fees for attending conferences, travel expenses for publishing papers in India and abroad. Further, internal seed funding is also provided for faculty driven projects and student ideas. During the 2024 calendar year, ₹12.14 Lakhs was distributed as incentives for 65 faculty members. During the Jan- April 2025 calendar year, ₹6.11 Lakhs was distributed as incentives for 35 faculty members.
- Enhancing patent filing through IPR Cell by increasing awareness about intellectual property** – Institute has a dedicated IPR Cell with support from GoK IPR Cell. This IPR cell actively engages with faculty members and students to identify patentable ideas and helps them publish their work with complete end-to-end support from Patent Attorney in filing the patent and fees involved. During the 2024 calendar year, 4 patents are published while during the Jan to May 2025 calendar, 2 patents are published. Similarly, During the 2024 calendar year, 2 patents have been granted while during the Jan to May 2025 calendar, 1 patent haven been granted.
- An eco-system to collaborate with institutions of national importance to secure external research funding from national funding agencies** – A dedicated Research and Consultancy Cell is established at the Institute to promote research culture among faculty members and students. Research proposal writing workshops are being conducted to validate the proposals to attract funding. In addition to sending proposals to institutes of national importance like DST, SERB, VGST, AICTE etc., Institute has collaborated with MIET-Russia, IISc-Bengaluru, JNCASR-Bengaluru and VTU-Belagavi. During 2024, an ASEAN-India collaborative project for ₹26.88 Lakhs was sanctioned in association with UKMUK, Malaysia. During 2025, another ASEAN-India collaborative project for ₹46.66 Lakhs was sanctioned in association with IIUM, Jalan Gombak.

## 3. Industry Collaboration and Placement

- Formation of the Industry Advisory Board to align academic offerings with industry needs.**
- Developing an eco-system to provide student community with industry driven problem statements through mentorship program** – In line with the revamping of curriculum, institute actively engages with industries like Unisys, TCS, BIS, SISA, VAGMIN R and D Labs for working on industry problems. At present 52 students working on 13 industry problems.
- To integrate the placement and skill training with the academic timetable starting from 1<sup>st</sup> semester.**

In the First Semester career readiness classes are integrated into the academic timetable, where focus is on Basic Quantitative Aptitude, Logical Reasoning, Data Interpretation, Reasoning ability. In the Second Semester, emphasize is on Advanced Quantitative Aptitude, Advanced Logical reasoning. In addition, 10 Hours of Soft skills Training is being provided.

In the Third Semester, core fundamentals and GATE specific topics are covered. In the Fourth Semester, problem solving skills through programming and Core Engineering sessions are engaged by passionate in-house faculty members. In fifth Semester, students are subjected to multiple assessments and this helps to plan need based training for slow learners and Advanced Training for fast learners. In addition, Peer Learning Activities are conducted. In Sixth Semester, refresher programs and Placement Preparation sessions by various industry associates are conducted. Further students' CVs are reviewed through senior to junior mentorships and Alumni mentorships.

- Decentralizing the placement activities which creates a platform for establishing a link with domain specific / product-based companies.**

Every department has department placement officers, and they are empowered to establish the connection with domain specific industries for their respective departments which enhances industry internships and placement opportunities.

## 4. Globalization and Collaboration

- Establishing a cell for global connections and collaborations to cater research internship, immersion program and industry internship** – A global collaboration cell is established to collaborate and engage with foreign institutions for possible internships, immersion programs. The cell has collaborated with different organizations namely UTP, DILABS, Taylor's University etc.
- Sign MoU with global universities for joint research, student exchange program and twinning opportunities** – Institute has been actively collaborating with industries, research organizations and foreign universities from time to time. Recently MoU was exchanged with MIET, Russia for research and with Japan University of Economics, Tokyo for student exchange program.

## 5. Infrastructure and Facilities

- Expand in-house hostel facilities to accommodate more students** – Due to eco-friendly measures and protect the existing green cover in the campus, institute has tied up with third parties to cater hostel requirements.
- Upgrade laboratories with state-of-the-art equipment for interdisciplinary research and projects** – New laboratories that impart knowledge and provides hands-on training are created in the IoT, EV, PCB design domains. Also, a centre of excellence by SISA is setup to work on cyber security domain. In addition, AICTE IDEA Lab is being set up to promote inter-disciplinary collaboration and research.
- Establishing energy research laboratory towards meeting SDG goals** – Keeping in view the role of Engineers in achieving climate and energy targets, emphasis is given to drive specific SDG goals at institute. In this direction, budget of ₹50 Lakhs is provided during the financial year 2025-26 to initiate the activities to set up a SDG energy lab.

## 6. Entrepreneurship and Innovation

- Strengthening the incubation center by enhancing mentor panel and organizing bi-annual pitch competitions.** - BICEP supports students with innovative start-up ideas by offering pre-incubation opportunities prior to incubation (startup registration). BICEP provides financial support to students for participating in competitions, events, and prototyping activities. Incubation Centre offers a comprehensive suite of support services, including workspace, mentorship, training programs, networking opportunities, and various other benefits. BICEP is backed by a diverse pool of 20+ experienced mentors from technical, business, and legal domains. Additionally, the Centre has a dedicated Principal Chartered Accountant (CA) Advisor to assist with company formation and statutory compliance requirements. To further strengthen the entrepreneurial ecosystem, BICEP organizes a variety of pitch competitions such as Boot Camp, Pitch-Off, Advert, Ideathon and Pitch to Win. These events provide student startups with a platform to showcase their ideas, gain valuable feedback from experts, and explore potential funding opportunities. On average, a budget of 12 lakhs is spent on these competitions annually under I&E section of the institute.
- Upscale national level hackathon (CodeRed) in collaboration with industry leaders and alumni.** - BICEP conducts two annual National-Level Hackathons—one focused on software and the other on hardware innovation, namely Code Red Hackathon (Software), Anveshana Prototype Competition (Hardware). Code Red is a national level 25-hour coding and problem-solving marathon that brings together enthusiastic student developers to collaboratively build solutions to real-world and technical challenges. The event is designed to foster creativity, collaboration, and technological innovation among budding engineers. Beyond the competition, the event acts as a powerful networking platform, enabling participants to engage with mentors, peers, and potential employers from the tech industry and alumni network. The 2024 edition of Code Red witnessed dynamic participation and concluded with a prize pool of ₹75,000 distributed among the winning teams. Anveshana is a national-level hardware-focused prototype competition, dedicated to cultivating innovation and entrepreneurial thinking among students and faculty alike. From hundreds of entries received nationwide, 50 top ideas are shortlisted by a panel of industry experts and invited to exhibit at the BMSIT&M campus. Projects spanned multiple domains, including engineering, technology, and interdisciplinary fields, showcasing the ingenuity of emerging innovators. With a prize pool of ₹2,25,000, the event not only rewards excellence but also reinforces BMSIT&M's commitment to advancing innovation, entrepreneurship, and research as core pillars of its academic environment.
- Leverage government schemes to secure funding for strengthening innovation and entrepreneurial eco-system** - Incubate startups at BICEP are hand-held to secure government funding from various schemes. With this effort four of our startups have received government fund/grant from startup Karnataka elevate program idea to PoC, JERBI foundation and IIT madras. A total of ₹69 lakhs funding has been raised by our students / faculty/alumni startups. These startups are encouraged to get DPIIT recognition which further helps them to raise government funds.

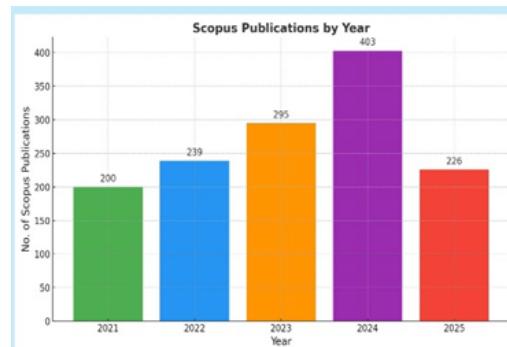
## 7. Student Progression

- To conduct regular awareness sessions on higher education opportunities like GATE, GRE and GMAT – Higher Education Facilitation Centre (HEFC) exclusively looks after the higher education requirements of aspiring students. For the calendar year 2024, 12 awareness sessions were conducted while during Jan-May 2025, 5 sessions were conducted.**
- Introduction of a structured mentorship program to guide students aiming for research and advanced degrees.**

## 8. NIRF and Rankings

- Align metrics with NIRF ranking parameters, focusing on placements, research output and diversity** - For NIRF, Graduate Outcomes, which measures the Graduates and their Employability Index few of the below actions are taken.
- Collection of Letter of Appointment through on campus/ off campus
- Calculating the Median Salary of our Graduates

Similarly, research publications are monitored and documented for NIRF and other ranking purposes.



**Note:** Publications for 2025 publications is current as of June 2025.

- Automating the data collection system to monitor key performance areas for rankings** – The data from all the stakeholders is being collected as the need arises. Now, to track and monitor the key performance areas, specific committees like IQAC, Academic audit committees are in place. A new committee has been constituted to automate the data collection process.
- Strengthening internal and external audit processes** – Audit formats have been revised during Aug/Sep 2024 in line with the requirements of NBA/NIRF/NAAC. Periodic internal and external academic and administrative audits are being conducted.

## Long-term Goals (2024-2029)

### 1. Academic Excellence

- Strengthening multidisciplinary education system in line with SEP/NEP, enabling flexible credit policies and interdisciplinary learning.**
- To develop and deliver hybrid learning courses to expand reach and address online learning needs.**

### 2. Research and Development

- 50% of research publications in 25% top ranked journals.**

Year	Total Publications	Q1+Q2	Research Papers Q1+Q2 Percentage	Percentage of Q1+Q2 w.r.t. Overall Publications
2024	435	103	59.88%	23.67%
2025 (Till June'2025)	226	86	65.65%	38.05%

- Aiming for significant externally funded research projects.
- Aiming for commercialization of patents.

### 3. Industry Collaboration and Placement

- To establish a dedicated placement council for core engineering domains to attract more core companies for recruitment.
- To partner with industries and involve industry mentors for student activities.
- To build a robust alumni network portal to leverage alumni for mentorship, placements and funding opportunities.

### 4. Globalization and Collaboration

- Attracting more international students to pursue UG/PG programs – Institute has been attracting foreign nationals for a long time under the aegis of an exclusive division namely International Cooperative Division. This division plans and participates in international education expos and promotes academic culture at BMSIT&M. Necessary approvals from AICTE are obtained to accommodate international students. During the academic year 2023-24, 31 PIO students joined UG programs while during the academic year 2024-25, 86 PIO students have joined UG programs.
- Secure partnerships for dual-degree programs and joint research initiatives with top-ranking global universities.
- Collaborate with international universities / organizations for joint research funding.

#### 5. Infrastructure and Facilities

- Establishing multi-disciplinary research facilities with a view to have greater research and consultancy - Keeping in view the role of Engineers in achieving climate and energy targets, emphasis is given to drive specific SDG goals at institute. In this direction, budget of ₹50 Lakhs is provided during the financial year 2025-26 to initiate the activities to set up a SDG energy lab.
- To establish an indoor sports complex to cater the needs of students and staff – Institute has a master plan to accommodate spacious indoor sports complex and auditorium. This work will be taken up soon.

### 6. Entrepreneurship and Innovation

- Foster startups and promote entrepreneurship among students – Institute has created an eco-system called BICEP to encourage, nurture and support ideas of students and faculty members. At present, BICEP has 6 start-ups functioning at its premise.
- Partner with venture capitalists and angel investors to fund scalable student and faculty innovations – The BMS Educational Trust to help its associated institutions has setup a section 8 company, namely BIG Foundation. This helps the budding entrepreneurs at BMSIT&M to leverage on the eco-system with mentorship and funding opportunities.
- Gain recognition as a premier entrepreneurial hub in Karnataka by supporting innovation across disciplines.

## 7. Rankings and Recognition

- Achieve a top 100 position in NIRF rankings within five years.
- To secure international accreditations like ABET or similar certifications to enhance global credibility - As a step forward, institute initiated with QS i-GAUGE rating process to understand areas of improvement.

## 8. Sustainability and Green Campus

- Transitioning to a carbon-neutral campus by implementing solar energy systems, waste recycling, and water conservation measures.
- Creating an eco-friendly innovation hub that aligns sustainability goals and green technologies.

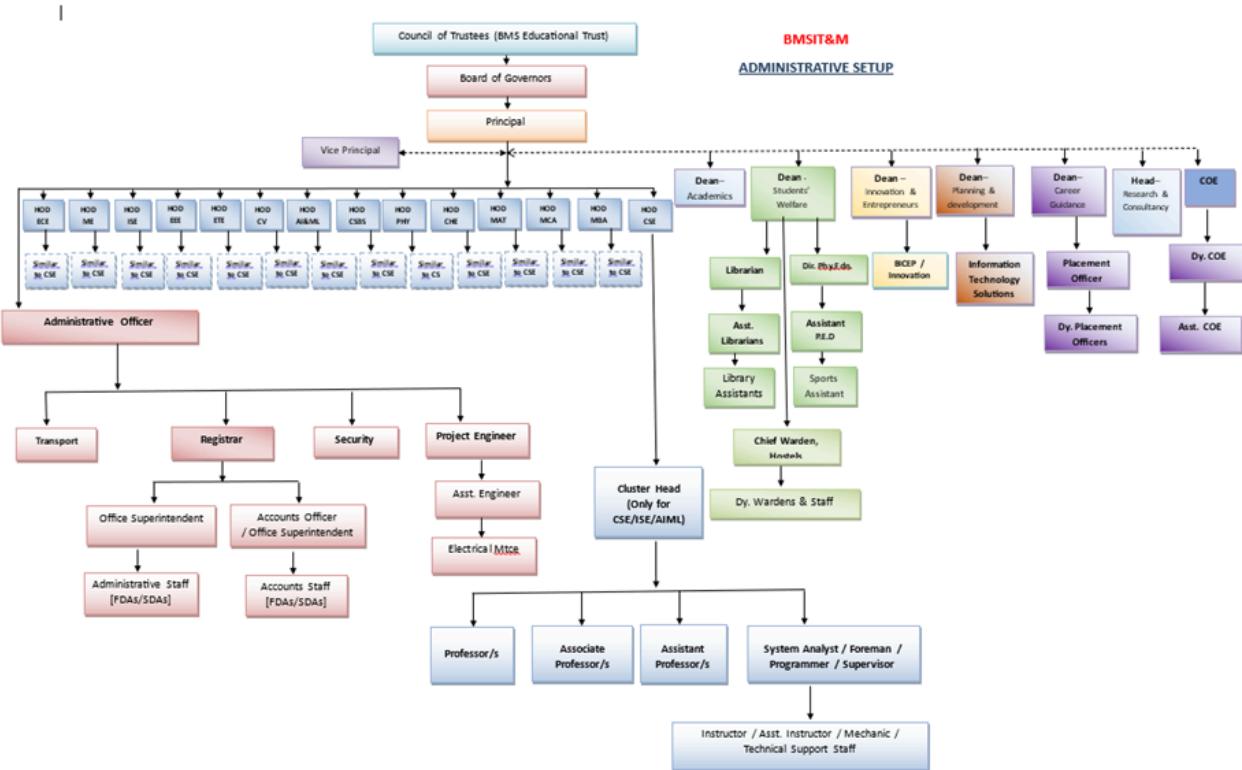
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9.6.2 Governing Body, Administrative Setup, Functions of Various Bodies, Service Rules, Recruitment procedures and Promotion Policies (10)

Institute Marks : 10.00

The Institute was started in 2002, and it offers seven Undergraduate Programs and five Postgraduate Programs. In addition, eleven research centers offer Doctoral Programs. The entire administration is overseen by the Board of Governors (BoG). In accordance with the guidelines of statutory bodies such as UGC, AICTE, VTU, and GoK, BMSIT&M has established various Committees, Academic Bodies, and Boards to oversee activities, assess requirements, and make informed decisions. These governing structures ensure the smooth and efficient administration of the institution, taking into account the diverse range of courses and large student population.

#### **BMSTI&M Administrative Setup:**



#### **Governing Bodies:** The various Statutory/Non-Statutory Governing Bodies:

- i. Board of Governors (BoG)
- ii. Finance Committee (FC)
- iii. Academic Council (AC)
- iv. IQAC
- v. Board of Studies (BoS)
- vi. Board of Examiners (BoE)
- vii. Board of Appointments (BoA)
- viii. College Internal Complaints Committee (CICC)
- ix. Women Empowerment Cell (WEC)

- x. Gender Champion Cell
- xi. SC/ST Cell
- xii. Disability Resource Cell
- xiii. Anti-Ragging Committee
- xiv. Grievance Redressal Cell
- xv. Committee for AICTE Activity Points Program
- xvi. Unnat Bharath Abhiyan
- xvii. IP Cell
- xviii. Global Collaboration Cell (GCC)

**Statutory/Non-Statutory Governing Bodies:**

1. **Board of Governors (BoG):** The Board of Governors of the Institute is the supreme administrative body. It ensures the achievement of the Vision through the Mission of the Institute. It promotes future academic plans, development of infrastructure and research activities by providing a clear-cut direction for implementation and overall monitoring of all activities. It supports the Head of the Institution in the execution of its programs, approves the budgetary allocation towards infrastructure, staffing pattern, research, and development, etc.

The constitution of the BoG is as outlined in Table 9.1

**Table 9.1**

1.	Sri. Aviram Sharma  Chairman, BOG, BMSIT&M and Trustee, BMS Educational Trust, Bengaluru – 560019	Chairman
2.	Dr. B.S. Ragini Narayan  Educationist, Donor Trustee,  Member Secretary,  Chairperson, BMS Educational Trust, Bengaluru – 560019	Donor Trustee
3.	Dr. P. Dayananda Pai  Chairman, Century Group,  Chairman, BOG, BMSCE,  Life Trustee, BMSET, Bengaluru-560019	Member

4.	Dr. Thirumalachari Ramasami (Awarded Padma Shri & Padma Bhushan by President of India), Former Secretary, Department of Science of Technology, Government of India, Trustee, BMSET, Bengaluru – 560019.	Member
5.	Commissioner, Department of Collegiate Education & Technical Education, Government of Karnataka, Ex-Officio Trustee, BMS Educational Trust, Bengaluru-560019	State Government Nominee Member
6.	Prof. Giridhar U. Kulkarni President, Jawaharlal Nehru Centre for Advanced Scientific Research.	Academician / Educationist Member
7.	Dr. N. C. Shivaprakash Professor (Retired), IISc	VTU Nominee Member
8.	Dr. Satya Gupta President, VLSI Society of India, Bengaluru.	Industrialist Member
9.	Dr. Anil G N Vice Principal Professor, Dept of CSE, BMSIT&M	Faculty representative Member
10.	Dr. Ambika R Professor, Dept of ECE and Dean – Student Welfare BMSIT&M	Faculty representative Member
11.	Mr. G H Vasappa, Registrar, Dept of Administration, BMSIT&M	Administrative Staff of the College, Member
12.	Dr. Sanjay H A Principal, BMSIT&M	Member Secretary

Apart from the Members of the BoG, BMSIT&M invites Trust Officials as invitees to the BoG. It has been the practice to invite students' representatives and a few faculty representatives to be present at the meeting. The meeting details are shown in Table 9.2.

**Table 9.2**

Year	Meeting No. / Date
2025	51 / 04.04.2025
2024	50 / 22.11.2024
	49 / 04.09.2024
	48 / 22.05.2024
	47 / 23.02.2024

	46 / 11.09.2023
2023	45 / 15.05.2023
	44 / 13.01.2023
2022	43 / 17.08.2022
	42 / 11.03.2022
2021	41 / 28.09.2021
	40 / 02.02.2021

The weblink for the Proceedings of the Board of Governors Meetings: <https://bmsit.ac.in/proceedings> (<https://bmsit.ac.in/proceedings>)

2. **Finance Committee (FC):** The Board of Governors has constituted a Finance Committee, which acts as an advisory body to the BoG and will meet at least once in a year to consider the following.

- i. Budget estimates/status, etc.
- ii. Monitoring and Guiding Financial Actions
- iii. Status of Statutory Payments
- iv. Financial Audit and Reporting
- v. Any other finance-related aspects

**The constitution of the finance committee is as follows:**

**Table 9.3**

Sl. No.	Name of member	Affiliation	Designation
1	Dr. Sanjay H A	Principal, BMSIT&M	Chairman
2	Sri. Prakash Rao	Deputy Director Finance,	Member
3	Mr. Arun R	Accounts Officer	Member
4	Dr. Ambika R	Dean – SW	Member
5	Dr. Manjunath T N	Dean – Career Guidance	Member

The dates of the meeting of the Finance Committee are as follows:

**Table 9.4**

Year	Meeting No. / Date
2025	15 / 11.02.2025

	14 / 19.11.2024
2024	13 / 23.01.2024
	12 / 03.08.2024
2023	11 / 07.01.2023
2022	10 / 08.02.2022
2020	09 / 12.12.2020
2019	08 / 20.12.2019
	07 / 20.02.2019

3. **Academic Council (AC):** The Academic Council takes the responsibility of aligning the academic activities and progress of the institute in line with the Outcome-based Education (OBE) and advises the Chairman of the Board of Studies of various departments to maintain high academic standards in their educational programs. It provides the necessary autonomy to the various departments, approves the academic calendar of events, the curriculum designed and developed by their BoS, establishes the general scheme of teaching, examination, and vertical progression to be followed by BoS of various departments and deliberates any other relevant matters. The council generally meets once in a semester before its commencement unless there is a special need. It is accountable to the BoG of the institute.

The composition of the Academic Council is as shown in Table 9.5:

**Table 9.5**

Sl. No	Name of the Member	Affiliation	Role
1.	Dr. Sanjay H A	Principal, BMSIT&M	Chairperson
<b>Experts from outside the college</b>			
1.	Dr. R. Govindarajan	Professor  Department of Computer Science and Automation ( <a href="http://www.csa.iisc.ac.in/">http://www.csa.iisc.ac.in/</a> ) and Supercomputer Education and Research Center ( <a href="http://www.serc.iisc.ac.in/">http://www.serc.iisc.ac.in/</a> )  Indian Institute of Science (IISc) ( <a href="http://www.iisc.ac.in/">http://www.iisc.ac.in/</a> )  Bangalore 560 012, INDIA	Member
2.	Dr. Guruprasad B.R	Director  Jawaharlal Nehru Planetarium and Scientist, Indian Space Research Organisation (ISRO), Bengaluru	Member
3.	Mrs. Saraswathi Ramachandra	Managing Director and Country Head Lightcast, Bengaluru	Member

4.	Mr. Ajay Kumar	Country HR Head Continental Bengaluru	Member
<b>Nominees of the VTU</b>			
1.	Dr B Sadashive Gowda	Principal Vidyavardhaka College of Engineering Mysuru	Member
2.	Dr. Hardik J Pandya	Associate Professor Department of Electronic Systems Engineering Indian Institute of Science (IISc) Bengaluru	Member
3.	Dr. Suresh D S	Director, CIT Group of Institutions Principal Channabasaveshwara Institute of Technology N.H. 206, B.H. Road, Gubbi, Tumkur	Member
4.	The Academic Council (AC) also includes the Vice-Principal, Deans, CoE, Head R&C, HoDs of all the Departments and the IQAC Coordinator		
5.	Dr. K. M. Sathish Kumar	Dean Academics Affairs Professor, Department of Mechanical Engineering	Member Secretary

The dates of the meeting of the Academic Council (AC) are as follows:

**Table 9.6**

Year	Meeting No. / Date
2024	6 / 15.11.2024
2023	5 / 19.10.2023
	4 / 22.07.2023
2022	3 / 02.12.2022
	2 / 01.08.2022
2021	1 / 23.10.2021

The Academic Council meets twice a year before the semester. The weblink for proceedings of the Academic Council: <https://bmsit.ac.in/proceedings> (<https://bmsit.ac.in/proceedings>)

**4. Board of Studies (BoS):**

The Board of Studies is constituted for each department separately. The BoS meets once every 6 months unless an emergency necessitates it. The BoS is responsible for supervising the developments in the external world and the development/revision of the curriculum to keep abreast with them. It performs its functions within the framework set by the Academic Council. It proposes any necessary changes to the curricular content, delivery, assessment, and evaluation systems for deliberation and approval by the Academic Council. The general composition of the BoS is as shown in the table.

**Composition of Boards of Studies at various Departments**

(As per UGC Guidelines for Autonomous Colleges)

**Table 9.7**

Sl. No.	Name	Designation
1.	Head of the Department concerned.	Chairman
2.	Entire Faculty of each specialization.	Members
3.	Two subject experts from outside the Parent University to be nominated by the Academic Council	Members
4.	VTU Nominee, (One Expert to be nominated by the Vice-Chancellor, VTU, from a panel of six recommended by the College Principal).	Member
5.	Industry – Placement (One Industry/Corporate Sector/Allied area relating to Placements)	Member
6.	Alumni – Senior Person (Meritorious alumnus to be nominated by the Principal)	Member
7.	Other Members (The Chairman of BoS may, with the approval of the Principal, Co-opt: a. Experts from outside the college. b. Other members of the same faculty).	Invitees/Members

**5. Board of Examiners (BoE):** Assessment and evaluation are an integral part of the academic process. Given that the institute has adopted an innovative curriculum, the assessment and evaluation of students' learning outcomes also need to be comprehensive and continuous.

The examination section is appropriately structured to carry out all the assessment and evaluation activities under an autonomous system. It discharges the responsibility of conducting and overseeing both Continuous Internal Evaluation (CIE) and Semester End Examination (SEE), evaluating student responses, publishing results, maintaining all examination-related documents, and submitting periodic reports to higher and regulatory authorities. The examination section will coordinate with the Board of Examiners (BoE) of every department for the smooth conduct of its activities. The BoE of a Department functions in close liaison with the corresponding Board of Studies (BoS) and meets at least once in a semester before the commencement of the examinations. The BoE evaluates the methods of assessment and evaluation to be done for various types of courses and suggests any improvements if needed.

The BoE is responsible for assessing and evaluating the methods used in the scrutiny of CIE and SEE to determine their appropriateness in measuring the learning outcomes expected of the course.

#### **Composition of Boards of Examiners at various Departments**

**Table 9.8**

Sl. No.	Person	Designation
1.	Head of the Department	Chairman
2.	Faculty – Specialization 1	Member
3.	Faculty – Specialization 2	Member
4.	Faculty – Specialization n	Member
5.	External Expert 1	Member
6.	External Expert 2	Member

**A few of the Statutory Committee details are listed below:**

I. **Grievance Redressal System:**

1. Composition:

Dr. Sanjay H A. Principal	Chairman
Dr. Thippeswamy G, Professor	Coordinator
Concerned Head/s of departments	Members
Mr. Devendra Kumar S, AO	Member

2. Frequency of Meeting : Based on Need

3. Rules & Responsibilities:

- To probe into the student grievances.
- To address the genuine problems and complaints of students whatever be the nature of the problem.
- To create a platform where students can point out their problems, regarding academic and non-academic matters.
- To Take necessary steps for improvement in the light of grievances

**Guidelines and rules:**

Objective: To be a single point contact for receiving the grievance, processing them and suggesting suitable remedies.

Policy Guidelines:

- A Grievance of any student/ staff to be reported in writing to the committee.
- A committee is formed by the Principal and will conduct a hearing.
- Based on the report submitted by the committee, action is taken by the committee.

Term/Meeting/Quorum:

- The term of the committee is for two years and shall continue until reconstituted.
- Meeting will be conducted as the need arises
- Quorum for hearing shall be one of the members of the constituted committee.

Roles and Responsibilities:

- The chairman will head the grievance redressal cell.
- The final decision and action taken will be decided by the Chairman.
- Coordinator will coordinate the meeting related to hearing of grievances and will do the necessary reporting to the Chairman.

**Procedural Steps: (Explain the Procedure of Grievance Redressal)**

- The committee list is displayed on the notice board.
- Any grievance received by the coordinator will be intimated to the chairman.
- Necessary coordination for conduction of the hearing.
- Reporting of the findings of the hearing to the administration.
- Suitable action to be taken by the administration.

II. **Internal Quality Assurance Cell (IQAC) :** BMS Institute of Technology & Managements Internal Quality Assurance Cell (IQAC) aims to enhance academic and administrative quality by developing a system for continuous improvement, promoting a culture of quality, and ensuring attainment of the institutes vision and mission. The IQACs key roles include evaluating performance, monitoring quality activities, and guiding quality-related programs, with procedural steps such as developing a quality manual, establishing internal quality assurance mechanisms, and preparing an Annual Quality Assurance Report (AQAR). By following National Assessment & Accreditation Council (NAAC) guidelines, the IQAC plays a vital role in sustaining and enhancing the institutes quality. The composition of the IQAC at BMSIT&M is placed below:

INTERNAL QUALITY ASSURANCE CELL			
Sl. No.	Name of the Person	Affiliation	Designation
1.	Dr. Sanjay H A	Principal, BMSIT&M	Chairperson
Senior Administrative officers			
2.	Dr. Anil G N	Vice Principal	Member
3.	Dr. Sathish Kumar K M	Dean (Academics)	Member
4.	Dr. Ganesh P	Dean (Planning and Development)	Member
5.	Dr. Nagabhushan S V	Associate Professor (CSE)	Member Convener
Management Representative			
6.	Wg Cdr R A Raghavan	Director (Admin), BMSET	Member
Senior Faculty Members from different Departments			
7.	Dr. Usha B A	Professor (CSE) & NAAC Coordinator	Member
8.	Dr. Raju Hajare	Professor (ETE)	Member
9.	Mrs. Archana K	Assistant Professor (CV)	Member
10.	Dr. Vinay H V	Associate Professor (MBA)	Member
11.	Dr. Hanumantha Raju M C	Professor (ECE) & COE	Member
12.	Dr. Prashanth AA	HoD, Assistant Professor (EEE)	Member

<b>Representation from R&amp;D Lab, Industry and IIT/NIT (To be nominated by VTU)</b>			
13.	Dr. Raja Samikkannu	Scientist D, CSIR, NAL, Bengaluru	Member
14.	Sri. Ramanujan VS	Sr. DGM, BEL, Bengaluru	Member
15.	Dr. C. Pandu Rangan	Dept. of CSE, IIT, Madras	Member
<b>Three non-teaching staff of the college, one each from different categories</b>			
16.	Mr. Pujari Kodanda Ramurthy	Mechanical Engineering	Member
17.	Mr. H N Harinath	Artificial Intelligence and Machine Learning	Member
18.	Mr. Anthony	Civil Engineering	Member

**III. Anti-Ragging Committee**

- a) Frequency of Meeting : Twice per year or Any incidents reported / noticed will be addressed separately in the hostel / college level.

**Functions of Anti-ragging Committee:**

This Committee is headed by the Head of the Institution, and consists of representatives of civil and police administration, local media, Non-Government Organizations involved in youth activities and representatives of faculty members, representatives of parents, representatives of students belonging to the freshers' category as well as senior students and non-teaching staff.

<b>Anti-Ragging Committee Members:</b>		
Sl.No:	Members Name	Designation
1.	Dr. Anil G N – Vice Principal	Chief Coordinator
2.	Sub Inspector of Police, Rajanukunte	Member
3.	Dr Ambika R	Dean Student Welfare
4.	Dr. Raju Hajare – Chief Warden	Coordinator
5.	Mr Devendra Kumar S Administrative Officer	Member
6.	Mr Jagannatha K B Deputy Warden	Member
7.	Dr Daruka Prasad B Deputy Warden	Member
8.	Dr Asha K Deputy Warden, Girls' Hostel	Member

b) Responsibilities:

- i. To monitor the activities of the anti-ragging squads and regarding the incidents of ragging, the problems faced by wardens and other officials, etc.
- ii. To conduct an enquiry into any incidents of ragging referred to it by the Head of the institution or any member of the faculty or any member of the staff or any student or any parent or guardian, submission of enquiry report along with recommendations to the Anti-Ragging Committee for action.
- iii. The Anti-Ragging Squad shall conduct such enquiry observing a fair and transparent procedure and the principles of natural justice and after giving adequate opportunity to the student or students accused of ragging and other witnesses to place before it the facts, documents and views concerning the incidents of ragging, and considerations such other relevant information as may be required.

iv. The Monitoring Committee shall also review the efforts made by institutions to publicise anti-ragging measures, including the solicitation of affidavits from parents/guardians and students, each academic year, to abstain from ragging activities.

c) Anti-Ragging Squad: This Committee is nominated by the Head of the Institution, representing various members of the campus community, including faculty, hostel wardens, technical staff, and other administrative staff. The Dean of Student Welfare will serve as the primary coordinator.

**Responsibilities:**

- i. To maintain vigil, oversight and patrolling functions and remain mobile, alert and active at all times.
- ii. To make surprise visits to the hostels, and other places vulnerable to incidents and having the potential for ragging and shall be empowered to inspect such places.

**IV College Internal Complaints Committee (CICC):**

1. Coordinators :

SI No.	Name & Designation	Position in CICC	Gender	Mobile No. & Email ID
1	Dr Geeta Amol Patil, Associate Professor, Dept. of ISE	Chairperson	Female	9764923424 geetapatil@bmsit.in (mailto:geetapatil@bmsit.in)
2	Dr. Lokesh R, Associate Professor, Physics Dept.	Faculty Member	Male	9844921008 lokeshphy@bmsit.in (mailto:lokeshphy@bmsit.in)
3	Mrs Shilpa G, Assistant Professor, HoD of EEE	Faculty Member	Female	9986299412 shilpag@bmsit.in (mailto:shilpag@bmsit.in)
4	Smt B J Tejaswini, Assistant Professor & HoD of HSS	Faculty Member	Female	9945545014 bjtmech@bmsit.in (mailto:bjtmech@bmsit.in)

5	Dr. Rajesh I S, Assistant Professor, AIML Dept.	Faculty Member	Male	7676776343 rajeshaiml@bmsit.in (mailto:rajeshaiml@bmsit.in)
6	Ms Shailavathi R, Library Assistant	Member (Non-teaching Employee)	Female	8880956777 shailavishwanath@bmsit.in (mailto:shailavishwanath@bmsit.in)
7	Ms. Supriya Gouda	Student (1BY23IS227) 3rd Sem-ISE	Female	8296076536, 1by23is227@bmsit.in
8	Ms. A Vishaka	Student (1BY22EE002) 5th Sem-EEE	Female	63643 11849 1by22ee002@bmsit.in
9	Mr Amith Myshri R	Student (1BY23CV401) 5th Sem-Civil	Male	8861436700 1by23cv401@bmsit.in
10	Dr Brinda K Varma Advocate	Advocates & IPR Consultants, (POSH Expert)	Female	9480059559 brinda@aekamlegal.com (mailto:brinda@aekamlegal.com)

2. As per VTU Circular Ref. no. VTU/BGM/WC/ICC/2021-22/6370/1 Dated:17-3-2022 (Gender sensitization, prevention, and prohibition of sexual harassment of employees and students and Redressal of Grievances in Technical Institutions), College Internal Complaint Committee (CICC) has been formed in BMSIT&M to prevent sexual harassment at workplace. College Internal Complaint Committee sensitizes the faculty members and students on the prevention and prohibition of sexual harassment.

#### **Roles and Responsibilities:**

- i. To promote awareness about sexual harassment through educational initiatives that encourages and fosters a dignified and safe environment on campus.
- ii. To provide a neutral, confidential, and supportive environment for the campus community who may have been sexually harassed.
- iii. To ensure fair and timely resolution of complaints about sexual harassment.
- iv. To provide information regarding counselling and support services on the campus.
- v. To ensure that students, faculty and staff are provided with current and comprehensive information on sexual harassment and assault.

Similarly other Statutory/Non-Statutory Committees are formed as per UGC/AICTE/VTU guidelines.

#### **Service rules, Policies and Procedures; Year of Publications to be listed**

1. **Appointment:** Board of Appointments (BOA), headed by the Chairman, BOG is formed as and when faculty members / staff are to be recruited. Generally, the committee meets minimum twice in a year prior to the new academic session. The Chairman, BOG, will serve as the Chairman of the BOA and Principal, BMSIT&M, as the Member Secretary, and invited subject experts and VTU representatives, serve as members of the BOA.

Main responsibility of the BOA is to identify the right candidates for various teaching and non-teaching positions. All the recruitments are subject to ratification by the Board of Governors. Student-teacher ratio and cadre ratio are maintained as per AICTE / VTU regulations. The vacancies are advertised in All India Circulation Newspapers and on the institutions website and social media. The weblink for recruitment: <https://bmsit.ac.in/careers> (<https://bmsit.ac.in/careers>) and [https://projects.bmsit.ac.in/faculty\\_recruitment](https://projects.bmsit.ac.in/faculty_recruitment) ([https://projects.bmsit.ac.in/faculty\\_recruitment](https://projects.bmsit.ac.in/faculty_recruitment))

**2. Promotions:** The Institute has in place three categories of promotion/s:

- a) **Direct Promotion (against Vacancy in the Cadre):** All vacant positions in a Department will be advertised in newspapers for inviting applications from eligible and qualified candidates. As it is open competition, both faculty members from the institute and external candidates may apply for positions. While external candidates are shortlisted based on both eligibility and merit, internal candidates will be shortlisted based only on eligibility. All shortlisted candidates would be called for interview. The selection of candidates in the interview will be purely based on the performance of the candidates.
- b) **Career Advancement Scheme (CAS):** In line with the AICTE policy, BMSIT&M has in place Career Advancement Scheme (CAS) for promoting the deserving teachers who do not get career advancement despite their eligibility and merit due to the absence of vacancies at higher levels. The CAS sets certain benchmarks on many key parameters (both academic, research and out-reach) to be satisfied by a teacher to become eligible for promotion. A screening committee/selection committee evaluates these eligible teachers as per the guidelines of AICTE before considering for promotion.
- c) **Time-Bound Promotion:** BMS Institute of Technology & Management has a promotion policy for promoting Assistant Professors to Associate Professor positions based on Age and Service. This policy ensures that experienced and qualified faculty members are recognized and promoted to senior positions.

**3. Service Rules at BMSIT&M:** The Service Rules and Code of Conduct for teaching and non-teaching staff members are available on the institutes website. Changes in Policies and Service Rules approved by the Board of Governors are brought to the notice of the staff members through e-mail.

**The weblink:** <https://bmsit.ac.in/public/assets/pdf/proceedings/ MANAGEMENT%20NORMS%20FOR%20STAFF.pdf>  
<https://bmsit.ac.in/public/assets/pdf/proceedings/ MANAGEMENT%20NORMS%20FOR%20STAFF.pdf>

**9.6.3 Transparency (5)**

Institute Marks : 5.00

BMS Institute of Technology & Management (BMSIT&M) is committed to providing a conducive and supportive environment for its Students, Faculty, and Staff. To achieve this goal, the institute has established various policies that govern its Academic, Administrative, and Operational activities. The following are some of the policies in vogue:

<b>Policies at BMSIT&amp;M</b>	
<b>Management Norms / Rule Book for Staff</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/ MANAGEMENT%20NORMS%20FOR%20STAFF.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/ MANAGEMENT%20NORMS%20FOR%20STAFF.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/ MANAGEMENT%20NORMS%20FOR%20STAFF.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/ MANAGEMENT%20NORMS%20FOR%20STAFF.pdf</a> )
<b>Promotion Policy (Direct Promotion, CAS, Time-Bound Promotion)</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/Paths%20for%20Career%20Progression%20(CAS,%20Time%20Bound%20and%20Dir%20Recruitment.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/Paths%20for%20Career%20Progression%20(CAS,%20Time%20Bound%20and%20Dir%20Recruitment.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/Paths%20for%20Career%20Progression%20(CAS,%20Time%20Bound%20and%20Dir%20Recruitment.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/Paths%20for%20Career%20Progression%20(CAS,%20Time%20Bound%20and%20Dir%20Recruitment.pdf</a> )
<b>Autonomous Rules and Regulations</b>	<a href="https://bmsit.ac.in/public/assets/pdf/autonomous/Final%20regulations%2011.12.2021%2012.45pm.pdf">https://bmsit.ac.in/public/assets/pdf/autonomous/Final%20regulations%2011.12.2021%2012.45pm.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/autonomous/Final%20regulations%2011.12.2021%2012.45pm.pdf">https://bmsit.ac.in/public/assets/pdf/autonomous/Final%20regulations%2011.12.2021%2012.45pm.pdf</a> )
<b>Examination Rules and Regulations</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/examrules.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/examrules.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/examrules.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/examrules.pdf</a> )
<b>Research Grants and Incentive Policy</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/BMSIT&amp;M%20Research%20Grants%20and%20Incentive%20Policy.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/BMSIT&amp;M%20Research%20Grants%20and%20Incentive%20Policy.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/BMSIT&amp;M%20Research%20Grants%20and%20Incentive%20Policy.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/BMSIT&amp;M%20Research%20Grants%20and%20Incentive%20Policy.pdf</a> )
<b>Code of Conduct</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/codeofconduct.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/codeofconduct.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/codeofconduct.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/codeofconduct.pdf</a> )
<b>Professor of Practice</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/professorofpractice.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/professorofpractice.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/professorofpractice.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/professorofpractice.pdf</a> )
<b>Innovation and Startup Policy (Archana, Civil)</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/ie.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/ie.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/ie.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/ie.pdf</a> )
<b>Staff Competency Development Policy (VP)</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/Staff%20Competency%20Development%20Policy_0001.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/Staff%20Competency%20Development%20Policy_0001.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/Staff%20Competency%20Development%20Policy_0001.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/Staff%20Competency%20Development%20Policy_0001.pdf</a> )
<b>PBAS (Performance Based Appraisal System) Policy</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/pbas.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/pbas.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/pbas.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/pbas.pdf</a> )
<b>Career Advancement Scheme (CAS)</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/cas.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/cas.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/policies/cas.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/policies/cas.pdf</a> )
<b>Internal Audit Committee Policy</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20ON%20INTERNAL%20AUDIT%20COMMITTEE.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20ON%20INTERNAL%20AUDIT%20COMMITTEE.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20ON%20INTERNAL%20AUDIT%20COMMITTEE.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20ON%20INTERNAL%20AUDIT%20COMMITTEE.pdf</a> )
<b>Residential Accommodation Overseeing Committee Policy</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/ROAC.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/ROAC.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/ROAC.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/ROAC.pdf</a> )
<b>Recruitment Policy</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/Recruitment%20policy.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/Recruitment%20policy.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/Recruitment%20policy.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/Recruitment%20policy.pdf</a> )
<b>Procurement Policy</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20FOR%20PROCUREMENT.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20FOR%20PROCUREMENT.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20FOR%20PROCUREMENT.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20FOR%20PROCUREMENT.pdf</a> )
<b>Preparation of Annual Budget Policy</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20FOR%20PREPARATION%20OF%20ANNUAL%20BUDGET.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20FOR%20PREPARATION%20OF%20ANNUAL%20BUDGET.pdf</a> ( <a href="https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20FOR%20PREPARATION%20OF%20ANNUAL%20BUDGET.pdf">https://bmsit.ac.in/public/assets/pdf/proceedings/POLICY%20FOR%20PREPARATION%20OF%20ANNUAL%20BUDGET.pdf</a> )

<b>Sabbatical Leave Policy</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/SABBATICAL%20LEAVE%20POLICY.pdf">(https://bmsit.ac.in/public/assets/pdf/proceedings/SABBATICAL%20LEAVE%20POLICY.pdf)</a>
<b>Staff Welfare Policy</b>	<a href="https://bmsit.ac.in/public/assets/pdf/proceedings/Staff%20Welare%20Policy_06.07.2023.pdf">(https://bmsit.ac.in/public/assets/pdf/proceedings/Staff%20Welare%20Policy_06.07.2023.pdf)</a>

#### **Delegation of Financial Powers**

To ensure efficient financial management and the smooth functioning of the institution, the Board of Governors has hereby delegated specific financial powers to the Principal, Deans, and Heads of Departments (HODs). This delegation aims to decentralise decision-making, promote accountability, and expedite routine financial transactions while maintaining transparency and adherence to institutional policies.

#### **1. Principal**

The Principal shall have the authority to:

- Approve expenditure related to academic and administrative activities within the sanctioned budget limits.
- Sanction procurement of goods and services up to a specified financial ceiling of RS 3,00,000/-.
- Authorize payments and reimbursement claims related to faculty, staff, and institutional operations which are up to 3,00,000/-.
- All payments above 3,00,000/- are Authorised by principal and chairman.
- Oversee and ensure compliance with financial guidelines and reporting to the Board of Governors.

#### **2. Deans**

The Deans of respective facilities shall be empowered to:

- Approve departmental expenses and purchases within the budget allocated to their faculty.
- Sanction travel and training-related expenditures for faculty and staff under their jurisdiction, subject to institutional norms.
- Monitor utilization of financial resources and submit periodic financial reports to the principal.

#### **3. Heads of Departments (HODs)**

The Heads of Departments are delegated the authority to:

- Manage and approve routine expenditure for departmental activities, maintenance, and minor procurement within prescribed limits of Imprest amount provided to their departments.
- The Imprest amount so provided are replenished without any limit for such replenishment as and when required with the submission of Bills in the prescribed manner provided by the institute
- Recommend procurement and budget utilization plans for approval by the Dean or Principal.
- Ensure proper documentation and timely submission of financial records to the concerned authorities.

#### **4. Budget Approval and Non-Interference Clause:**

- All financial decisions and expenditures by the Principal, Deans, and HODs must be made within the framework of the approved annual budget. Once the Board of Governors sanctions the budget, the Management shall not interfere with or override the financial decisions made by these delegated authorities, provided these decisions are in line with the approved budgetary provisions and institutional policies.
- This policy is intended to foster autonomy, expedite decision-making, and enhance accountability at all levels of the institution, thereby contributing to improved institutional governance and operational efficiency.

Sl. No.	Designation	Financial power (in Rs.) – to approve procurement
1	Principal & Vice-Principal	Up to Rs. 3.00 lakhs
2	Chairman, BOG & Principal	Above Rs. 3.00 lakhs

The income and expenses are audited in two levels viz., Internal and External Auditors. The Principal is empowered to accord administrative sanction of all procurements / civil / maintenance work in the campus.

**Transparency and availability of correct/unambiguous information in public domain**

The important matters relating to governance, policies and events are uploaded on the college website regularly. As a measure of transparency, the Proceedings of the Board of Governors are uploaded on the College Website: <https://bmsit.ac.in/proceedings> (<https://bmsit.ac.in/proceedings>).

Through the website: <https://bmsit.ac.in/admissions> (<https://bmsit.ac.in/admissions>) the student can access all the information such as Advertisement / Notifications for admission to courses offered by the Institute, rules and regulation, scheme, and syllabus, download of applications etc. and the webpages are updated periodically.

The Audited Accounts of the Institute can be found on the website: <https://bmsit.ac.in/proceedings> (<https://bmsit.ac.in/proceedings>) and Mandatory Disclosure are also made available on the website: [https://bmsit.ac.in/public/assets/pdf/mandatory\\_disclosure/Mandatory\\_Disclosure.pdf](https://bmsit.ac.in/public/assets/pdf/mandatory_disclosure/Mandatory_Disclosure.pdf) ([https://bmsit.ac.in/public/assets/pdf/mandatory\\_disclosure/Mandatory\\_Disclosure.pdf](https://bmsit.ac.in/public/assets/pdf/mandatory_disclosure/Mandatory_Disclosure.pdf))

It shall be a constant endeavor of the Institution to take steps to provide information to the public at regular intervals through various means of communication, including the internet.

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**9.7 Budget Allocation, Utilization, and Public Accounting at Institute Level (12)**

Total Marks 12.00





Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3  
 CFY : (Current Financial Year),  
 CFYm1 : (Current Financial Year minus 1),  
 CFYm2 : (Current Financial Year minus 2) and  
 CFYm3 : (Current Financial Year minus 3)

**Table 1 - CFY 2024-2025**

Total Income 1123198962				Actual expenditure(till...):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
950420452	0	4361289	168417221	958141472	5437	176226.13

**Table 2 - CFYm1 2023-2024**

Total Income 763880809				Actual expenditure(till...):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
643449811	0	3524750	116906248	960484081	4429	216862.52

**Table 3 - CFYm2 2022-2023**

Total Income 627493866				Actual expenditure(till...):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
526067886	0	3708817	97717163	73,13,25,901	3919	186610.33

**Table 4 - CFYm3 2021-2022**

Total Income 591433119				Actual expenditure(till...):	Total No. Of Students	Expenditure per student
Fee	Govt.	Grants	Other sources(specify)			
516211173	0	2117000	73104946	56,65,16,322	3859	146803.92

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Infrastructure Built-Up	3104140	1959506	6302700	2456035	9201200	1468505	9040699	7511957

Library	482000C	3009564	454000C	165248C	453200C	321337E	3105672	2081176
Laboratory equipment	980850C	100195E	5629772	484253E	472188C	371314E	3704715	3544994
Teaching and non-teaching sta	5405493	504853E	4688451	4205141	4065763	387082E	316400C	327554C
Outreach Programs	650000	822236	284000	66478	261000	72933	226240	158298
R&D	645500C	5271061	300000C	1515297	410000C	681028	145000C	569069
Training, Placement and Indust	935630C	502070C	465000C	396545E	602900C	4554823	1106000	1072119
SDGs	750000C	633543C	670000C	538844E	705000C	5501432	668700C	398790E
Entrepreneurship	445000C	288646C	302000C	310321E	470000C	1060792	185000C	32748
Others, specify	1781032	133795E	159505E	230249E	9620134	145176E	8016584	1204914
<b>Total</b>	<b>1160382916</b>	<b>958141472</b>	<b>769869791</b>	<b>960484081</b>	<b>668680474</b>	<b>731325901</b>	<b>538444893</b>	<b>566516322</b>

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**9.8 Program Specific Budget Allocation, Utilization (8)**


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Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3

CFY: (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2) and

CFYm3 : (Current Financial Year minus 3)

**Table 1 :: CFY 2024-2025**

Total Budget 34460000		Actual expenditure (till...): 22442325		Total No. Of Students 696
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
34460000	34460000	22442325	65%	32244.72

**Table 2 :: CFYm1 2023-2024**

Total Budget 3610000		Actual expenditure (till...): 2755271		Total No. Of Students 630
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
3610000	3610000	2755271	76%	4373.45

**Table 3 :: CFYm2 2022-2023**

Total Budget 3760000		Actual expenditure (till...): 3369695		Total No. Of Students 630
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
3760000	3760000	3369695	89%	5348.72

**Table 4 :: CFYm3 2021-2022**

Total Budget 2150000		Actual expenditure (till...): 1668534		Total No. Of Students 630
Demanded	Actual Allocated	Actual Expenditure	% Spent	Expenditure per student
2150000	2150000	1668534	77.68	2648.47

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Laboratory equipment	3205000	1975629	1300000	1139000	1800000	1793170	250000	237500
Software	1500000	1862447	1700000	1200960	1400000	1200960	1400000	1140000
SDGs	300000	313443	100000	72441	50000	16460	0	0
Support for faculty development	150000	87829	150000	112470	150000	165779	150000	155938
R & D	200000	177272	200000	79200	200000	71326	200000	58886
Industrial Training, Industry exp	200000	193043	100000	100200	100000	71500	100000	31210

BoS and others	60000	52000	60000	51000	60000	50500	50000	45000
Total	<b>34460000</b>	<b>22442325</b>	<b>3610000</b>	<b>2755271</b>	<b>3760000</b>	<b>3369695</b>	<b>2150000</b>	<b>1668534</b>

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**9.9 Quality of Learning Resources (Hard/Soft) (5)**

Total Marks 5.00



**Preamble:**

- The total built-up area of library is **1664 sqm.** comprising **issue section with 768 sqm.** and **reference section with 896 sqm.**
- Library Working Hours are as follows:

**Circulation:**

Monday to Saturday: 8:30 AM to 4:30 PM

**Reference Section:**

Monday to Saturday: 8:30 AM to 9:00 PM

**During Internal Tests and University Exams:**

**One week before and till the completion of examination, Sundays & general holidays remains open 9:30 AM to 1:00 PM**

- The Boards of studies at the Institute level are advised to recommend latest standard textbooks during the curriculum design, from time to time.
- In the beginning of the academic year, the department will send the request to library for prescribed textbooks.
- The library will procure the identified and relevant books/materials by considering the students' strength of the respective academic year.
- In addition, library also has a provision to procure books that are required for faculty, research scholars and students for specific purposes.
- Institute recommends to procure books published by standard publishers such as Mc-Graw Hill, Pearson, CRC, Springer, CUP etc.
- In view of the GenZ students, preference is given to e-books in addition to printed books.
- Library follows the following borrower mechanism:

Category	Privileges	Duration
Faculties	8 books	1 month
Student-General	3 books	2 weeks
Students-Book Bank	3+2 books	2 weeks; 1 semester
Student- SC/ST	3+2 books	2 weeks; 1 semester

**Library Resources:**

Book Titles	15,590
Book Volumes	69,162
Print Journals - Research	117

	EDUPORT GLOBAL-CBS	174	
	BSP BOOKS	141	
	CENGAGE LEARNING	69	
	CAMBRIDGE UNIVERSITY PRESS	58	
e-BOOKS	MINT	1360	29,301
	QUIKLRN	91	
	EBSCO ENGINEERING SUITE DATABASE	24,015	
	CAMBRIDGE UNIVERSITY PRESS	94	
	PEARSON INDIA	80	
	OTHERS	3,219	
e-JOURNALS	IEEE- ASPP & POP All	1,785	
	ELSEVIER SCIENCE DIRECT	327	
	SPRINGER NATURE	689	9,113
	EMERALD PUBLISHING	212	
	EBSCO ENGINEERING SUITE	6,100	
Dailies		15	
Weeklies		14	
Anti-Plagiarism Software	Turnitin (https://www.bing.com/ck/a?i=&p=9b895d71e9737c983d4718d24e659902d1a1d25cf89721bf210bd44d1fab9f81JmltdHM9MTc1MDYzNjgwMA&ptn=3&ver=2&hsh=4&fcid=1d639025-f4cf-69ca-23fa-854df56268e4&psq=turnitin&u=a1aHR0cHM6Ly93d3cudHVybml0aW4uY29tL2xvZ2luX3BhZ2UuYXNw&ntb=1) iThenticate ( <b>Institutional Subscription</b> )  DrillBit ( <b>VTU e-consortium</b> )	400 End users  Unlimited	
DELNET Service			
IIMB Membership service			
NDLI service			
Reprographic Services			
Other Facilities:			
Digital Library with headsets		20 Systems	



- In addition to the above, the following services are being provided by the library:
  - Circulation including Book Bank and SC/ST Book Bank facility.
  - Selective Dissemination of Information (SDI) Service to research scholars and faculties.
  - Newspaper Clipping Service on email.
  - Content Page Service of subscribed print journals.
  - New Arrivals list through e-mail.

◦ **ACCESSIBILITY TO STUDENTS AND STAFF:**

- Open access to its resources is adapted.
- Open-Source Library Integrated Management Software - **Koha 21.11.05 version**, is in vogue.
- All articles have been shelved strictly according to **DDC 22/e**.
- Online Public Access Catalogue (OPAC) software is available in library, which can be used to check the availability of any article and its shelving location, which helps users to easily locate the required book/article. Three computer systems are dedicated for this purpose. In addition, OPAC can be accessed at <http://172.16.0.40> (<http://172.16.0.40>), which is available on intranet and on <http://14.97.166.101> (<http://14.97.166.101>) on the internet.
- The books are well stacked and are easily located through the following:
  - Shelf Numbers
  - Bay Guides
  - Shelf Lists
  - Title Lists
- Remote Access to e-resources can be obtained by:
  - Authenticating the device for IEEE Packages.

◦ **Support to students for self-learning activities:**

- A separate digital library with 20 systems with internet connectivity is available for self-learning.
- Library has procured 29,774 NPTEL videos and 15,928 web courses from IIT Madras and have been archived in a dedicated storage device and hosted on local area network that helps readers access the information on digital device through internet and alternatively can have a copy of the resources from the library for viewing from anywhere.
- Library has also archived **Do-It-Yourself (DIY)** series materials which help students for self-learning.
- GMAT, GRE, GATE, TOFEL etc., books are available for students to take competitive exams.
- Discussion rooms with internet facility at library enable students for group discussion and brainstorming.
- Institute encourages students towards self-learning by providing incentives for successful completion of NPTEL/SWAYAM courses.
- Best reader award is instituted to promote good reading habits to support continuous learning.



E-governance in education involves using technology to improve academic and learning management, ensuring equitable access to campus-wide computing resources, and fostering sustainable practices, ultimately enhancing student and faculty experiences and outcomes. E-governance initiatives for administration, academic operations, examinations, feedback, and communication can be considered here.

E-governance in education leverages information and communication technologies (ICTs) like the internet and online platforms to enhance governance, improve TLP and facilitate interactions within the educational ecosystem.

#### **E-Governance Initiatives in Academics, Examination and Administration:**

- Student Management system is in place which caters the following:
  - Admission Process
  - Fees Collection and Reporting
  - Course Registration
  - Elective Selection
  - Lesson Plan Preparation and Work Done Diary
  - Support for Learning Management System
  - Attendance Management
  - End-to-end CIE Computation
  - Student Feedback on Faculty Members
  - Proctoring
  - Examination Registration
  - Examination Conduction (Hall Ticket Generation, Seating Arrangements, Form A/B Generation)
  - Digital Valuation and Billing
  - Results Processing and Grade Card / PDC Generation
  - Results Announcement
  - Support for OBE
  - Student / Parent Dashboard for Monitoring and Corrective Measures
  - Monitoring at different Administrative levels
  - Grievance Submission and Redressal
- Online MCQ examination for 1-credit courses through Quiklm
- Tally ERP for Accounting
- Koha for Library Management
- Online access to Library Resources and Research Publications
- iThenticate (Turnitin) and Drillbit for Anti Plagiarism check
- Staff selection using Digital Tabs / Online platforms
- Digital communication with stakeholders through e-Mail, Website, Social media
- Alumni connect through Web Portal
- Staff management through in-house web application

#### **Sustainable Practices in Academic and Learning Management:**

BMS Institute of Technology & Management (BMSIT&M) is committed to fostering sustainable, transparent and efficient academic and administrative operations through robust e-governance practices. The institute has embraced a range of digital solutions that reduce paper usage, streamline workflows and promote accountability, aligning well with the principles of sustainability and governance.

##### **1. Integrated Student Management System**

A comprehensive **Student Management System (SMS), Contineo**, is implemented to automate and digitize the entire student lifecycle, thereby minimizing paperwork and manual processes. Key features include:

- **Admission Process:** Online application, verification, and admission workflows.
- **Fees Collection & Reporting:** Cashless transactions and real-time financial reporting.
- **Course Registration & Elective Selection:** Digital interfaces for student course registration.
- **Lesson Plan & Work Diary:** Interfaces for course planning, course delivery and tracking of syllabus coverage.
- **Learning Management System (LMS) Support:** Integration with LMS for digital content access.
- **Attendance & CIE Computation:** End-to-end digital monitoring of attendance and Continuous Internal Evaluation.
- **Student Feedback Mechanism:** Structured online feedback system on faculty performance.
- **Proctoring & Mentoring:** Online tracking of student progress and mentorship logs.
- **Examination Management:** Hall ticket generation, seating plans, and Form A/B automation.
- **Digital Valuation & Billing:** Secure, paperless valuation with integrated faculty compensation.
- **Results Processing:** Automated grade card and PDC generation, with result announcements.
- **OBE Support:** Mapping of COs/POs for Outcome Based Education and analytics.
- **Stakeholder Dashboards:** Real-time academic and performance data for students, parents, faculty members, mentors.
- **Grievance Redressal System:** Digitally tracked complaint submission and resolution mechanism.
- **Administrative Monitoring:** Dashboards for department heads and administrators for data-driven governance.

## **2. Financial and Administrative Digitalization**

- **Tally ERP** is utilized for transparent and efficient financial accounting and auditing, minimizing manual ledger maintenance and ensuring sustainability.
- **In-house Staff Management System:** Web-based platform for salary slips and performance monitoring.

## **3. Library and Research Support**

- **Koha Integrated Library System** supports cataloguing, lending, and inventory digitally.
- **Online Access to Resources:** Students and faculty have remote access to journals, e-books, and databases, promoting a paperless learning environment.
- **Plagiarism Detection:** Use of iThenticate (Turnitin) and Drillbit ensures research integrity and discourages academic misconduct.

## **4. Stakeholder Communication and Engagement**

- **Digital Staff Recruitment:** Provision to apply online for the vacant positions, faculty hiring process conduction via tablets and online tools to ensure process efficiency and transparency.
- **Communication Platforms:** Use of email, institutional website and official social media handles for real-time updates, circulars and newsletters.
- **Alumni Engagement:** Web-based alumni portal, **Almashines**, fosters continued engagement and networking.

### **Campus-wide computing resources**

The following table represents the list of campus wide computing resources in place at BMSIT&M.

Computers for Students	1738
Computers for Administration	115
Printers	64
Internet	2 Gbps Internet leased line (1:1)
Wi-Fi Access Points	280 access points
Website	<a href="https://bmsit.ac.in">https://bmsit.ac.in</a> ( <a href="https://bmsit.ac.in">https://bmsit.ac.in</a> )

ERP	<p>Contineo for Academics and progress -  <a href="https://staff.bmsit.ac.in/sims/">https://staff.bmsit.ac.in/sims/</a>          (https://staff.bmsit.ac.in/sims/)</p> <p><a href="https://student.bmsit.ac.in/webfiles/">https://student.bmsit.ac.in/webfiles/</a>          (https://student.bmsit.ac.in/webfiles/)</p> <p>Examination Results  <a href="https://results.bmsit.ac.in/">https://results.bmsit.ac.in/</a>          (https://results.bmsit.ac.in/)</p> <p>Internal web application for staff use  <a href="https://projects.bmsit.ac.in/">https://projects.bmsit.ac.in/</a>          (https://projects.bmsit.ac.in/)</p>
In-House Servers for ERP	<p><b>1. Academic Server Configuration:</b>          SERVER: AMWIN DP Server with 48 Core, 512 GB RAM, RAID 1 (2 * 480 GB SSD) for OS and RAID 6 (6 * 2.4 TB SAS HDD) for DATA</p> <p><b>2. Examination Section Server Configuration:</b>          SERVER: AMWIN DP Server with 48 Core, 512 GB RAM, RAID 1 (2 * 480 GB SSD) for OS and RAID 6 (6 * 6 TB SAS HDD) for DATA</p>
Examination Valuation	Digital
CCTV	430 IP Cameras
E-Studio	LMS content creation
Projectors	172
Smart Boards	08
Alumni Connect	Almashines Portal
Collaboration	MS Teams, GoogleMeet, WebEx, Zoom
Grievance Addressal	Digital
Staff Attendance	Bio-Metric, ICT based
Student Monitoring – Parents	Contineo
Social media	LinkedIn, Instagram
Journal Access	e-consortium
Plagiarism Check Tools	Turnitin and Drillbit – with access outside BMSIT&M
Library OPAC	With access outside BMSIT&M
Proprietary Software	38
Open-Source Software	28

System Software	7
Application Software	59
Anti-Virus	Escan – 100 Users
Firewall	FortiGate 500E

#### ***Accessibility and availability to support academic and professional activities for students and faculty***

BMS Institute of Technology and Management (BMSIT&M) is committed to ensuring that academic and professional support resources are **readily accessible and consistently available** to both students and faculty. The institute has adopted multiple digital, physical, and infrastructural strategies to promote seamless access, thereby fostering a conducive environment for teaching, learning, and research.

#### **1. Digital Platforms and Resources**

- **Learning Management System (LMS):** Students have 24x7 access to course materials, assignments and assessments through the LMS..
- **Online Library Access:** The digital library offers remote access to a wide range of e-books, journals, databases, and open-access resources, supporting academic and research work beyond institutional boundaries.
- **Plagiarism Check Tools:** Availability of iThenticate and Drillbit to all faculty and research students supports ethical research practices and academic integrity.
- **Student Management System:** Facilitates real-time access to academic data, attendance records, feedback, exam schedules, and results for both students and faculty, improving transparency and decision-making. Faculty utilize the platform for content delivery, student interaction, and academic tracking.
- **Research facilities:** NVIDIA centre of excellence's high-end resources are accessed through secured credentials via internet. Additionally software and hardware can also be accessed through intranet.

#### **2. Physical Infrastructure and Facilities**

- **Well-equipped Laboratories and Research Centers:** Department-specific labs with extended working hours support hands-on learning and experimentation.
- **Wi-Fi Enabled Campus:** High-speed internet across the campus ensures uninterrupted connectivity to digital resources.
- **Central Computing Facilities:** Access to high-performance computing systems and software supports simulation, design, and programming-related activities.
- **Library with Extended Hours:** The central library remains open beyond regular hours during normal days and exams.

#### **3. Academic Support Services**

- **Proctoring System:** Each student is assigned a faculty mentor (proctor) who provides academic guidance, career counseling, and personal support during and after the working hours.
- **Skill Development and Certification:** Regular workshops, value-added courses, and industry-relevant certifications are offered at the institute and department level.
- **Career Guidance and Placement Cell:** Students receive consistent support through training, internships, and placement activities. Mock interviews, resume-building workshops, and guest lectures enhance professional readiness.
- **Research and Consultancy Support:** Faculty are supported through seed funding, research grants, conference sponsorships, and publication incentives.

#### **4. Administrative and Grievance Support**

- **Digital Grievance Redressal:** A transparent, online grievance mechanism is in place for quick redressal of academic, administrative, and personal concerns.
- **Responsive Communication Channels:** Information dissemination through emails, SMS alerts, website updates, and notice boards ensures that students and staff are well-informed and connected.

#### **Implementation:**

- Dedicated ITS team to plan, provision, maintain ICT resources at the campus.

- Adequate budget provided to procure and maintain ICT resources.
- Regular Feedback on the ICT resources from stakeholders for further improvement.
- Authentic logins for each of the stakeholders to access the key ICT resources.
- Dedicated in-house as well as cloud servers to deploy the ICT tools.
- CCTVs are protected and secured with storage facility for 6 months.
- Bio-metric devices are installed for easier access by staff members to mark their attendance.

**BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT** (Autonomous Under VTU)

HOME STUDENT GRIEVANCE COUNSELLING USER MANUAL LOGOUT Dr. P Ganesh

Even Term 2025 REPORT ISSUE TO CONTINEO HELPDESK

Dr. P Ganesh

Menu:

MY CLASSES

[View Timetable](#)

MCA-MCA - CLOUD COMPUTING (Theory) - SEM II - SEC B

Max IA Marks: 50 | MMCA24 |

**Internals**

	IA1	AAT1	IA2	AAT2	IA3
Mark	45	10	45	10	45
View	<a href="#">View</a>				
Pdf	<a href="#">Pdf</a>				

**Attendance** on 14:30, Friday on 09:25

Planned:	Marked:	Pending:
43	16	1

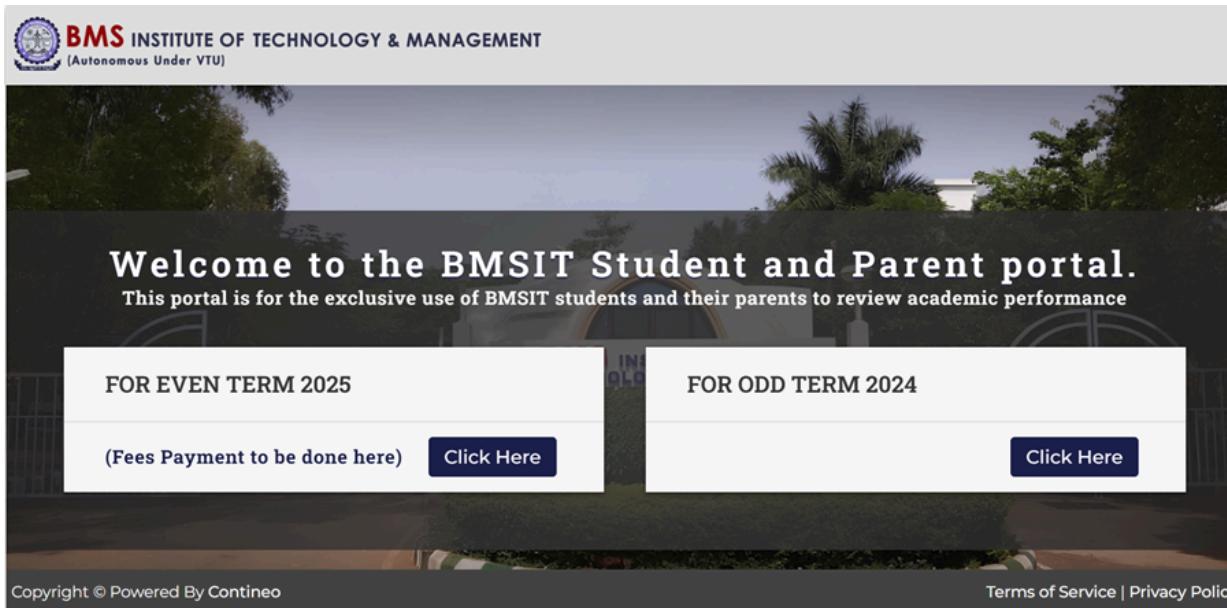
[Mark](#) [View](#) [Pdf](#)

**LDPR**

37.2%  
8.0%  
0 100  
LDPR Progress Class Progress

[Mark](#) [View](#)

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The image shows the dashboard of the BMSIT Student and Parent portal. The top navigation bar includes a back arrow, forward arrow, refresh icon, a search bar with a magnifying glass icon, a star icon, a user verification icon, and a three-dot menu icon. The URL in the address bar is "projects.bmsit.ac.in/dashboard". The dashboard header features the BMSIT&M logo and the name "Dr. P Ganesh" with the title "Professor and Dean (Planning and Development)". On the left, a sidebar menu lists "Search", "Dashboard" (which is selected and highlighted in blue), "Research & Consultancy", "NAAC Survey Status", "Duplicate / New ID Card", and "Logout". The main content area displays three cards: "Master of Computer Applications" (Department), "9901213213" (Mobile), and "pganesh@bmsit.in" (Email). Below these are three more cards: "Salary Payslip" (with tabs for 2024 and 2025, showing months January and February with "Action" buttons), "Medical Insurance E-Card" (with a tab for "E Card" and a "Download" button), and "Form 16" (with a tab for "Form 16" and a "Year" dropdown set to "Form 16 - Financial Year 2023-24" with an "Action" button).

[bmsit.ac.in](https://bmsit.ac.in)



B.M.S. INSTITUTE OF TECHNOLOGY & MANAGEMENT  
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Yelahanka, Bengaluru - 560019

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# BMSIT&M

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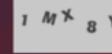
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Enter Student Registration No (USN)

Enter Id Card No

 Enter CAPTCHA

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**9.11 Initiatives and Implementation of Sustainable Development Goals (SDGs) (10)**

Total Marks 10.00



**Overview:**

BMSIT&M as an institution is committed to supporting the United Nations Sustainable Development Goals (SDGs) through a range of academic, research, infrastructure, entrepreneurial and outreach initiatives. Significant efforts have been undertaken in the areas of green energy, waste management, water conservation, carbon neutrality, quality education, and sustainable practices.

**1. Green Energy (SDG 7)**

Activities also co-aligned with SDG 11 & 13

The institution has installed solar panels and LEDs to reduce dependency on non-renewable energy. Faculty development Programs, Workshops and Hackathons have also been organised for renewable energy, to promote the use of clean and sustainable energy. The institute has also established Electric Vehicles laboratory. Courses focussing upon Green Buildings, Renewable Energy Resources, Electric Vehicles are also being engaged to equip students with the knowledge and skills essential to address the global energy and environmental challenges.



**Fig.** Solar Panels



**Fig.** Solar Panels and LED.



**Fig.** Electric Vehicles Laboratory

## 2. Waste Management (SDG 12)

### Activities also co-aligned with SDG 3, 6, 11 & 15

The institution is engaging in grey water treatment (350 KLD) with MBBR technology. The treated polished effluent (100%) is reused / recycled viz for lawn sprinkling, gardening etc. The Quality of recycled water is tested periodically before its usage. There is implementation of source-level waste segregation (bio, recyclable, and e-waste) as well. The institute has an MoU with GRKMS Pvt Ltd (govt. authorised recycler), wherein all e-wastes generated are being handed over to the firm. The garden litter is being handled viz. on-site passive composting. The institute is plastic-free and also engages in community outreach activities voluntarily under Swachh Bharat Abhiyan. The institute also complies with BBMP norms of segregation of both wet and dry waste, and as well engages in handing over to it. As a societal outreach, the hostel food waste is handed over to pig farms / pigsty. Also, 'DostBin', the smart waste management product developed by students and faculty team of BMSIT is successfully installed in the campus.



Fig. 350 KLD STP.





**Fig.** Passive Compost Pit.



e - NBA



**Fig. E-waste Collection Drive.**



**Fig.** Off-campus Swachh Bharat Abhiyan.

### 3. Preserving Water (SDG 6)

Activities also co-aligned with SDG 3, 6, 11 & 14

The institution has extensive Rainwater harvesting (RWH) systems installed across academic blocks and hostels (3 units) which can save a total of 3,10,000 Litres. The conserved water is being used for flushing, street washing, and gardening purposes. The washrooms are employing dual-flush systems and low-flow fixtures to reduce water consumption as well. The drinking water quality is constantly monitored by NABL certified labs.

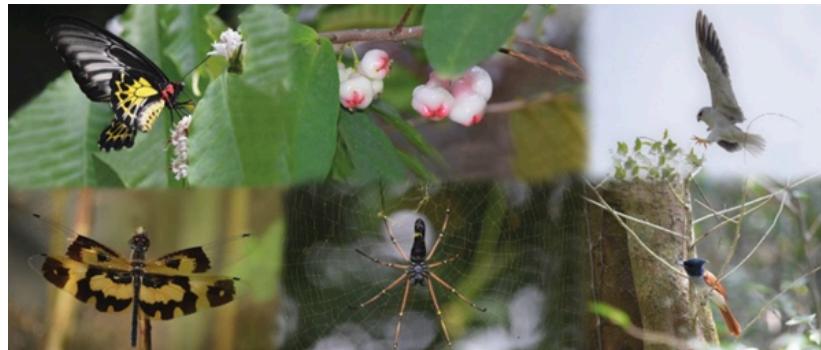


**Fig.** RWH unit.

**4. Net Zero (SDG 13)**

Activities also co-aligned with SDG 3, 8, 11 & 15

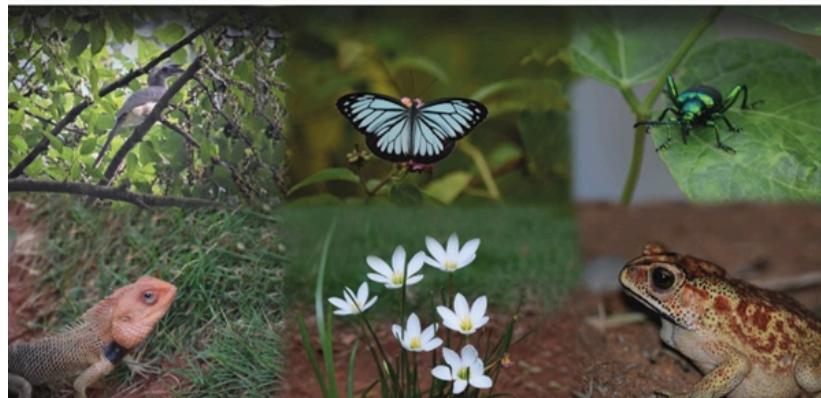
The institution has committed itself to Net Zero Commitment towards sustainability for Climate Action. The campus has a lush green campus with native species. The college has also published 2 Handbooks on its Fauna. Climate-related research publication on the carbon sequestration potential has also been published in an indexed journal. There is a gradual transition also towards motivating faculty, staff, and students to use Electric Vehicles, Cycles, Public Transport and adopt Car-pooling. A Green audit report is also being prepared annually which focusses upon the efforts of Biodiversity preservation, off-campus and on-campus greening programs, and eco-restoration projects that are aligned with terrestrial ecosystem sustainability goals. This also includes an experiential workshop for students on seedball making undertaken in the institute. Towards reducing emission inside campus, the students of mechanical engineering are fabricating an Electric Buggy (6-Seater) for the BMSIT campus.



# NATYRA

A Handbook on Flora and Fauna of BMSIT&M

**Dr Rajesh Gopinath**



**Fig.** Handbook on Campus Fauna**Fig.** On-campus Sapling Drive.



**Fig.** Off-campus Sapling Drive.

#### 5. Quality Education (SDG 4)

Activities also co-aligned with SDG 3, 6, 7, 9, 11 ,13 , 14, 15

The institute is committed to inclusive and equitable education. This is accomplished through value-added courses, experiential learning, outcome-based education, digital learning resources, and remedial classes for slow learners. Regularised Courses within scheme and viz MOOC is being offered in the avenue of Renewable Energy, Waste Management, SDG, Green Building, Climate Science, Environmental Science and Engineering, Rain Water and Water Resource Conservation, Soild Waste Management, Air Pollution and Control, Electric Vehicles, Renewable Energy Resources etc. Faculty level Hackathons, Student level Hackathons, and Project-Based Learning are aligned with SDG challenges. Educational support activities are also oriented for the deprived-community at large.



**Fig.** Screening of Environmental-based Documentaries.



Fig. MOOC



Fig. Experiential Workshop on seed-ball making



**Fig.** Project exhibition and Poster presentation on Environmental topics for school children.

#### Add-on

#### **Industry, Innovation, Technology, and Infrastructure (SDG 9)**

Activities also co-aligned with SDG 3, 4, 6, 7, 9, 11, 13, 16, 17

The institute has set-up Incubation Cell under the Institution Innovation Council (IIC), Entrepreneurial Cell, MoU's with NGOs and Industry to encourage research and product development in the arena of green and clean technologies such as green hydrogen. The funding and mentorship for student-led start-ups also focuses on sustainability and sustainable technological advancements. One such example is the Electric Buggy (6-Seater) which is being built by the students for the BMSIT campus. In this direction, a real-time Air Quality Climate Monitoring set-up, Sustainable Energy Lab set-up is on the anvil with a funding of INR 50000 and 50 Lakhs, respectively. Entrepreneurial startups such as "DostBin" has been initiated and is making waves across the global market.



**Fig.** Smart Environment based Projects.



**Fig. DostBin.**

#### No Poverty (SDG 1)

- It is noteworthy to highlight that the institute offers Scholarships, fee concessions, other support schemes to economically disadvantaged students.
- Relevant Policies are also in place to ensure inclusion, non-discrimination, and equal opportunities irrespective of socio-economic background.

#### Gender Equality (SDG 5)

- The institute promotes gender equity through anti-harassment policies, women empowerment cells, and leadership training programs for female students and staff.
- Relevant Policies are also in place to ensure inclusion, non-discrimination, and equal opportunities irrespective of gender.

#### Reduced Inequality (SDG 10)

- The institute has transparency, anti-ragging policies, grievance redressal mechanisms, and ethical governance to uphold strong institutional values and student safety
- Relevant Policies are also in place to ensure inclusion, non-discrimination, and equal opportunities irrespective of abilities.

#### Reduced Good Health and well-being (SDG 3)

- Health check-up camps, blood donation drives, yoga sessions, and mental health awareness programs are regularly organized for students and the in-house community.

Alongside environmental bye-laws, there are quite a good number of pro-active environmental/ecological outreach activities, environmental awareness programs, skill-building initiatives from the Eco-Club, NSS units and other student club's set-up in the institute. As an outcome, the institute has patents and the student and faculty have won several accolades, w.r.t. department and institute level.

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#### 9.12 Innovative Educational Initiatives and Implementation (5)

Total Marks 5.00



**i. Provide details of initiatives taken towards mobility of students, implementation of academic bank of credits:**

The establishment of an Academic Bank of Credits (ABC) system represents a transformative step in India's higher education reform strategy, aligning with the goals outlined in the National Education Policy (NEP) 2020.

The ABC facilitates a flexible and student-centric learning ecosystem by allowing learners to accumulate, store, and transfer academic credits earned across different recognized institutions. This system promotes lifelong learning by recognizing and valuing prior learning and diverse learning pathways. From an education reform perspective, the ABC enhances academic mobility, encourages multidisciplinary and interdisciplinary education.

The Institute has taken a step to ensure that the students have created their ABC IDs and the Institution is progressed to enter the academic records of the students in the NAD portal.



**BMS Institute of Technology and Management**  
 (An Autonomous Institute affiliated to Visvesvaraya Technological University, Belagavi)  
 Avalahalli, Doddaballapur MainRoad, Bengaluru – 560 119

**Department of Computer Science and Engineering**

**B.E. (CSE- Cluster 2), 2023 – 2024 Batch**

SL.NO	NAME	USN	ABC IDs
1	NEELESH TIWARI	IBY23CS138	237-838-563-157
2	NEETHU P SAJJAN	IBY23CS139	202-741-580-225
3	NEHA DEVARASETTY	IBY23CS140	169-802-199-230
4	NEHA GUJAR	IBY23CS141	921-826-272-745
5	NEHA II	IBY23CS142	987-186-672-948
6	NEHA RN	IBY23CS143	425-357-394-770
7	NEIL VARGHESE ABRAHAM	IBY23CS144	837-928-972-550
8	NIHAARIKA PV	IBY23CS145	215-188-453-962
9	NIHARIKA R M	IBY23CS146	158-221-153-808
10	NIKHIL SHUKLA	IBY23CS147	926-066-021-465
11	NIKITHA R SHENOY	IBY23CS148	849-762-724-660



**BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT**  
**YELAHANKA-BENGALURU-64**  
**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**

**Students Registration for Academic Bank of Credits - IV SEM**

SI No.	Name of the Student	USN	ABC ID
1	RAHUL SRIVASTAVA	1BY19AI042	971-338-154-383
2	VAISHNAVI C	1BY20AI060	696-593-974-673
3	AAKASH NAGAMALLI	1BY21AI001	879-916-229-387
4	AAYUSH PRASAD	1BY21AI002	496-438-977-126
5	ABHISHEK ARADHYA B U	1BY21AI003	304-289-257-957
6	ANAND RAMACHANDRA BHAT	1BY21AI005	958-754-211-198
7	ANMOL A	1BY21AI006	355-437-949-528
8	ANUBHAV ANAND	1BY21AI007	768-753-747-522
9	ANUSHA BHAGWATH	1BY21AI008	416-609-566-556
10	ARAVIND M	1BY21AI009	248-629-772-025
11	ARYAN MUKKATIRA AIYAPPA	1BY21AI010	970-624-604-327
12	BHARAT KUMAR	1BY21AI011	719-803-929-747
13	BOMMISETTY RAHUL	1BY21AI012	385-062-536-788
14	CHANDRAHAS REDDY BONDALA	1BY21AI013	964-746-272-802
15	DASA GURU MURTHY SAI PUNEETH	1BY21AI014	919-844-211-779
16	DEEPAK JINACHANDRA NAYAK	1BY21AI015	135-958-589-658
17	G JAHANAVI	1BY21AI017	979-008-552-010
18	GADUPOOTI SAI DEEPAK	1BY21AI018	135-020-482-149

**II. Support for holistic education including human values:**

In alignment with the vision of nurturing well-rounded individuals, our institution emphasizes holistic education that integrates academic excellence with human values, ethics, and life skills. This comprehensive approach ensures that students not only excel in their professional domains but also become responsible citizens committed to societal and environmental well-being.

**Curriculum Integration:**

- Courses such as Environmental Studies, Universal Human Values (UHV), Indian Constitution and Professional Ethics, Indian Knowledge System (IKS), IDT projects, Societal projects, Scientific Foundations of Health (SFH), Sports, Yoga, NCC, NSS and Music are embedded in the curriculum across all programs.

**Co-Curricular and Extension Activities**

- NSS, NCC, Rotaract and YRC units actively engage students in community service, instilling compassion and civic responsibility.
- Students participate in awareness campaigns, blood donation drives, Swachh Bharat Abhiyan, and other social initiatives.
- Value-based sessions, yoga, and meditation programs are regularly conducted to foster mental well-being and inner discipline.

Students workshop on Universal Human Values was conducted for IV semester, all three sections of AIML on 26.05.2025, ECE A section, ME and CSBS on 27.05.2025 and ECE B section, ETE and ISE D section on 30.05.2025, CSE on 16.05.2025 morning session and ISE A, B And C sections on 16.05.2025, afternoon session. The workshop was conducted by Disha Bharat, a voluntary organization dedicated in promoting value education. The workshop included sessions on "Know Yourself", "Know your culture" and "Know your country". The session was interactive wherein students were engaged through games, questionnaires and feedback sessions.



The department of Humanities and Social Sciences in collaboration with Disha Bharat conducted a students workshop on Universal Human Values to all the fourth semester students on 18<sup>th</sup> August 2023. The workshop was conducted for 2 hours 30 minutes in five different sessions parallelly in Seminar Hall-1, 2 and CSE Seminar Hall. Disha Bharat is a non-profit social initiative started in the year 2005 with an objective to impart values in the higher education domain with the motto – “शीलमेव परम धनम्” (Sheelameva Parama Dhanam). Smt. Rekha Ramachandran, founder, Smt. Smruthi Khare, Sri Pramod Nataraj, Smt. Sneha Damle, Ms. Lavanya Radhakrishna and Sri Pradeep Nataraj, volunteers of Disha Bharat were the resource persons. The workshop was coordinated by the various course coordinators of UHV-2 which is a common course for all fourth semester students.

The workshop provided participants with a dynamic and interactive experience that combined quiz, yoga and mini-games to explore human values, enhance self-awareness, and deepen knowledge of their country's culture and heritage. The workshop focussed on holistic character development of the youth enabling them to engage ethically in the personal and professional domains. Around 800 students attended this workshop and expressed that the knowledge and insights gained from this workshop will continue to influence participants lives positively and contribute to a more compassionate and harmonious society.



### III. Multidisciplinary/interdisciplinary curriculum/programs:

The design of curricula is an important task that must meet the needs and current demands of the society. Choice based credit system (CBCS) allows students to choose inter-disciplinary, Multidisciplinary courses and Ability enhancement courses / Skill based courses.

**One year internship:** A one-year internship plays a vital role in fostering interdisciplinary and multidisciplinary learning by engaging students in real-world environments where knowledge from various fields must be integrated to solve complex problems. During this internship, students work in cross-functional teams alongside professionals from diverse domains. This experience enables them to apply theoretical knowledge in practical contexts, develop holistic problem-solving abilities, and understand how different disciplines contribute to achieving common goals. Furthermore, internships enhance communication, adaptability, and collaboration skills.

**Interdisciplinary project:** To function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings, the Institute has incorporated the Interdisciplinary projects (Mini project and Major project) across the programs.

This initiative aims to enhance the collaboration and practical application of knowledge by bringing together students and faculty from various programs to work on shared projects. To promote the interdisciplinary culture, we encourage the students to form a group of students comprising various programs to execute the Mini and/or Major projects.

**Open electives:** They play a vital role in fostering a multidisciplinary approach in engineering discipline. Open elective option allows students to explore courses beyond their core curriculum, open electives encourage the integration of diverse knowledge domains. For instance, an engineering student can take courses offered by the engineering programs other than his/her program. This helps to gain exposure to different perspectives, helping them understand how technical solutions impact and are influenced by broader societal factors.

This cross-disciplinary exposure significantly enhances problem-solving skills. Real-world challenges are rarely confined to a single discipline; they require solutions that draw from multiple areas of expertise. In addition to professional benefits, open electives support personal growth and adaptability. They help students become lifelong learners.

**Engineering Science, Emerging Technology and Programming Language Courses (ESC, ETC and PLC):** To nurture the multidisciplinary exposure among the I year students, the institute offers a flexible curriculum framework that incorporates Engineering Science Courses (ESC), Emerging Technology Courses (ETC), and Programming Language Courses (PLC). These categories are designed to expose students to multidisciplinary and interdisciplinary domains that transcend traditional departmental boundaries. Students are encouraged to select any one course from each of the courses from the bunch of ESC, ETC and PLC. Student can select any course/s offered from the other departments.

**NPTEL online courses:** Introducing NPTEL MOOC (Massive Open Online Courses) into the curriculum is an effective strategy to promote lifelong learning, especially in the context of interdisciplinary and multidisciplinary programs. As a part of the curriculum students are required to complete 6 credits of NPTEL courses. These are 12-week courses. Students are required to complete 2 NPTEL courses one from Professional elective domain and other from Open elective domain.

Integrating NPTEL MOOC into curriculum design provides a structured pathway for promoting lifelong learning in interdisciplinary and multidisciplinary programs. These courses, developed by India's premier institutes like the IITs and IISc, cover a wide range of subjects across engineering, sciences, humanities, management, and emerging technologies. By allowing students to choose NPTEL MOOCs as Professional electives and open electives courses, institution is enabling the learners to explore topics beyond their core discipline, encouraging cross-domain understanding. This flexibility supports a multidisciplinary approach. Additionally, the self-paced nature of MOOCs fosters independent learning habits, a key element of lifelong learning.

**Introduction of Biology for Engineers and Bioinformatics:** Biology for engineers encourages a holistic perspective, recognizing that many engineering problems have biological components. Traditionally, biology and engineering have been viewed as distinct disciplines; however, the growing relevance of fields such as biomedical engineering, biotechnology, and environmental engineering necessitates a foundational understanding of biological concepts for engineering students.

Embedding this course in the curriculum fosters the ability to think across domains. It also prepares students for emerging interdisciplinary careers and research opportunities where biology and engineering intersect.

**Promotion of Honors Degree and Minor Degree:** The promotion of Honors and Minor Degrees within undergraduate programs will support interdisciplinary learning. By offering students the opportunity to pursue an Honors degree in their major allows students to delve deeper into specialized topics, often involving application of the concepts to multidisciplinary scenarios.

Minor degree program allows a student to explore the courses beyond his/her major program courses. For example, a Mechanical engineering student may opt for a Minor in Data science, Cyber security, Semiconductor chip design, Management, or Humanities, thereby gaining skills and perspectives that broaden their problem-solving abilities and adaptability.

These flexible academic pathways of introducing the Honors and Minor degree empower students to tailor their education based on personal interests and career goals. This aligns well with the National Education Policy's emphasis on holistic and multidisciplinary learning.

**Social Connect and Responsibility course:** The Social Connect and Responsibility course promotes interdisciplinary and multidisciplinary learning by encouraging students to engage with real-life social issues that require knowledge and solutions beyond a single academic domain. As a part of this course, students will be doing the societal relevance projects, environmental degradation projects and public health from various perspectives—combining insights from sociology, economics, environmental science, engineering, and public policy.

#### IV. Initiatives on Indian Knowledge System:

The institution actively promotes the integration of the **Indian Knowledge System (IKS)** into the academic environment to enrich students' understanding of India's cultural, scientific, philosophical, and technological heritage. The initiatives are aligned with the objectives of the National Education Policy (NEP 2020), which emphasizes holistic and multidisciplinary education rooted in India's rich intellectual traditions.

A Poster Presentation and Competition was Organized by Department of Humanities and Social Sciences, BMSIT&M, supported by "AICTE-SPICES" (Scheme for Promoting Interest, Creativity, and Ethics among Students) on 26<sup>th</sup> August 2022 from 1.00 pm to 4.30 pm. Seven sections of 2<sup>nd</sup> semester students participated in the poster exhibition competition as a part of Indian Knowledge System course. 15 teams per section had selected one topic out of 15 given topics. They were asked to make posters with relevant information and present the same. The following topics were given to the students.

- Discuss Artha shastra on Town Planning
- Elaborate on any one Temple Architecture in Ancient India
- Elaborate on any one Archaeology as a source of Information
- Elaborate on any one Patents in IKS
- Elaborate Intellectual Property Laws for IKS Protection
- Elaborate on any one example of "Aesthetics in Indian Art"
- Elaborate on any one "Practice of Living in Harmony with Nature in Indian Traditions"
- Elaborate on any one "Learning Centers in Ancient India and its Present Day Status"
- Ayurvedic-way of Living Your Student-life"
- Challenges in the historical reconstruction / interpretation of sources of knowledge.
- Enumerate the aspects of the ancient Indian calendar system and compare with the current days calendar.
- Discuss on any one of the great ancient Indian mathematicians and their salient contributions in Mathematics.
- Elaborate on any one of the history of  $\pi$ (pi)approximations with example made by Indian mathematicians.
- Compare the diffusion of Indian knowledge with that of any one of the other cultures.
- Describe any one of the methods given by Pingala to identify the binary sequence processes.

The posters were evaluated based on the fields like Poster Content, Poster Organization, Presentation / Delivery and Overall Impression / Quality & Teamwork.

Participation certificates were issued to all students who had participated. Under each theme one best poster is selected and awarded with gifts of worth Rs.500/- The winner group for each theme is listed below.

Sl. No.	Theme	Name	USN	Section	Course Co-ordinators
1.	Artha shastra on Town Planning	Nikhitha Kulakarni	IBY21CS111	<b>B</b>	Dr. Arun Kumar B.R
		Meghana T J	IBY21CS096		
		Likhithaa S M	IBY21CS082		
		Manoj T	IBY21CS089		
		Mohammed Saadan	IBY21CS100		
2.	Temple Architecture in Ancient India	Anusha Bhagwath	1BY21AI008	<b>G</b>	Dr. Thejaswini S
		G Jahanavi	1BY21AI017		
		Kruthi M	1BY21AI023		
		M. Tejaswini	1BY21AI024		
		Nayanal Vishwanath	1BY21AI033		
3.	Archaeology as a source of Information	Chandanashree S V	1BY21CS038	<b>A</b>	Dr. Sowmyashree M S
		B S Srividya	1BY21CS029		
		Akhila S	1BY21CS012		
		Aishwarya	1BY21CS008		
4.	Patents in IKS	T Sai Bharath	1BY21IS179	<b>F</b>	Dr. Shoba M
		G S K Manoj	1BY21IS163		
		T Karthik	1BY21IS177		
		T G Pradeep	1BY21IS184		
5.	Intellectual Property Laws for IKS Protection	Yashraj Jain	1BY21IS196	<b>F</b>	Dr. Shoba M
		Umar	1BY21IS185		
		Roshan	1BY21IS135		
		Shashank Saxena	1BY21IS151		

6.	Aesthetics in Indian Art	Iffath Ayesha	1BY21CS06 8	<b>A</b>	Dr. Sowmyashree M S
		Dhruthi Reddy	1BY21CS05 0		
		Deekshitha G	1BY21CS04 7		
		Ankitha Bhat	1BY21CS05 5		
7.	Practice of Living in Harmony with Nature in Indian Traditions	Krish Gupta	1BY21IS069	<b>E</b>	Dr. Shoba M
		Lalita Kumari	1BY21IS088		
		Neela N	1BY21IS092		
		P Janavi	1BY21IS101		
		Rachitha	1BY21IS123		
8.	Learning Centers in Ancient India and its Present-Day Status.	Sarbashree Kaspal	1BY21CS16 7	<b>C</b>	Dr.Prathiba. N
		Swasti. S	1BY21CS19 5		
9.	Ayurvedic-way of Living Your Student-life	Neha Harnal	1BY21AI034	<b>G</b>	Dr. Thejaswini S
		S J Satyanarayanan	1BY21AI045		
		Sumukha K	1BY21AI055		
		Vaishnavi C	1BY20AI060		
		Yash Raj Jain	1BY21AI061		
10.	Challenges in the historical reconstruction / interpretation of sources of knowledge	Mimansa	1BY21IS084	<b>E</b>	Dr. Shoba M
		Krishna Gupta	1BY21IS070		
		Likhitha M D	1BY21IS075		
		Mahek	1BY21IS080		
		Raghav Kumar	1BY21IS124		
11.	Comparison of ancient Indian calendar system and with the current day's calendar.	Ranjitha	1BY21CS14 8	<b>C</b>	Dr. Prathiba.N
		Shraddha. G. Reddy	1BY21CS17 3		
		Suraj. G. M	1BY21CS19 1		
		Sanath. S. Soni	1BY21CS16 4		

12.	The great ancient Indian mathematicians and their salient contributions in Mathematics.	Pothireddy Harshini	1BY21IS125	<b>B</b>	Dr. Arun Kumar B R
		Pavan Kalyan S	1BY21IS121		
		Pranav Srinivasa	1BY21CS127		
		Mudit Agrawal	1BY21CS103		
		Pratik Balagouda Patil	1BY21CS133		
13.	The history of $\pi$ (pi) approximations with examples made by Indian mathematicians.	Dhanush B A	1BY21IS041	<b>D</b>	Dr. Satish Kumar T
		Gurukiran M	1BY21IS051		
		Gagankashyaph S	1BY21IS048		
		Dileep Raj B	1BY21IS042		
		Dipesh Jayakara Poojary	1BY21IS044		
14.	Comparison of the diffusion of Indian knowledge with any one of the other cultures	Daksh Sharma	1BY21IS035	<b>D</b>	Dr. Satish Kumar T
		Arth Dubey	1BY21IS024		
		Aditya Jhawar	1BY21IS010		
		Akash Gupta	1BY21IS014		
		C V Yukthi Shree	1BY21IS032		
15.	Methods given by Pingala to identify the binary sequence processes.	Sonal Mahapatra	1BY21IS166	<b>F</b>	Dr. Shoba M
		Sathvika S	1BY21IS148		
		Sanjay R J	1BY21IS143		
		Siddharth Tatineni	1BY21IS164		
		Sathvik Dinesh Hegde	1BY21IS147		





#### **V. Contribution towards and implementation of teaching in Indian language, etc:**

In alignment with the National Education Policy (NEP) 2020 and the initiatives by the Government of Karnataka, the institution actively promotes and integrates Indian languages, particularly Kannada. As per this initiative all the students who joins Engineering programs are mandatorily study one credit course on Kannada language. Also, as per the AICTE initiative to start the BE degree programs in regional languages, the Visvesvaraya Technological University (VTU) our affiliated university has offered the colleges to start B.E Degree programs in Kannada language.

#### **VI. Policies on inclusivity and equity and their implementation.**

The institution is committed to fostering an inclusive and equitable learning environment that ensures equal opportunities for all students and staff regardless of their socio-economic background, gender, caste, religion, language, or disability status. The following policies and practices have been institutionalized to uphold these values:

##### **Key Policies on Inclusivity and Equity:**

1. Equal Opportunity Policy: Ensures non-discrimination in admissions, hiring, and academic processes. Promotes diversity and supports underrepresented groups.
2. Gender Equity Policy: Addresses gender sensitivity and equality through education, and grievance redressal mechanisms. College Internal Complaints Committee (CICC) was established to handle issues related to sexual harassment as per UGC/AICTE norms. Gender Champion Cell was established to make the young boys and girls gender sensitive and create positive social norms that value the girls and their rights. The diversity of the faculty members will be 48.21% Male faculty and 51.79% Female faculty. The diversity of the Boys students will be 66.82% and Girls students will be 33.18%.
3. Reservation and Access Policy: Implementation of statutory reservations for SC/ST/OBC/EWS/PWD categories in admission as per government regulations. As per the admission norms of the Government of Karnataka, Karnataka Examinations Authority (KEA) is following the reservations of admissions for Scheduled Castes: 15%, Scheduled Tribes: 3%. OBC: 32%, and General Merit: 50%.
4. Multilingual and Cultural Inclusion Policy: Encouragement of Indian languages in academic discourse and co-curricular events. Celebration of cultural diversity through various student club activities and festivals.
5. Anti-Discrimination Policy: Anti-Ragging Cell and Grievance Redressal Cell ensure prompt action and counselling.
6. Women Empowerment Policy: Active Women Development Cell organizes seminars, training programs, and awareness campaigns. Special focus on leadership development, safety, and personal growth of girl students.
7. Inclusive Curriculum Development Policy: Integration of ethics, human values, Indian Knowledge Systems, and social responsibility into course content. Encouragement of projects and social immersion programs with focus on community impact.

##### **Implementation Mechanisms:**

- Monitoring Committees: Dedicated cells like SC/ST Cell, Grievance Redressal Cell, ICC, etc., ensure policy enforcement.
- Awareness Programs: Regular workshops, gender sensitization drives, and outreach initiatives.

#### **VII. Support for economically, socially and physically challenged students**

- BM Sreenivasaiah merit cum means scholarship.
- B S Narayan Memorial Scholarship for the poor and meritorious students.
- Scholarships for economically weaker students from Alumni fund.
- Tuition fee waiver for poor and meritorious students.
- "Foundation for Excellence (FFE), a 30 year old USA based philanthropic organization are fund bright and needy Indian students for their higher education and employability skilling.
- Infrastructure facilities for physically challenged students such as ramps, accessible washrooms, and special seating arrangements. Support through scribe assistance and extended exam duration as per the norms.

**VIII. Action plan and its implementation for slow learners****1. Identification of Slow Learners**

Slow learners are identified through:

- Performance in Internal Assessments, Semester Exams, and Entry-level Tests
- Low SGPA/CGPA
- Faculty/mentor observations

**2. Action Plan and Implementation**

A comprehensive support mechanism is planned with the following strategies:

- a. Bridge Courses / Remedial Classes
  - Scheduled outside regular class hours.
  - Focus on foundational concepts and prerequisite knowledge.
  - Delivered by course faculty or specially assigned remedial instructors.
- b. Mentoring and Counselling
  - Faculty mentors are assigned to monitor academic progress.
  - Personalized mentoring to address specific learning gaps, motivation, and exam anxiety.
  - Peer mentoring by advanced learners.



**Preamble:** Performance Based Appraisal System (PBAS) is important dimension for any organization while managing its human resources. Although, a higher educational Institution depends upon the Teaching as well as its technical staff, a major responsibility comes upon the Teachers who are a source of students' knowledge, learning and development. To administer this, evaluate and enhance Teachers' performance appraisal system is required. In line with this, BMSIT&M has been having a reliable and effective PBAS for the past five years. Given the need for improving the academic and the research performance of the Institution and create an opportunity for every Teacher to get into the mainstream of progress. PBAS is being in place for evaluation, and it is also evolving over a period of time.

**Process:** An amendment to the existing PBAS was made in August 2024 and it emphasizes of the following:

- a. With a view to improve and promote publications among the faculty members more emphasis has been given to SCI, Scopus, WOS indexed, ABDC journal publications.
- b. To inculcate the culture of IPR and Patent process, Patents filed, published and granted have been incorporated.
- c. To increase Faculty competency about project funding and proposals, the details related to grants received for research and consultancy has been incorporated.
- d. To foster Industry relations, Industry driven activities is encouraged thus converting them to functional MoU.

The following is the flow of events in PBAS:

1. PBAS is based on contribution to the
  - a. Academics
  - b. Research
  - c. Administration
  - d. Outreach activities
2. Increments are sanctioned in 2 phases. Increments will be sanctioned in January for those who are eligible between January-June and in July for those who are eligible during July-December.  
This is in line with the BMS Educational Trust policy.
3. All the faculty members are informed about the PBAS proforma and its requirements, well in advance enabling them to plan and comply with the necessary requirements.
4. A circular will be shared twice a year as per increment schedule informing the eligible faculty members to submit the PBAS form along with necessary proof of documents to the respective HoD.
5. Faculty members will be filling and submitting to the Head of the Department with all supporting documents.
6. HoDs will review, record their observations and forward the PBAS form submitted by faculty members to the Principal.
7. Principal will forward the applications to the review panel headed by Vice Principal. The committee reviews and prepares final list of eligible faculty members for their increments.
8. Faculty members who do not meet the Minimum expected score will be called for counselling.

#### **Implementation:**

A Sample of recent PBAS implemented for the 2025 calendar year, is detailed as below.

#### **CIRCULAR**

## Annual Increment July-Dec 2025



**VICE PRINCIPAL BMSIT** <viceprincipal@bmsit.in>  
to faculty-members, Principal, REGISTRAR, Devendra, shashi ▾

Jun 12, 2025, 11:14 AM



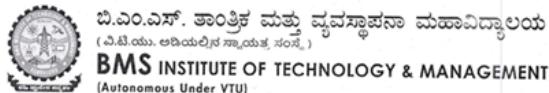
Dear Colleagues,

Please find the Circular about the Annual Increment and the Proforma to be filled herewith. Hod's are requested to verify, evaluate and duly recommend the applications of the eligible staff members.

Please submit with the attached proofs as per the circular.

**Kind Regards,**

**Dr. Anil G.N**  
**Vice Principal**  
**Professor, Dept. of Computer Science & Engineering**



Ref: BMSIT&M/2025-2026/ESTB/ 522

Date: 11-06-2025

**CIRCULAR**

**Kind attention of Teaching Staff Members:**

The Teaching staff members whose annual increments are due for the period between July 1, 2025, and December 31, 2025, are hereby informed to submit their applications as per the proforma attached, along with all relevant documents. The Annual Increment applications, duly verified with the recommendation of the Head of Department (HoD), may be forwarded to the office of the Vice Principal on or before July 10, 2025. Furthermore, Faculty Members promoted under CAS 24-25 shall be eligible for an annual increment after completing a year of service in the Elevated Position.

  
Principal  
[Signature]

**Copy to:**

1. All Faculty Members
2. Office
3. Accounts



**VICE PRINCIPAL BMSIT** <viceprincipal@bmsit.in>  
to hods, faculty-members, Principal, REGISTRAR, Devendra, shashi ▾

Jun 14, 2025, 4:01PM ⚡ ↺ ⌂

Dear Colleagues,

As per the discussion in the Town Hall staff meeting with the Principal Sir, it was mutually decided that the minimum feedback to obtain for the subjects & labs handled by the Teaching staff is set to 75%. In the recent Feedback taken counselling has already been done for staff who have secured less than 75%. Now, please find the revised document of PBAS with this correction in Sl. NO. 1. Pl. use this document for filling the PBAS.

Hod's are also requested to notice this change and evaluate accordingly.

**Kind Regards,**

**Dr. Anil G.N**  
**Vice Principal**  
**Professor, Dept. of Computer Science & Engineering**  
**B M S Institute of Technology and Management**  
**Avalahalli. Yelahanka. Doddaballapura Main Road.**

#### PROFORMA

Information by Teaching Staff for Annual Increment for the year \_\_\_\_\_

Faculty Name:

Department:

Sl. No.	Category	Details			Supporting Documents Enclosed (Y/N)
1	Students' Feedback (Average of all courses Handled) – Score 20  Above 95 - 20 90 - 94.99 - 18 85 - 89.99 - 16 80 - 84.99 - 14 75 - 79.99 - 12 Below 75 - 0	Academic Term  Odd Sem	Course Code	Student Feedback %	
		Even Sem			
			Average		

	Results Obtained – Score 10 Above 90 - 10 85 - 89.99 - 9 80 - 84.99 - 8 75 - 79.99 - 7 70 - 74.99 - 6 65 – 69.99 - 5 60 - 64.99 - 4 Below 60 - 3	Academic Term	Course Code	Results %	
		Odd Sem			
		Even Sem			
		Average			
3	Count of SCI / Scopus / WoS Indexed Journal Publications  (The faculty should be one among first three authors) – Score 10 per paper				
4	Count of Scopus / WoS Indexed Conference Publications  (The faculty should be one among first three authors) – Score 5 per paper				
5	Count of Scopus / WoS Books / Chapters (The faculty should be one among first three authors) – Score 5 per publication				
6	Patents Filed / Published (BMSIT&M as Applicant) – Score 5 per filing / publication				
7	Patents Granted (BMSIT&M as Applicant) – Score 10 per filing grant				
8	Projects Guided – Score 2 per project work with a maximum cap of 10	UG			
		PG			
9	Count of Ph.D. / M.Sc. Engg. Research Scholars Guidance – Score 5 per scholar				
10	Grants Received from National Funding Agencies - Score 2 per Lakh received				
11	Grants Received from State Funding Agencies - Score 1 per Lakh received				
12	Consultancy Amount Generated – Score 5 per Lakh received				

Sl. No.	Category	Details	Supporting Documents Enclosed (Y/N)
13	Reviewer of Q1 / Q2 / Q3 / Q4 Journals – Score 2 per review		
14	Conference / Session Chaired at reputed International Conferences – Score 1 per activity (Capped @ 5)		
15	Chief Coordinator for FDP / Workshop / SDP (Minimum 1 Week) - Score 5 per activity (Capped @ 5)		
16	MOOC course completed (NPTEL / Industry certification) Score 5 per activity (Capped @ 5)		
17	Count of FDP / Workshop / Industrial Training Attended outside BMSIT&M (Minimum 1 Week) - Score 5 per one-week program (Capped @ 5)		
18	Count of Invited Technical Talks in Top 200 NIRF Ranked Institutes / Govt Organizations - Score 5 per programme (Capped @ 10)		
19	Industry Relations - SPOC for Industry driven activities (Functional MoU / Industry driven student projects etc.) – Score 10 per industry		
20	Professional Body Activities – Faculty Coordinator (IEEE / ACM / CSI / ASCE / ASME / BIS / IETE etc.) – Score 5 per Professional Body (Capped @ 5)		
21	Institution / Department Activities- Dean / HoD, Coordinators of NIRF / IQAC / NAAC / AICTE / NBA etc. – Score 5 per Coordination (Capped @ 5)		
22	Other Services to Institution / Department Contributions as Dean / HoD, Project Work / Internship / Timetable / BICEP / Newsletter / Magazine etc. – Score 5 per Coordination (Capped @ 5)		
23	Awards / Honours Received by Government / Recognised Organizations – Score 5 per Award / Honour (Capped @ 5)		

24	Any Other Major / <b>Notable Contributions / Dean / HoD or any other – Score 5 per Coordination (Capped @ 5)</b>		
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\*Sl.No - 3/4/5 are Mandated

Assistant Professor -	Associate Professor -	Professor -
Minimum Expected Score: <b>50</b>	Minimum Expected Score: <b>60</b>	Minimum Expected Score: <b>70</b>

<b>Recommendation of the HoD</b>	
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Date:

Signature of Staff

Signature of HoD



VICE PRINCIPAL BMSIT &lt;viceprincipal@bmsit.in&gt;

## Committee formation for evaluation of Annual Increments

1 message

**VICE PRINCIPAL BMSIT <viceprincipal@bmsit.in>**

Wed, Jul 10, 2024 at 4:14 PM

To: "Dr.Dhananjaya N" <ndhananjayas@bmsit.in>, shobharani@bmsit.in, aschethan@bmsit.in, Keerthi Kumar <keerthikumarn@bmsit.in>  
Bcc: Principal - <principal@bmsit.in>

Dear Colleagues,

As per the directions of the Principal the following committee is constituted to review and verify the data and supporting documents provided by the Staff members for sanction of their Annual Increments.

The members are as follows :

1. Dr. Dananjay - Professor , Physics
2. Dr. Shobha Rani - Associate Professor, Electronics
3. Dr. Chethan A S - Professor , Mathematics
4. Dr. Keerthi Kumar - Assistant Professor, Mechanical

They are requested to meet the undersigned for discussion on preparing the format for evaluation.

Kind Regards,

**Dr. Anil G.N**  
**Vice Principal**  
Professor, Dept. of Computer Science & Engineering  
B M S Institute of Technology and Management  
Avalahalli, Yelahanka, Doddaballapura Main Road,  
Bengaluru - 560064  
Ph:080-68730403

SAMPLE PROFIRMA BY FACULTY MEMBER



ಬಿ.ಎಂ.ಎಸ್. ವಾಂಪೆರ್ ಮತ್ತು ಸ್ವಾಮ್ಯಾಧಿಕಾರಿ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣ ಮಹಾವಿದ್ಯಾಲಯ  
(ವಿ.ವಿ.ಯಾ. ಅಧಿಕಾರಿ ಸಾಂಸ್ಥಿಕ ಸಂಖ್ಯೆ)  
**BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT**  
(Autonomous Under VTU)

(35)

Information by Teaching Staff for Annual Increment for the year  
2023-24

Faculty Name: Dr.Anil Kumar D

Department: ECE

Sl. No.	Category	Details			Supporting Documents Enclosed (Y/N)
1	Students' Feedback (Average of all courses Handled) - Score 20	Academic Term	Course Code	Student Feedback %	
	Above 90 - 20	Odd Sem	2IEC57	86.04	
	85 - 89.99 - 18	Even Sem	2IECL58	84.2	
	80 - 84.99 - 16		2IEC643	89.03	
	75 - 79.99 - 14		2IECL69	79.3	
	70 - 74.99 - 12				
	60 - 69.99 - 10				
	Below 60 - 00				
			Average	84.64	
2	Results Obtained - Score 10	Academic Term	Course Code	Results %	
	Above 90 - 10	Odd Sem	2IEC57	98.3	
	85 - 89.99 - 9	Even Sem	2IECL58	95.16	
	80 - 84.99 - 8		2IEC643	100	
	75 - 79.99 - 7		2IECP87	100	
	70 - 74.99 - 6				
	65 - 69.99 - 5				
	60 - 64.99 - 4				
	Below 60 - 3				
3	Count of SCI / Scopus / WoS Indexed Journal Publications (The faculty should be one among first three authors) - Score 10 per paper	SCIE - Q2, 1			
4	Count of Scopus / WoS Indexed Conference Publications (The faculty should be one among first three authors) - Score 5 per paper		3		
5	Count of Scopus / WoS Books / Chapters (The faculty should be one among first three authors) - Score 5 per publication		1+1 book		
6	Patents Filed / Published (BMSIT&M as Applicant) - Score 5 per filing / publication			-	
7	Patents Granted (BMSIT&M as Applicant) - Score 10 per filing grant				
8	Projects Guided - Score 2 per project work with a maximum cap of 10	UG	4		
9	Count of Ph.D. / M.Sc. Engg. Research Scholars Guidance - Score 5 per scholar	PG	-		
10	Grants Received from National Funding Agencies - Score 2 per Lakh received		3		
11	Grants Received from State Funding Agencies - Score 1 per Lakh received		-		
12	Consultancy Amount Generated - Score 5 per Lakh received		-		

Page 1 | 2

Sl. No.	Category	Details	Supporting Documents Enclosed (Y/N)
13	Reviewer of Q1 / Q2 / Q3 / Q4 Journals - Score 2 per review	-	
14	Conference / Session Chaired at reputed International Conferences - Score 1 per activity (Capped @ 5)	-	
15	Chief Coordinator for FDP / Workshop / SDP (Minimum 1 Week) - Score 5 per activity (Capped @ 5)	-	
16	MOOC course completed (NPTEL / Industry certification) Score 5 per activity (Capped @ 5)	0	
17	Count of FDP / Workshop / Industrial Training Attended outside BMSIT&M (Minimum 1 Week) - Score 5 per one-week program (Capped @ 5)	2	Verifd 16/12/24 (5) Verifd 16/12/24
18	Count of Invited Technical Talks in Top 200 NIRF Ranked Institutes / Govt Organizations - Score 5 per programme (Capped @ 10)	2	Verifd 16/12/24 (10) Verifd 16/12/24
19	Industry Relations - SPOC for Industry driven activities (Functional MoU / Industry driven student projects etc.) - Score 10 per industry		
20	Professional Body Activities - Faculty Coordinator (IEEE / ACM / CSI / ASCE / ASME / BIS / IETE etc.) - Score 5 per Professional Body (Capped @ 5)		
21	Institution / Department Activities- Dean / HoD, Coordinators of NIRF / IQAC / NAAC / AICTE / NBA etc. - Score 5 per Coordination (Capped @ 5)	Nba-criteria 4,	Verifd 16/12/24 (5) Verifd 16/12/24
22	Other Services to Institution / Department Contributions as Dean / HoD, Project Work / Internship / Timetable / BICEP / Newsletter / Magazine etc. - Score 5 per Coordination (Capped @ 5)	Seminar hall, 1 and 2 , c studio, induction program stage arrangements	Verifd 16/12/24 (5) Verifd 16/12/24
23	Awards / Honours Received by Government / Recognised Organizations - Score 5 per Award / Honour (Capped @ 5)		
24	Any Other Major / Notable Contributions / Dean / HoD or any other - Score 5 per Coordination (Capped @ 5)	Utsaha-24 chief coordinator	Verifd 16/12/24 (5) Verifd 16/12/24

\*SLNo - 3/4/5 are Mandated

Assistant Professor - Minimum Expected Score: 50	Associate Professor - Minimum Expected Score: 60	Professor - Minimum Expected Score: 70
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Recommendation of the HoD	Recommended for annual increment
Date: 16/12/24	Signature of Staff
	Signature of HoD

## CONSOLIDATED REPORT BY COMMITTEE

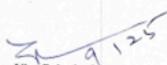
BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT  
YELAHANKA, BANGALORE - 560064.

The list of staff members whose annual increments have become due in the month of **January 2025** as per AICTE 7th Pay norms. Put up for kind perusal and orders.

SL. No.	Name of the Staff	Designation	Dept.	Total marks obtained	Recommendation of the HoD Yes or No
1	Dr. Sanjay H A	Professor & PRINCIPAL	CSE	-	-
2	Dr. And G N	Professor & Vice Principal	CSE	73	Recommended
3	Dr. Bhuvaneshwari C Melinamath	PROFESSOR	CSE	75	Recommended
4	Dr. Satish Kumar T	Associate Professor	CSE	92	Recommended
5	Mrs. Vishakha Yadav	Assistant Professor	CSE	66	Recommended
6	Mr. Anand R	Assistant Professor	CSE	87	Recommended
7	Mrs. Durga Devi G Y	Asst. Professor	CSE	64	Recommended
8	Mr. Jagadish P	Assistant Professor	CSE	66	Recommended
9	Mrs. Durga Bhavani A	Assistant Professor	CSE	61	Recommended
10	Mr. Rajesh N V	Assistant Professor	CSE	63	Recommended
11	Mrs. Ambika G N	Assistant Professor	CSE	96	Recommended
12	Dr. Vidya R	Assistant Professor	CSE	88	Recommended
13	Smt. A. Mari Kirthima	Assistant Professor	CSE	62	Recommended
14	Dr. Lakshmi B N	Assistant Professor	CSE	93	Recommended
15	Dr. Dhanalakshmi B K	Assistant Professor	CSE	71	Recommended
16	Mrs. Brunda S	Assistant Professor	CSE	51	Recommended
17	Mrs. Shilpa M	Assistant Professor	CSE	51	Recommended
18	Mrs. Tanya Chandra	Assistant Professor	CSE	54	Recommended
19	Mrs. Goutami Chenumella	Assistant Professor	CSE	58	Recommended
20	Dr. Jai Arul Jose G	Assistant Professor	CSE	66	Recommended
21	Dr. G L Anantha Krishna	Associate Professor	ME	66	Recommended
22	Mr. Chandrasekhara Reddy K	Assistant Professor	ME	75	Recommended
23	Mrs. Nithya Poornima	Assistant Professor	ME	85	Recommended
24	Mr. Briganeesh T G	Assistant Professor	ME	71	Recommended
25	Mr. Sundaresh S	Assistant Professor	ME	80	Recommended
26	Mrs. B J Tejaswini	Assistant Professor & In-charge HOD, HSS	CIP-ME (HSS dept)	55	Recommended
27	Dr. Rajakumara H N	Professor	CIVIL	87	Recommended
28	Dr. Rajesh Gopinath	Associate Professor	CIVIL	95	Recommended
29	Mrs. Shobha R	Assistant Professor	CIVIL	82	Recommended
30	Dr. Deepak M S	Assistant Professor	CIVIL	82	Recommended
31	Dr. Chandrashekharappa Agasenall	Assistant Professor	CIVIL	96	Recommended
32	Dr. Athiyamaan V	Assistant Professor	CIVIL	70	Recommended
33	Dr. Hanumantharaju M C	Professor	ECE	118	Recommended
34	Dr. Surekha R Gondkar	Associate Professor	ECE	91	Recommended

SL. No.	Name of the Staff	Designation	Dept.	Total marks obtained	Recommendation of the HoD Yes or No
35	Dr. Anil Kumar D	Associate Professor	ECE	109	Recommended
36	Dr. Shebha Rani A	Associate Professor	ECE	81	Recommended
37	Dr. Anita V R	Associate Professor	ECE	129	Recommended
38	Dr. Mamatha K R	Assistant Professor	ECE	138	Recommended
39	Mrs. Asha G Hagargund	Assistant Professor	ECE	80	Recommended
40	Dr. Dankan Gowda V	Assistant Professor	ECE	-	Application not submitted
41	Dr. Anna Merine George	Assistant Professor	ECE	106	Recommended
42	Dr. Aaha K	Assistant Professor	ECE	98	Recommended
43	Dr. Raghuendaran O H	Assistant Professor	ECE	71	Recommended
44	Dr. Sathesh Kumar P	Assistant Professor	ECE	189	Recommended
45	Dr. Bharathi Malakareddy A	Professor & Head R&C	AI & ML	166	Recommended
46	Dr. Rajesh I S	Assistant Professor	AI&ML	90	Recommended
47	Mr. Sachin A Urabinahatti	Assistant Professor	AI&ML	63	Recommended
48	Mr. Shobhit Tembhe	Assistant Professor	AI&ML	58	Recommended
49	Mr. Chidananda K	Assistant Professor	AI&ML	56	Recommended
50	Mrs. Amitha S K	Assistant Professor	AI&ML	53	Recommended
51	Mr. Balarraju G	Assistant Professor	AI&ML	75	Recommended
52	Mrs. Mayuri K P	Assistant Professor	AI&ML	50	Recommended
53	Dr. Vishwa Kiran S	Associate Professor & In-charge HOD, CS&BS	CS&BS	81	Recommended
54	Dr. Sheela Kathavale	Associate Professor	ISE	67	Recommended
55	Dr. Geeta Amol Patil	Associate Professor	ISE	74	Recommended
56	Dr. N Rakesh	Associate Professor	ISE	72	Recommended
57	Mrs. Ambika Rani Subhash	Assistant Professor	ISE	82	Recommended
58	Dr. Shanthi D L	Assistant Professor	ISE	88	Recommended
59	Dr. Chandrasekara K T	Assistant Professor	ISE	77	Recommended
60	Smt. S. Mahalakshmi	Assistant Professor	ISE	60	Recommended
61	Mrs. Chethana C	Assistant Professor	ISE	78	Recommended
62	Dr. Savitha S	Assistant Professor	ISE	77	Recommended
63	Dr. Basavaraj G N	Assistant Professor	ISE	103	Recommended
64	Dr. Kalai Vani P	Assistant Professor	ISE	72	Recommended
65	Dr. Harish Kumar N	Assistant Professor	ISE	65	Recommended
66	Mr. Sonnegowda K	Assistant Professor	ISE	50	Recommended
67	Mr. Vinaykumar Y B	Assistant Professor	ISE	55	Recommended
68	Mrs. Saritha A K	Assistant Professor	ISE	10	Appendix A
69	Mr. Puneetha	Assistant Professor	ISE	10	Appendix A
70	Dr. Narapareddy Ramarao	Asso. Professor	EEE	72	Recommended
71	Dr. Prashanthi A Athavale	Asst. Professor & HOD	EEE	63	Recommended

SL No.	Name of the Staff	Designation	Dept.	Total marks obtained	Recommendation of the HoD Yes or No
72	Mr. Manjunatha Babu P	Assistant Professor	EEE	77	Recommended
73	Mr. Oswin Dominic D'Souza	Assistant Professor	EEE	67	Recommended
74	Dr. Madhu Palati	Assistant Professor	EEE	143	Recommended
75	Mr. Babu Naik Gagolethu	Assistant Professor	EEE	57	Recommended
76	Mr. Vikram Chekuri	Assistant Professor	EEE	54	Recommended
77	Dr. Raju Majare	Associate Professor	ETE	101	Recommended
78	Dr. Thejaswini S	Assistant Professor	ETE	119	Recommended
79	Dr. Saritha I G	Assistant Professor	ETE	76	Recommended
80	Dr. Anitha Kiran	Assistant Professor	MATHS	55	Recommended
81	Dr. Aruna Kumara H	Assistant Professor	MATHS	84	Recommended
82	Dr. Nidhi Kedia	Assistant Professor	MATHS	47	Appendix-A
83	Dr. Yashaswini	Assistant Professor	IT/PGC3	78	Recommended
84	Dr. Chandrashekhar Pathak	Assistant Professor	PHYS	60	Recommended
85	Dr. Sandra Dias	Assistant Professor	PHYS	52	Recommended
86	Dr. Bincy Rose Vargis	Assistant Professor	CHEMISTRY	65	Recommended
87	Dr. Sudheer Kumar K H	Associate Professor	Chemistry	43	Appendix-A
88	Dr. Udayabhanu	Assistant Professor	CHEM	127	Recommended
89	Dr. Ganesh P	Professor & Dean	MCA	78	Recommended
90	Dr. Shivakumara T	Assistant Professor	MCA	79	Recommended
91	Mrs. Reshma C R	Assistant Professor	MCA	58	Recommended
92	Mr. Dwarakanath G V	Assistant Professor	MCA	68	Recommended
93	Mr. A Venkatesh	Assistant Professor	MCA	68	Recommended
94	Dr. Sridevi M	Assistant Professor	MCA	73	Recommended
95	Mrs. Nirupama B K	Assistant Professor	MCA	51	Recommended
96	Dr. Ishanmitra K L	Assistant Professor	MBA	55	Recommended
97	Mr. Sri Niranjana R	Assistant Professor	MBA	61	Recommended



Vice Principal



Principal

#### COUNSELLING REPORT

**Appendix-A**

SL. No.	Name of the Staff	Designation	Dept.	Total marks obtained	Recommendation of the HoD Yes or No	Signature of the HoD
1	Ms. Saritha A K	Assistant Professor	ISE	10	Recommended. Reported in the month of June and she was not assigned with any of theory classes and she is not having the feedback details. As she is going on maternity leave in the month of February 1st week, this time kindly consider her for the increment. Dept cluster Head and HoD will mentor her to get minimum score when she returns from maternity leave.	Saritha 9/1/25
2	Mr. Puneetha	Assistant Professor	MATHS	10	Recommended. As the faculty is doing good job in dept, he may be considered. Mr. Puneetha joined the dept 6 months back in the mid semester. He engaged the remedial classes in that semester. Hence no feedback/no results are awaited. Informed him to publish paper/ attend workshops and conferences etc.	G 9/1/25
3	Dr. Nikki Kedia	Assistant Professor	MATHS	47	Recommended. As the Faculty has submitted the project for DST & doing good work in the dept. She may be considered.	G 9/1/25
4	Dr. Sudheer Kumar K H	Associate Professor	Chemistry	43	Forwarded to Principal sir for the necessary approval as per norms	Ramya 9/1/25



Vice Principal



Principal

**9.14 Outreach Activities (5)**

Total Marks 5.00



**A. Initiatives taken towards outreach activities, social internships (2)**

The institute has NSS cell, NCC, Youth Red cross society, Rotaract club, Unnat Bharath Abhiyan cell, OIKOS club to undertake outreach activities.

Each cell is conducting many activities which benefit the society.

The institute is encouraging and supporting the activities by providing financial assistance.

NCC cadets are encouraged to attend camps, Republic day parades, 'B' and 'C' certificate exams.

Following are the activities undertaken by the students.

1. E-waste Awareness and Collection drive
2. "Reusable Study Materials Collection Drive"
3. Blood donation camps
4. "Lake Rejuvenation - Sapling Plantation Drive"
5. Young Voters Registration Campaign
6. Book Distribution Drive
7. Food for thought
8. Awareness on Plastic Free Abhiyaan
9. Health Check Up Camps
10. Drug Awareness and Police Marshals launch event
11. Project Prabodhan 2.0-teaching to underprivileged students of NGO.
12. Sapling Plantation Drive
13. Dengue Vigilance and Prevention
14. Water and Sanitation Survey
15. Swacch Bharath Abhiyaan
16. Colours of Happiness ( Wall painting activity for Govt. schools)
17. Awareness on Drug Abuse and Cyber Security
18. Water Internship Survey Project
19. Plantation Drive - 2023 -24
20. Organic Farming Talk and Plantation Event- 2023 -24
21. Project Pragnya
22. Tobacco & Cancer Awareness Program
23. Blood Stem Cell Transplantation

**Total expenditure for outreach activities:**

Year	2021-22	2022-23	2023-24	2024-25
Total Amount	Rs. 1,36,027/-	Rs. 1,27,816/-	Rs. 3,26,930/-	Rs. 6,36,278/-

A.

**B. Society connected activities undertaken by the students with activities (3)**

**NSS Activities**

**Blood Donation – Awareness**

Lion Blood Bank – Yelahanka, Vijayanagar and Bangalore Medical Services Trust, created an awareness about blood donation and benefits of donating the blood regularly on 06-07-2022 at BMSITM Campus. Around 1,500 students got awareness from this program.



#### Volunteer Blood Donation Camp

Blood donation camp was organised at BMSIT&M Campus by NSS in association with YRC-UBA & NCC:

1. On 07-07-2022. Around 389 units of blood donated, 3 blood banks participated in the event (Lions Yelahanka, Lions Vijayanagar and BMST Rotary – 1).
2. On 27<sup>th</sup> July 2023 & 28<sup>th</sup> July 2023 at BMSIT&M Campus. Around 60 Volunteers and 1000 + students & staff involved in this event and approximately 300 units of blood was collected and 1116+ needy patients benefitted.
3. On 25<sup>th</sup> October 2024 with the primary goal of encouraging voluntary blood donation and raising awareness about its importance. The Lions Blood Bank (Yelahanka and Vijayanagar – Vaishnavi group) collected about 400 units of blood.



#### Old Age Home Visit

Students and staff of BMSIT&M visited old age home on 23.12.2022. Donations in the form of cloths and money collected from staff and students of BMSIT&M were donated to Punahchethana Foundation, Sai Daksha Layout, Lingadahalli, Near Yelahanka RTO, Bengaluru. 25 Volunteers Participated in the event.



#### **Electoral Club – Young Voters Registration Campaign**

Young Voters Registration Campaign was held on 15-01-2023 to 31-03-2023 at BMSIT&M Campus, 10 Volunteers Participated in the event to check the status of Voters registration of 18+ years young voters. Around 1400 voter's registration submitted to Yelahanka Chief Electoral Officer.

1340	2023/03/1	meghagar	UG	CS	Megha	1BY202317	#####	1ST
1341	2023/03/1	bhuviray4	UG	CS	Bhuvan Ra	22UG1BY0	#####	1ST
1342	2023/03/1	jha.ishika	UG	CS	Ishika Jha	44	9/1/2004	1ST
1343	2023/03/1	aditi22004	UG	CS	ADITI S	1BY22CS06	#####	1ST
1344	2023/03/1	pranay200	UG	CS	Pranay Sir	22UG1BY0	#####	1ST
1345	2023/03/1	gamingdh	UG	CS	DHANUSH	59	#####	1ST
1346	2023/03/1	reyyanjan	UG	CS	Reyyan Al	B-34	5/2/2004	1ST

#### **Awareness on Plastic Free Abhiyaan**

Awareness on Plastic Free Abhiyaan under YRC-UBA in association with NSS & NCC was organised on 14th July 2023 at Avalahalli Village.



### Health Check Up Camp

Health Check Up Camp was organised by NSS in association with YRC-UBA & NCC on 21st July 2023 at BMSIT&M Campus. Around 20 Volunteers and 200 staff participated in the event.



### Drug Awareness and Police Marshals launch event

Drug Awareness and Police Marshals launch event was conducted by Aarohan Foundation along with Bengaluru City police. The event was supported by 42 various educational institutions and hospitals, and our college student volunteers from NSS-YRC-NCC participated in the event on 30-08-2023 at Ambedkar Bhavan, Yelahanka New Town, Bengaluru.



### Student Induction Program at Punahchetana Foundation Sevashrama

ECE Students visited a old age home- Punahchetana Foundation Sevashrama, as part of Student Induction Program on 07.09.2023 at Madappanahalli, Yelahanka. Around 04 Volunteers and 35 students of ECE, participated.

**Swacch Bharath Abhiyaan****Ek Tareekh Ek Ghanta – Swachhata Hi Seva 2023**

Ek Tareekh Ek Ghanta–Swachhata Hi Seva 2023–Cleanliness of Campus surrounding event was organized by NSS Unit in association with YRC on 30-09-2023. 25 student volunteers were participated.

**Awareness on Drug Abuse and Cyber Security**

Awareness on Drug Abuse and Cyber Security was organised on 08-12-2023 at BMSIT&M. The objective of the event was to create awareness among students about the drug abuse and cyber security. Consumption of drugs leads to ill health, and how drug consumption leads to criminal activities. Around 100 students were participated in the event.



### Water Internship Survey Project

Water Internship Survey Project was conducted in Doddaballapura Taluk, covering 12 villages within the limits of Hosahalli and Sasalu Gram Panchayats, focusing on surveying 13 lakes on 29-05-2024. A total of 52 volunteers participated in the survey. The initiative, called Water Positive, aims to reverse the negative water footprint by revitalizing small water bodies in urban and rural Bengaluru. This effort is a collaboration among Yuvaka Sangha, AICTE, NSS Karnataka, EMPRI, KSPCB, and BWSSB.

#### Hosahalli Panchayath Villages:



#### Plantation Drive - 2023 -24

Plantation Drive - field activity was conducted on 25-06-2024 at Adde Vishwanathapura Village, Rajanakunte Gram Panchayat. A total of 120 student volunteers participated in the event. Over 400 varieties of plants were planted during the activity, benefiting local villagers. The event fostered collaboration between students, faculty, and local leadership for a meaningful impact.



#### Organic Farming Talk and Plantation Event- 2023 -24

Organic Farming Talk and Plantation Event - field activity was held on 02-07-2024. The event took place in the 2nd Floor Seminar Hall and behind the Amphitheatre for the plantation. Sixty student volunteers participated, planting over 50 varieties of medicinal plants in the campus. The session was led by Prof. S Sudhakar, an organic farming educator from KR Puram, Bengaluru. He provided valuable insights on organic farming, market trends, and answered student queries.



### Tobacco & Cancer Awareness Program

The NSS Unit of BMSIT&M, in collaboration with the Youth Red Cross, organized a vital awareness initiative on the **Tobacco & Cancer Awareness Program** on **13th May 2025 (Tuesday)**. This event aimed to raise awareness about the severe consequences of tobacco consumption, educate the participants on early signs, prevention, and treatment of cancer, promote a healthier lifestyle through education and community participation and explained to students and staff about the detrimental health effects of tobacco use and its strong correlation with cancer. The session featured expert speakers **Dr. Lithika Lavanya M**, Consultant Radiation Oncologist from Ramaiah Institute of Oncology and **Dr. Swathi Acharya**, Program Coordinator, Indian Cancer Society, Bengaluru who shared valuable insights and actionable guidance.



### Blood Stem Cell Transplantation

An awareness session on Blood Stem Cell Transplantation was conducted on 14th May 2025 at BMSIT&M, in collaboration with DKMS Foundation India and the NSS Unit of the college. The event aimed to educate students on the significance of blood stem cell donation in fighting blood cancer and other life-threatening blood disorders. The session emphasized how a simple donation process could potentially offer a second chance at life to patients in need of a matching donor. The collaborative efforts of DKMS and the NSS Unit helped foster a sense of **social responsibility and compassion** among participants. By encouraging student participation in donor registration, the event made a significant impact in the fight against blood cancer.



### OIKOS Club Activities

#### E-waste Awareness and Collection drive

As part of CSER activity of OIKOS (BMSIT&M), and for the Compliance with Smart & Green Campus requisites as per AICTE; E-waste Awareness and Collection drive was carried out during November-December 2021. As part of this exercise, about 1000+ students (including Faculty) had submitted e-wastes. Overall, about 1000+ kg of E-waste was collected from the entire exercise, which had been handed over on 29th December 2021 in presence of office-bearers to New Delhi based Govt. Recognized Authorized Recyclers "Namo e-waste Management Ltd".

**"Reusable Study Materials Collection Drive"**

On 3rd June 2022, "Reusable Study Materials Collection Drive" was successfully accomplished by OIKOS, in collaboration with the NGO "Humanity is Religion". The activity was in compliance with 12.5 AICTE activity points and supported by NSS team of BMS Institute of Technology and Management. The activity was coordinated by Mrs Chetana (Dept. of CSE).

**"Lake Rejuvenation - Sapling Plantation Drive"**

In compliance with the Environmental Policy of OIKOS & BMSIT, "Lake Rejuvenation - Sapling Plantation Drive", was jointly organized by OIKOS in collaboration with ECOR Foundation on 31st July 2022 at Singapura Lake (Survey Number 102, Yelahanka Hobli, Yelahanka Taluk), in facilitation by Singapura Lake Walker's Association & BBMP, Govt. of Karnataka. More than 60 students undertook this activity.



#### Visit to Anganavadi Kendra

As a part of Environmental Education Outreach Activity of BMSIT&M and OIKOS, on 14/09/2023 the Faculty & Student Members of OIKOS have visited Nammuru Anganvadi Kendra & Nammuru Sarkari Kiriya Prathamika Paatshala (Bengaluru Uthara Valaya-4, Yelhanka). On this occasion, the Models and Charts created on Environmental topics were presented to the recipients and OIKOS student members took the opportunity to explain these to the school children. Further pencil boxes, books and colour pencils were gifted to each student.



#### E-waste awareness, sensitization, dissemination and collection drive

As part of Societal Environmental Outreach activity of BMSIT, OIKOS-Eco-Club, has successfully undertaken and accomplished an E-waste awareness, sensitization, dissemination and collection drive. On the occasion of World Soil Day (5<sup>th</sup> December 2023) OIKOS (Eco Club), has organized a campus-wide E-waste Collection Drive. The objective of the activity was to sensitize all students and faculty about the perils of unethical e-waste dumping in the soil and encourage its disposal only to authorized recyclers who manage it in a scientific and Environmentally Sound Manner. About 2000 kg of e-waste was handed over to GRKMS Pvt. Ltd, an authorized recycler recognized by KSPCB & CPCB on this occasion. This activity was also benevolent towards the accomplishment of 20 points AICTE student activity. More than 1000 students (2020, 2021, 2022 and 2023 batch) have participated and benefited from this environmental exercise.



#### Green Alumni Award 'CSER Appreciation'

On 22<sup>nd</sup> May 2024, OIKOS has honored Ms Monisha KY with its Inaugural Green Alumni Award for her invaluable efforts and contribution to Environment and Society.



#### World Environmental Day 'Societal Greening Activity'

With this year's World Environment Day (5th June 2024) theme as "Ecosystem restoration", OIKOS celebrated it viz. Environment-theme Ethnic Day and Sapling Plantation to raise environmental consciousness.



**MoU 'E-waste recycling'**

OIKOS (Eco Club ~ BMSIT&M) has taken its efforts towards environmental conservation and SDG 2020. On 16-01-2025) BMSIT&M has entered into an MoU with GRKMS India Pvt Ltd for effective management of e-wastes generated from the college.



**World Environmental Day 'E-waste recycling'**

On World Environment Day 05-06-2025, OIKOS (Eco Club ~ BMSIT&M) has handed over the E-waste generated in its premises to GRKMS India Pvt Ltd for effective management; in its efforts towards environmental conservation and SDG 2020.

**World Environmental Education Day 'Conduction'**

On the occasion of World Environmental Education Day (26-01-2025), OIKOS has joined hands with Green Circle (Environmental NGO) and Sai Shankar Vidyashala (managed by Peoples Trust), Rajanakunte, Bengaluru; to create Environmental awareness by facilitating Crossword Competition. Crosswords prepared upon three different Environment-related topics were shared with different students group.

**Kere Habba 'Volunteering'**

Three OIKOS Student coordinators namely Arjit Praveen Kumar, Tejas, and Tejaswi Gunturi have actively volunteered at Kere Habba conducted by Green Circle on 15<sup>th</sup> February 2025, at Avalahalli Lake.



#### Eco-friendly Mass-Marriage 'Volunteering'

16 OIKOS Student have actively volunteered in the Eco-friendly Mass-Marriage organized by at Peoples Trust and Green Circle (for the under-privileged) on 10th and 11th May 2025. On this occasion, the volunteers have collected many fugitive plastic bottles and ensured its submission to recycling centers, in a step towards promoting environmental sustainability. Also, they have indulged in exploring local plants and trees, helping to raise awareness about biodiversity and the importance of a green environment.



#### World Environmental Day - Education Outreach Activity

On the occasion of World Environmental Day (05-06-2025), OIKOS has joined hands with Green Umbrella (Environmental NGO-Dandeli) and handed over study materials to underprivileged school kids enrolled in govt. schools at Kali Tiger Reserve. The activity was coordinated by Student Alumni Ms Jhansi and Key Liaison Dr Rajesh Gopinath.



### Rotaract Club Activities

#### **Book Distribution Drive- Rotaract Club**

The Book Distribution Drive was conducted on 08.06.2023 at Panchajanya Vidya Peeta. It was aimed to provide educational resources to underprivileged children attending government schools. Around 1600 books and 600 packs of pencils were distributed to the students.



#### **Food for thought - Rotaract Club**

Food for Thought was organized from 09.07.2023 to 23.07.2023 at Yelahanka New Town. It is an initiative that helps to provide food for those in need. Students stockpile food and distributed to underprivileged communities.

**Dengue Vigilance and Prevention**

The "Attend, Educate, and Report" project is focused on dengue vigilance and prevention. It was organised on 26/09/2023 at various Govt. schools across Bangalore. It included creating awareness sessions in government schools to educate students about dengue prevention measures.

**Water and Sanitation Survey**

Water and Sanitation Survey was conducted on 26/09/2023 at various Govt. schools across Bangalore. It aimed at assessing the cleanliness, water and sanitation conditions in government schools and to promote a healthy and hygienic learning environment.

**Project Prabodhan 2.0**

Project Prabodhan is an initiative in which BMSIT volunteers engage in teaching subjects such as mathematics and spoken English to underprivileged students of NGO. This project operates in collaboration with Up child foundation. BMSIT&M students volunteered in this activity in the month of September 2023.

**Anandotsava Vidyalaya : Colours of Happiness ( Wall painting activity)**

The "Colors of Happiness" project was held on 4/11/2023 - 5/11/2023, with the valuable support from the Rotary Club of Yelahanka, successfully achieved its goal of infusing life and joy into the Anganwadi at Attur School. Over the course of two days, a team of enthusiastic volunteers, in collaboration with the Rotary Club, painted the building with a mix of lively colors and imaginative designs. The artwork not only brought visual appeal but also incorporated educational elements, contributing to the children's learning environment.



**"Chirag Abhidaan"**

The "Chirag Abhidaan" project, organized on 12.11.2023, a heartwarming Diwali celebration at the People Trust School. Dedicated volunteers came together to create a festive and joyous atmosphere for the children.



**"Santa's Workshop"**

A charitable event/workshop titled "Santa's Workshop", held from December 5th to 9th 2023 at Kapi Kuteera and Basketball Ground. Rotaract club in collaboration with Rushaang - the Music Club of BMSIT&M organized this event. The event served as a testament to the collective spirit of generosity within the community, aiming to support three orphanages by raising funds and donations to bring joy to underprivileged children through heartfelt gift contributions. The core objectives of this initiative were twofold: to provide gifts, essential supplies, and memorable experiences for 92 children across Miracle Manna Children's Home, Home of Faith Charitable Trust, and The Refuge Foundation, and to orchestrate effective fundraisers to finance and support these endeavours.



### Food for Thought

Food for Thought project focused on distributing essential food kits to 100 families in need, addressing food shortages in the Slum near BMSIT and Rachenahalli Slum on 30th October 2024.



### Project Pragnya

Project Pragnya- Phase-1: aim is to refurbish four classrooms at S. Ramakrishna Memorial School, Yelahanka to create a more conducive learning environment. It was successfully achieved with the repainting of a small classroom that had severe damage to its ceiling, which had been causing discomfort and health concerns for the students. The repair and repainting work, conducted from 22nd to 25th November 2024, has now transformed the room into a bright, safe, and welcoming space for learning.

### IEEE Outreach Activity

Stark Expo, held on 20th and 21st December 2024, was an interactive project

exhibition aimed at school students, showcasing over 35 student-led innovations as part of the Winter of Projects initiative. The event featured hands-on mini-games, live demonstrations, offering school children exposure to practical applications of science and technology. Over 50 school children, participated in the expo which given the students an engaging platform to inspire curiosity and interest in STEM fields.



Cadets and the NCC officer's Achievements for the year 2020-21 and 2021-22

Sl. No.	Year	No. of Events	Dates	Achievements

				<b><u>2020-21</u></b>	
1	2020-22	34	Jun 10 <sup>th</sup> 2020 to April 30 <sup>th</sup> 2022	<p><b>1. SUO. Deeksha Sethi</b></p> <ul style="list-style-type: none"> <li>• Republic Day Camp-2021</li> <li>• Rajpath NCC Girls Contingent</li> <li>• PM's Rally 2021</li> <li>• All India Best Cadet- Silver Medal</li> <li>• Chief Minister Commendation Card.</li> </ul> <p><b><u>2021-22</u></b></p> <p><b>2. C.SUO. Rishab S Rokhade</b></p> <ul style="list-style-type: none"> <li>• DG NCC Medallion.</li> </ul> <p><b>3. B.SUO. Pranav Shakthi</b></p> <ul style="list-style-type: none"> <li>• Promoted to Battalion Adjutant,</li> <li>• Ek Bharat Shreshtha Bharat Camp.</li> </ul> <p><b>4. B.Sgt. Shri Harsha Prasad</b></p> <ul style="list-style-type: none"> <li>• Promoted to Battalion Provost Seargent,</li> <li>• Selected at Group level Pre-RDC.</li> </ul> <p><b>5. CSM. Adityan A</b></p> <ul style="list-style-type: none"> <li>• Ek Bharat Shreshtha Bharat Camp.</li> </ul> <p><b>6. Cpl. Sujatha</b></p> <ul style="list-style-type: none"> <li>• Ek Bharat Shreshtha Bharat Camp.</li> </ul> <p><b>7. Cpl. Savarnik Tiwari</b></p> <ul style="list-style-type: none"> <li>• Ek Bharat Shreshtha Bharat Camp.</li> </ul>	
2	Associate NCC Officer			<p><b>8. Lt. Rani Mysore Srinivas</b></p> <ul style="list-style-type: none"> <li>• Deputy Director General Commendation Card</li> <li>• Worked as Board of Examiner for B&amp;C Certificate Examination</li> <li>• Cleared UGC- State Eligibility test in Physical Education</li> </ul>	

Cadet Senior Under Officer **Deeksha Sethi**, receiving Chief Minister Commendation Card by Deputy Director General Karnataka & Goa Directorate Air Commodore L.K. Jain, for representing **Republic Day Parade at Rajpat, Delhi and also secured Silver Medal at All India Best Cadet Competition**.



**Deputy Director General for Karnataka and Goa NCC Directorate**

**Annual Felicitation Programme - 2022**

CSUO. Rishab Rokhade and Lt. Rani M S have been awarded the prestigious **Dy.DG Commendation Card** by Air Commodore Bhupender Singh Kanwar, VSM, DDG - Kar & Goa. This annual ceremony was held on 13<sup>th</sup> March 2022 at Christ University, Bangalore hosted by NCC Directorate.



**Company Senior Under Officer Rishab S Rokhade** of fifth semester, Dept of CSE was commended by Dy DG NCC for exceptional contribution in the digitalization of NCC Directorate, NCC Gp HQ 'B' Bangalore and for his service as a member of Digital Forum Review Team at the Group Headquarters.

**Company Senior Under Officer Rishab S Rokhade** was recently awarded the **Director General's Appreciation Medallion** by DG NCC Lieutenant General Gurbirpal Singh, AVSM, VSM for rendering service of high order and for his participation in nation building.

**Lieutenant Rani Mysore Srinivas**, Associate NCC Officer and Company Commander, BMSIT&M was commended by Dy DG NCC for her excellent devotion to duty and years long dedicated services to groom young individuals to disciplined and responsible citizens of the nation.



#### NCC BATTALION RANKS APPOINTMENTS – 30 DEC 2021

Two of our cadets for their outstanding performance were promoted to battalion level ranks.

- Cadet Adjutant for the battalion, Battalion SUO Pranav Shakti
- Battalion Provost Sergeant Sriharsha Prasad



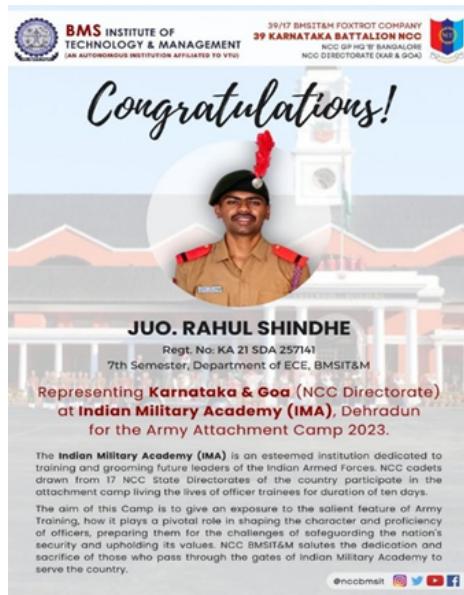
#### NCC Cadets Achievements for the Year 2023-25

Sl No.	YEAR	No. of Events	Dates	Achievements

1	2024-25	46	08/12/2023 to 02/02/2025	<p style="text-align: center;"><b><u>2023-2024</u></b></p> <p>1. <b>JUO. Rahul Shinde</b></p> <ul style="list-style-type: none"> <li>◦ Indian Military Attachment Camp.</li> </ul> <p style="text-align: center;"><b><u>2024-2025</u></b></p> <p>1. <b>CSUO. Varadaraj Prabhu GG</b></p> <ul style="list-style-type: none"> <li>◦ All India Thal Sainik Camp(AITSC-2024).</li> </ul> <p>2. <b>BUO. Prajwal V Dev</b></p> <ul style="list-style-type: none"> <li>◦ Promoted to Battalion JUO,</li> <li>◦ Idea &amp; Innovation Competition (RDC-2025),</li> <li>◦ Startup &amp; Idea Innovation Camp (NITK).</li> </ul> <p>3. <b>BUO. Sagar B S</b></p> <ul style="list-style-type: none"> <li>◦ Promoted to Battalion JUO,</li> <li>◦ Republic Day Camp-2025 (Culturals).</li> </ul> <p>4. <b>JUO. Nupreeth Mandappa</b></p> <ul style="list-style-type: none"> <li>◦ Special National Integrated Camp.</li> </ul> <p>5. <b>LCPL. Jeevitha A</b></p> <ul style="list-style-type: none"> <li>◦ Special National Integrated Camp.</li> </ul>
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**Indian Military Academy Attachment Camp 17/12/2023 to 28/12/2023**

**JUO.Rahul Shinde** represented Karnataka & Goa Directorate at Indian Military Academy (**IMA**), Dehradun for Army Attachment Camp 2023. The IMA is an esteemed Institution dedicated to training & grooming of future leaders of the Indian Army.



#### All India Thal Sainik Camp (AITSC), 02/09/2024 to 12/09/2024

CSUO Varadaraj Prabhu GG completed the All India Thal Sainik Camp (AITSC) that was held from 2nd September to 12th September 2024 at HQ DG NCC, Dehli. He represented the Karnataka & Goa Directorate in Map Reading (MR). He also played a vital role in the team securing 3<sup>rd</sup> Place in the Overall Championship (SD category).



#### Startup and Idea & innovation Camp NITK 9/12/2024 to 20/12/2024

Startup and Idea & Innovation Camp – 2024 was held at NITK from 9/12/2024 to 20/12/2024. BUO Prajwal V Dev was selected to represent the Karnataka and Goa Directorate in the Idea & Innovation Competition for RDC 2025.

His idea for the competition was MITRA-D (Dharatee), a sugarcane bagasse-based bioplastic, for a sustainable and circular plastic future.



#### Special National Integration Camp 11/12/2024 to 22/12/2024

Special National Integration Camp 2024 was held at Wokha, Nagaland from 12/12/2024 to 23/12/2024 by 1 Naga Bn. JUO. Nupreeth Mandappa K V from 5th sem/AI&ML dept. and LCPL. Jeevitha A from 3rd sem/CSBS dept. were selected to represent Karnataka and Goa Directorate.

This National-level camp provides a platform for cadets to promote national integration, showcase their talents, and foster camaraderie among participants from across India.



#### Republic Day Camp 2025: 29/12/2024 to 02/02/2025

The Republic Day Camp (Culturals)- 2025, held in Delhi celebrated India's cultural diversity through a variety of artistic performances. Representing the 39 Karnataka & Goa Directorate, BUO Sagar B S participated in the Cultural segment as a pianist, showcasing Karnataka's cultural heritage while bringing pride and recognition to the Directorate.



Idea & Innovation Competition (Republic Day Camp-2025) held in Delhi, aimed to encourage and inspire the young minds to develop innovative solutions to real-world problems. BUO Prajwal V Dev's project MITRA-D(Dhatree) ranked to be one of the TOP 10 Projects.

This remarkable achievement brought immense pride to the Karnataka & Goa Directorate.



#### **Impact:**

1. Students reached out to society through various activities, understood some of the problems existing in society.

Analyzed how best they can help the community through some activities. Experienced to work in a team and Managing finance. Some of these activities motivate the students to continue such activities and support the needy as and when required.

All these activities are mapped to: Engineer and the Society, Ethics, Individual and team work, Finance management and lifelong learning.

#### **Achievements:**

1. Students are actively participating in the activities and earning the AICTE activity points.
2. Sangeetha Prabhu, alumni of AI-ML department is actively participating in societal activities through Rotaract club and she is serving as District Community Service Director under Rotaract District 3192. The projects she has undertaken
  - i. Walkathon in eradicating polio, 25/10/2024
  - ii. Project Disha, initiated to teach maths, science and English communication to Govt. school students in collaboration with insights and innovations, CSIR, Tata Elxsi.
  - iii. Yuva volunteer: Teaching spoken English to Govt. school students every Saturday.
  - iv. Project Prathibha: districtwide initiative celebrating govt. school students' talent, 1/2/2025.
  - v. Organized hope for Wayanad and Uttara Karnataka, relief initiative to those affected by floods.
3. Nidhisha, 1BY18EC111, Alumni of ECE, serving as District Rotaract secretary- Rotary International District 3192

Club advisor- Rotaract club of Bangalore- Bhuvaneshwari Nagar

International Service Director Designate- Rotary Bangalore West.

#### **Contributions:**

- i. Led as the disciplinary head of the entire Rotaract Organisation in Bangalore (District 3190) and was an active participant in multiple community service projects for the year 2022-2023
- ii. Served as Zonal Rotaract representative leading and guiding 10 Rotaract clubs across Bengaluru monitoring their community and professional development activities, trained young leaders to serve the community in 2023-24.
- iii. Serving as the District Rotaract Secretary for the year 2024-2025 leading rotaraction of entire 65 Rotaract clubs under District 3192. Have trained, monitored and administered activities of various Avenues including Community Service, Professional Development, Self Development etc.
- iv. Led Human Chain world record for World Democracy Day, Organized Mega cultural event for around 600 government school children to showcase their talents, Led a mega sapling drive planting 200 saplings, raised funds through a project to install smart classes and provide computers to government schools, led a mega march to create polio awareness on world polio awareness day.

4. NCC cadets have attended B certificate and C certificate exams and cleared with A & B grades.
5. NCC cadets represented Republic Day Parade, National level camps, National level Idea & Innovation Competitions.
6. NCC cadets have selected as officers in Indian Armed Forces.

#### NCC Cadets Completed B- Certificate and C- Certificate Exams

Year	No. of Cadets completed B- Certificate Exams	No. of Cadets completed C- Certificate Exams
2021	20	17
2022	22	22
2023	13	13
2024	12	12
2025	22	22



7. Mr. Vishal S of 1st sem MBA has been conferred with the prestigious State award by Dept. of Youth Empowerment and Sports, Govt. of Karnataka for his exceptional service towards society and social well being. He has received the State Award from his excellency Governor of Karnataka, Shri Tawar Chand Gehlot. He had worked as a volunteer at Seshadripuram First Grade College in his UG (2021-24) for which he is recognised for the collective efforts towards nation building.



Annexure I  
(A) PROGRAM OUTCOME (POs)

**Engineering Graduates will be able to:**

**PO1: Engineering Knowledge:** Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

**PO2: Problem Analysis:** Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

**PO3: Design/Development of Solutions:** Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

**PO4: Conduct Investigations of Complex Problems:** Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).

**PO5: Engineering Tool Usage:** Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)

**PO6: The Engineer and The World:** Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

**PO7: Ethics:** Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

**PO8: Individual and Collaborative Team work:** Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

**PO9: Communication:** Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences

**PO10: Project Management and Finance:** Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

**PO11: Life-Long Learning:** Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

**(B) PROGRAM SPECIFIC OUTCOME (PSOs)**

**Program should specify 2-4 program specific outcomes.**

PSO1	Core and Emerging Technology Proficiency: Apply foundational knowledge of computer science and engineering to analyse, design and develop computing solutions across core domains such as algorithms, programming, databases, networking, web technologies and software engineering. Demonstrate proficiency in modern tools and emerging technologies including Artificial Intelligence, Machine Learning, Data Science, Cloud Computing, IoT and Cybersecurity to build innovative and effective software systems.
PSO2	Computational Problem Solving and Professional Competence: Employ analytical thinking and problem-solving abilities to address real-world challenges with societal impact through the application of computing platforms. Exhibit professional ethics, effective communication and teamwork skills necessary for success in multidisciplinary and collaborative environments.

## Declaration

The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines inforce as on date and the institutes shall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

**Head of the Institute**

Name : Dr.Sanjay H A

Designation : Principal

Signature :



**Seal of The Institution :**

PRINCIPAL  
BMS Inst.of Tech.& Mgmt.  
Doddaballapur Main Road  
Avaihalli,Yelahanka, Bangalore-56

**Place :** Bangalore

**Date :** 02-07-2025 15:50:10