



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ
(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT
(Autonomous Under VTU)



DEPARTMENT OF INFORMATION
SCIENCE AND ENGINEERING

SELF ASSESMENT REPORT (SAR)

Submitted to





ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

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BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Under VTU)

Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

PART - A

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

Part A: Institution Details

1. Name and Address of the Institution	BMS Institute of Technology and Mgmt,Dodaballapur Road, Avalahalli, Yelahanka,Bengaluru KA
2. Name and Address of Affiliating University	Visvesvaraya Technological University
3. Year of establishment of the Institution:	2002
4. Type of the Institution:	Autonomous
5. Ownership Status:	Self-financing Trust

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

Name of Institutions	Year of Establishment	Programs of Study	Location
B.M.S College of Engineering, Bangalore	1946	Engineering Programs (UG+PG)	Bengaluru
BMS College of Law	1963	Law (LLB, LLM) Programs	Bengaluru
BMS College for Women	1964	PUC and Degree (Arts, Science and Commerce)	Bengaluru
BMS Evening College of Engineering	1973	Engineering Programs(UG)	Bengaluru
BMS School of Architecture	2010	B.Arch and M.Arch. Programs	Bengaluru
BMS Evening College for Arts and Commerce	2014	B.A and B.Com.	Bengaluru
BMS College of Architecture	2016	B.Arch. and M.Arch. Programs	Bengaluru
BMS College of Commerce and Management	2018	B Com, BBM, MBA	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
Information Science and Engineering	UG	2010	2010	60	60	240	Granted accreditation for 3 years for the period (specify period)	2018	2021	Yes	4
Cyber Security	PG	2022	2022	18	No	18	Not eligible for accreditation	--	--	No	2
Artificial Intelligence and Machine Learning	UG	2019	2019	60	Yes	180	Not eligible for accreditation	--	--	No	4
Mechanical Engineering	UG	2002	2002	60	No	60	Granted accreditation for 3 years for the period (specify period)	2022	2025	No	4
Electrical and Electronics Engineering	UG	2003	2003	60	No	60	Granted accreditation for 3 years for the period (specify period)	2022	2025	0	4
Electronics and Telecommunication Engineering	UG	2003	2003	60	No	60	Granted accreditation for 3 years for the period (specify period)	2022	2025	0	4
Master of Business Administration (MBA)	PG	2022	2022	60	No	60	Not eligible for accreditation	--	--	0	2
Computer Science Engineering	UG	2002	2002	60	Yes	240	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
Electronics and Communication Engineering	UG	2002	2002	60	Yes	120	Granted accreditation for 3 years for the period (specify period)	2022	2025	0	4
M.Tech in Computer Science Engineering	PG	2014	2014	18	No	18	Granted accreditation for 3 years for the period (specify period)	2021	2024	0	2
Master of Computer Application (MCA)	PG	2003	2003	60	Yes	120	Granted provisional accreditation for two years for the period(specify period)	2022	2024	0	2
Computer Science and Business Systems	UG	2023	2023	60	No	60	Not eligible for accreditation	-	-	0	4

Sanctioned Intake for Last Five Years for the Information Science and Engineering

Academic Year	Sanctioned Intake
2023-24	240
2022-23	180
2021-22	180
2020-21	180
2019-20	180
2018-19	120

Sanctioned Intake for Last Five Years for the Artificial Intelligence and Machine Learning

Academic Year	Sanctioned Intake
2023-24	180
2022-23	120
2021-22	60
2020-21	60
2019-20	60
2018-19	0

Sanctioned Intake for Last Five Years for the Computer Science Engineering

Academic Year	Sanctioned Intake
2023-24	240
2022-23	180
2021-22	180
2020-21	180
2019-20	180
2018-19	120

Sanctioned Intake for Last Five Years for the Electronics and Communication Engineering

Academic Year	Sanctioned Intake
2023-24	120
2022-23	120
2021-22	180
2020-21	180
2019-20	180
2018-19	180

Sanctioned Intake for Last Five Years for the Master of Computer Application (MCA)

Academic Year	Sanctioned Intake
2023-24	120
2022-23	60
2021-22	60
2020-21	60
2019-20	60
2018-19	60

Sanctioned Intake for Last Five Years for the Master of Business Administration (MBA)

Academic Year	Sanctioned Intake
2023-24	120
2022-23	60
2021-22	0
2020-21	0
2019-20	0
2018-19	0

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

S No	Level	Discipline	Program
1	Undergraduate	Engineering & Technology	Information Science & Engg.

9. Total number of employees in the institution:**A. Regular* Employees (Faculty and Staff):**

Items	2023-24		2022-23		2021-22	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	69	73	67	69	59	69
Faculty in Engineering (Female)	28	30	57	58	56	59
Faculty in Maths, Science & Humanities (Male)	22	30	29	29	29	30
Faculty in Maths, Science & Humanities (FeMale)	22	23	22	22	21	23
Non-teaching staff (Male)	58	68	70	70	68	72
Non-teaching staff (Female)	29	29	27	27	26	28

B. Contractual* Employees (Faculty and Staff):

Items	2023-24		2022-23		2021-22	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	0	0	0	0	0	0
Faculty in Engineering (Female)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (Male)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (Female)	2	2	2	2	0	0
Non-teaching staff (Male)	35	37	29	37	21	29
Non-teaching staff (Female)	16	18	12	16	7	12

10. Total number of Engineering Students:**Engineering and Technology- UG Shift-1**

Items	2023-24	2022-23	2021-22
Total no. of Boys	2633	2423	2528
Total no. of Girls	1267	1174	1138
Total	3900	3597	3666

Engineering and Technology- PG Shift-1

Items	2023-24	2022-23	2021-22
Total no. of Boys	0	6	8
Total no. of Girls	0	6	9
Total	0	12	17

Engineering and Technology- MBA Shift-1

Items	2023-24	2022-23	2021-22
Total no. of Boys	0	27	0
Total no. of Girls	0	23	0
Total	0	50	0

Engineering and Technology- MCA Shift-1

Items	2023-24	2022-23	2021-22
Total no. of Boys	0	62	95
Total no. of Girls	0	48	72
Total	0	110	167

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 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:**Head of the Institution**

Name	Dr.Mohan Babu G N
Designation	Principal
Mobile No.	9632555300
Email ID	prinicipal@bmsit.in

NBA Coordinator, If Designated

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



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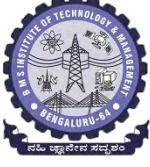
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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

PART - B

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.



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BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

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Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CRITERION - 1

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

1.1 State the Vision and Mission of the Department and Institute (5)

About BMSIT&M

BMS Institutions takes pride in educating students since 1946 in various fields of Engineering and continues to provide world class education in the coming years with more emphasis on research and development. The history of BMS Educational Trust rewinds back to the year 1946 with the establishment of the first private engineering college in the country, BMSIT&M is NAAC accredited with 'A' grade and five departments are NBA accredited. BMSIT&M Alumni can be found all over the world.

Located in Yelahanka, the massive 22 acre campus enables BMSIT&M to impart high quality technical education to its students in a pollution free environment. This is achieved with over 75% of the campus being covered with a lawn, a mini forest, scores of trees, parks, gardens and above all a green canopy of Kadamba, Badhami and Rain trees. Housing several evergreen, semi-evergreen, tropical, deciduous, dry, ornamental, fruit bearing, medicinal, bio-diesel plants, plenty of shrubs, jungle wood trees etc. The BMSIT&M campus is totally eco-friendly. All of this is maintained and managed by more than 23 garden staff who are dedicated to keeping the campus sustainable and playing its part in addressing the issue of global warming.

Large scale afforestation initiative has been taken up in our college campus by considering the benefits of having more trees like retaining surface moisture, reduction in soil erosion, surface runoff, flooding, air pollution and green house affect. Some other incidental benefits include encouraging water infiltration and hence improving ground water level. BMSIT & M garden was awarded 11 FIRST PRIZES/ SPECIAL OUTSTANDING PRIZE For "BEST ORNAMENTAL GARDEN" in Independence Day Garden Competition.

Vision of BMSIT&M

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 society.

Mission of BMSIT&M

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

About the Information Science and Engineering Department

The Department of Information Science and Engineering started in the Year 2010 with an approved intake of 60 and Enhanced to 120 from the academic year 2018-19, 180 from the academic year 2019-20 and to 240 from the academic year 2023-24. The Department has qualified and professionally dedicated faculty member practice OBE in the academic deliverables. The faculties have published research articles in various National, International, IEEE Conferences, and Journals.

The department has modern laboratories to serve the teaching and research needs of the students as well as faculty members. The Department has been organizing conferences, workshops, expert lectures, and student-centric activities to encourage students and faculty to in-still lifelong learning.

Few of our students are working for consultancy projects along with a few faculty members. The staffs are encouraged to attend the 10 days internship to bridge the gap between the academics and industry. The department has an admirable research ambiance.

Vision of the Department

Emergence as centre of learning in the field of Information Science and Engineering with technical competency to serve the society.

Mission of the Department

To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

Department Vision and Mission is in-line with institute Vision and Mission.

Vision

The Department of ISE aims to emerge as centre of learning in the field of Information Science and Engineering aligned with the institution vision to be one of the finest technical institutions.

We at the department, provide specialized technical training for students and faculty, in-line with the technically competent key word in institution vision.

The learning environment and these specialized skills enable us to address societal needs by offering technological solutions, thereby aligning with the institution's vision for the betterment of the society.

Mission

To emerge as centre of learning, the department fosters an inspiring learning atmosphere, which, in turn, contributes to the creation of an outstanding educational environment as articulated in the institute's mission statement provide excellent learning environment.

We at the department are committed in delivering curriculum which is aligned with industry requirements, employing effective teaching methodologies, and offering mentorship is reflected in the institution's commitment to providing high-quality academic instruction.

As we aspire to establish ourselves as a center of learning, innovation assumes a central role, echoing the emphasis on innovation within the institute's mission. Furthermore, our mission underscores the importance of industry-institute interaction, which affords students exposure to the corporate world, nurtures ethical conduct and professionalism, mirroring the institution's focus on the industry-institute interface at the institutional level.

1.2 State the Program Educational Objectives (PEOs) (5)

PEO-1: Successful professional career in Information Science & Technology.

PEO-2: Pursue higher studies and research for advancement of knowledge in IT industry.

PEO-3: Exhibit professionalism and team work with social concern.

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

The dissemination of Vision, Mission and PEOs statements are grouped as below:

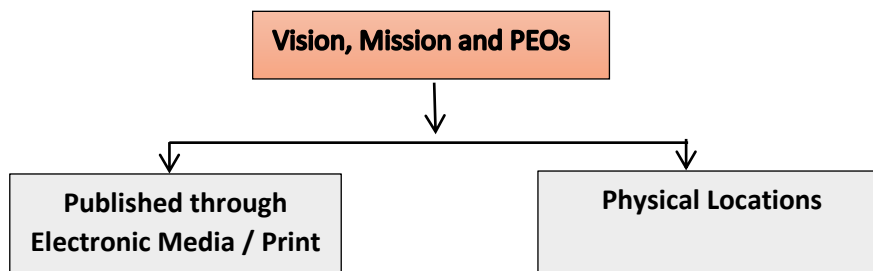



Fig 1.3 Dissemination of Vision, Mission and PEOs

The Vision, Mission and PEOs are published in Electronic Media

Table 1.3a

Sl.No	Published	Department		
		Vision	Mission	PEOs
1	Institute Website/ Departmental Webpage	✓	✓	✓
2	Emails/Course file	✓	✓	✓
3	Laboratory Manuals	✓	✓	✓
4	Conference workshop/Brochures	✓	✓	
5	Major/Minor Project/ Seminar Reports	✓	✓	✓
6	Department Newsletter - Jnan	✓	✓	
7	Research compendium	✓	✓	
8	FDP Report/ SDP Report/Open Course	✓	✓	

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 **BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT**
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Vision
Emerge as centre of learning in the field of information science & engineering with technical competency to serve the society.

Mission
To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

Information Science and Engineering

VISION: Emerge as center of learning in the field of Information Science & Engineering with technical competency to serve the society.

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ABOUT US

ABOUT BMSIEM

Cat Founders

Values and Mission

Council of Exiles

Board of Governors

BMSIEM Officers

Vision

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

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

Vision

Mission


Program Educational Objectives

Program Outcomes

Program Specific Outcomes


VISION

Emerge as Centre of learning in the field of information science & engineering with technical competency to serve the society.



MISSION

To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.



Department of Information science and Engineering

VISION

Emerge as centre of learning in the field of information science & engineering with technical competency to serve the society.

MISSION

To provide excellent learning environment through balanced curriculum, best teaching methods, mentoring and industry institute interaction.

Contents

Sl. No	Particulars
1	Research Publications Summary
2	Citation Details of faculty

The Vision, Mission, PEOs and PSOs are disseminated at Physical Locations

Table 1.3b

Sl.No	Location	Department		
		Vision	Mission	PEOs
2	HoD Room	✓	✓	✓
3	Class Rooms	✓	✓	
4	Laboratories	✓	✓	
5	Seminar Hall	✓	✓	
6	Common Areas	✓	✓	✓
7	Notice Boards	✓	✓	✓



Awareness among stakeholders with effective process and implementations:

The awareness of Department Vision and Mission is inculcated to various stakeholders such as:

1. Internal stakeholders: Students, Faculty, Management and Department Advisory Board Members

Students:

Students are the stakeholders who spend ample time in utilizing the technological resource, human resource and utilize infrastructure on the campus. They are primary stakeholders of the teaching learning process. *The awareness of department's vision and mission is through first year induction programs, second year induction programs, classroom sessions, activities, workshops and many more.*

Faculty:

Faculties are facilitators of teaching learning environment and conductive repository of knowledge who disseminate the same to students. Their wide expertise contributes towards defining Vision, Mission and attaining the POs and PEOs of the Program. *The faculties are majorly involved in formulation of vision and mission and awareness is inculcated through department meetings and discussions.*

Department Advisory Board (DAB) Members:

The DAB members are advisories for the overall development of the Department. The Department's Vision and Mission is discussed through DAB meetings, emails, and interactions.

Management:

The Management and trustee members are driving force of the overall development of the Department and Institute. The Department's Vision and Mission is discussed in BOG meetings, emails, and interactions.

2. External stakeholders: Employers, Alumni, Parents, Professional Bodies, Society

Employer:

Employers are the opportunity providers for students. The feedback, opinion, and suggestions received from employers helps in bridging the gap between curricula and industry. Along with graduates, they act as change-agents for sustainable development and address various issues of society. The awareness of the Department's Vision and Mission is imparted to Employers through placement sessions, industry-institute interactions, emails, surveys, Alumni students etc.

Alumni:

Alumni are pioneers and emissaries of the legacy of the institution to the outside world. They are the driving force of the industry. They are responsible for bridging the gap between industry and academia. The alumni students are informed about the Department's Vision and Mission through surveys, emails, and alumni interactions.

Parents:

Parents like to see an overall growth of their ward in terms of exposure to various activities and opportunities on campus, which would yield them to become a responsible learned citizen who can contribute to the society. It is their ardent desire to see their wards getting multiple job offers and/or pursue higher studies or become entrepreneurs for better opportunities. The awareness of the Department's Vision and Mission is imparted to parents through first year induction program, Parent-Teacher meetings (PTM), emails, newsletters etc.

Professional Bodies:

Professional bodies for Information Science and Engineering are platforms, where students can interact with Information Technology Engineering professionals from various walks of industry. Their guidance through technical talks, training, and workshops helps students to explore many perspectives of professional development and research avenues. Association for Computing Machinery (ACM) is lead societies extensively involved in mentoring and developing information science engineer's world over. PEOs are defined with reference to the Program Specific Criteria (PSCs) ACM. The Computer Society of India (CSI) and IEEE (Institute of Electrical and Electronics Engineers) are the leading professional bodies in India and are involved in conducting Seminars, Workshops, Conferences to share industry experiences and knowledge. Other professional societies in the Information Science and Engineering domain include The Indian Society for Technical Education (ISTE) and many more. *The awareness of the Department's Vision and Mission is imparted to the professional bodies through student chapters, industry-institute interactions, workshops & events, emails etc.*

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25)

NBA process was initiated in the year 2013-14. The draft copy of vision and mission were framed after brainstorming sessions and were finalized in September 2015. The vision and mission of the department is established by keeping institute vision and mission statement as base. Thorough discussions in various sessions by department faculties and principal was held, and collecting relevant information from different stakeholders like - students, parents and Alumni of the department is carried out as shown in Figure 1.4a

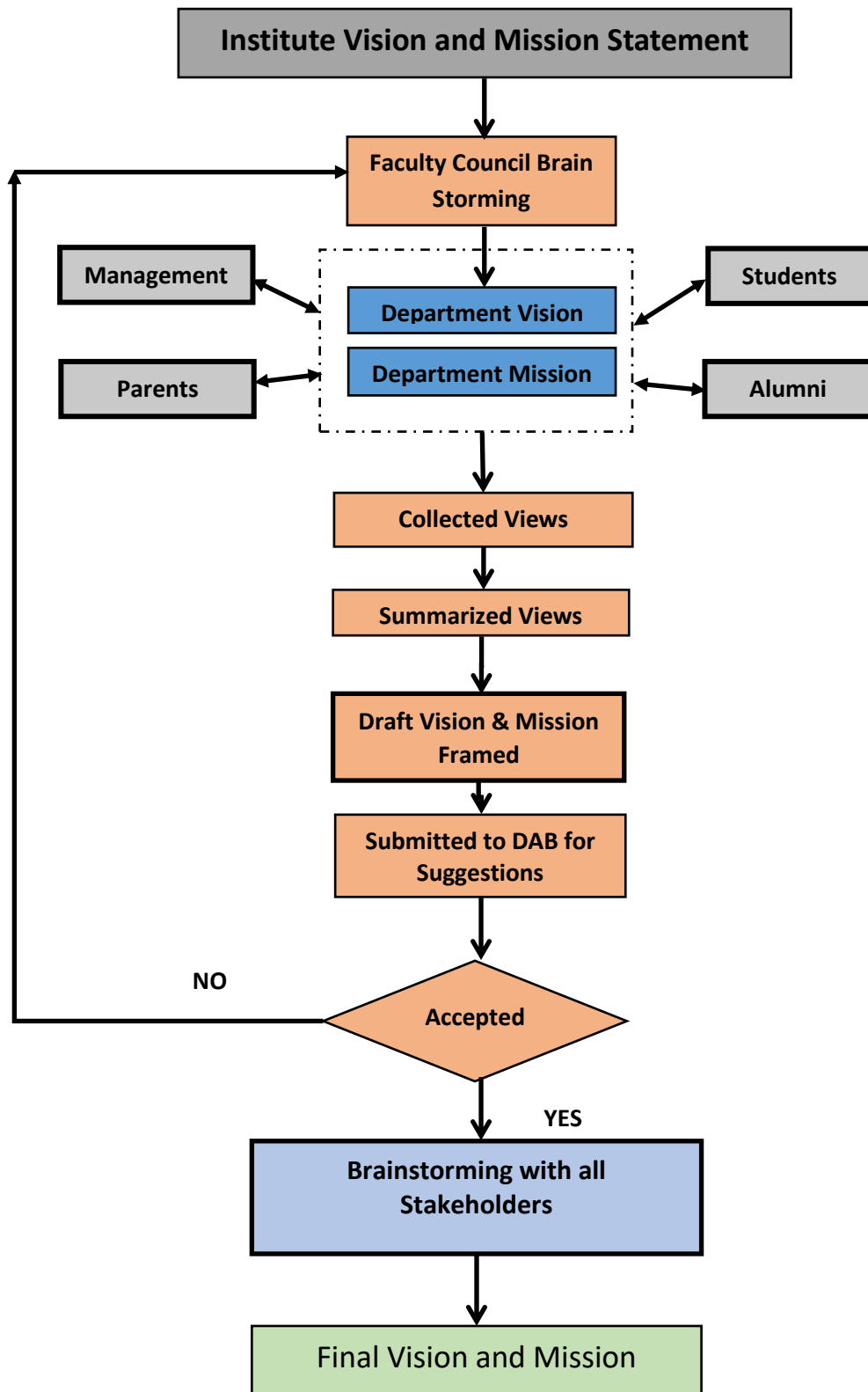


Figure 1.4a Process of defining Vision and Mission of the Department

In establishing the vision and mission of the department the following steps were followed:

Step 1: Vision and Mission of the institute are taken as base.

Step 2: Draft copy of vision and mission were framed through brainstorming sessions. The SWOC analysis by the department faculties and recommendations from all the stakeholders (Students, Parents, Faculty, Employers, Professional bodies, and Alumni).

Step 3: The accepted views were analysed and reviewed to check the consistency with the vision and mission of the institute and put forth in the Department Advisory Board (DAB) meeting for members opinions and suggestions. Later, suggestions were adopted and finalized the vision and mission of the department and disseminated to stakeholders.

Step 4: The vision and mission statements are subjected to periodic revisions based on external factors and future requirements.

PEOs Creation and Validation Process

After framing copy of vision and mission through various sessions of interaction, the Program Educational Objectives (PEOs) were created through DAB meeting. The Program Educational Objectives describes what the Graduates of the program are expected to achieve within 3 to 4 years of completion. These were established through a well-defined process involving the Key elements as Professional success, Life-long learning, Higher Education, Research, Ethical professional practice, Communication skills and Team player. The Figure 1.4b shows the process of defining PEOs.

Faculty Council:

Faculties of the department played an important role in establishment of PEOs because they are the course coordinators who are responsible for generating, observing and analysing all the activities related to the achievement of the course outcomes. Few of them are module coordinators who coordinate and supervise activities related to achievement of the course outcomes. Faculty council establishes guidelines for program academic and administrative units and provide guidance for student outcome assessment.

Statutory Body:

Statutory body provided an advice to standard procedures, rules and guidelines on various aspects of the development.

Lead Society:

Lead Society provided an advice on curriculum, research-based activities and guidelines on various aspects of the development.

Alumni Feedback:

Alumni are especially important in the assessment of PEOs because they have better knowledge of the program and experience in industry. The feedback from alumni is obtained by means of Alumni Survey. Alumni executive council meets every quarter and alumni meet is conducted once in a year in the campus. However, every month the department conducts "Alumni of the Month" event to felicitate our outstanding alumni.

Employer Feedback:

The employer feedback specifies the competency of our graduates to fulfil the needs of the organization along with societal and environmental needs.

Advisory board:

An advisory board consists of HOD, Program Coordinator, senior faculty members and Representatives from industry/ professional body and academia. The committee evaluates the program effectiveness and proposes the necessary changes.

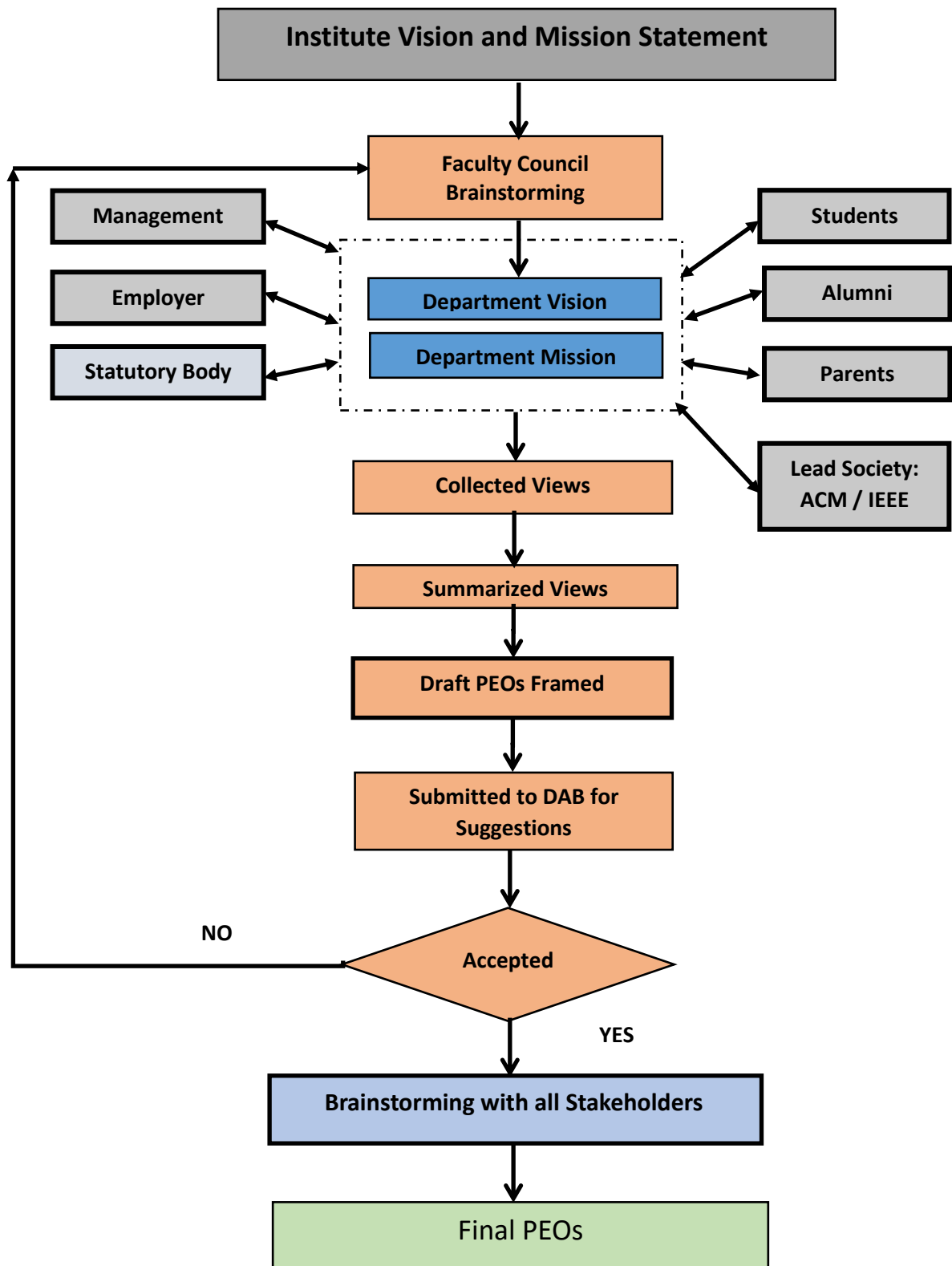


Figure 1.4b: Process for defining PEOs of the Department

The following steps brief the process of PEOs:

Step 1: Vision and Mission of the Department were taken as basis to interact with various stake holders.
Step 2: Summarized views were collected, draft PEOs were framed and submitted to Department Advisory Board for opinions and suggestions.
Step 3: The accepted views were analysed, draft PEOs were deliberated in DAB meeting.
Step 4: Once accepted, PEOs of the department were finalized and disseminated to all stakeholders.

1.5 Establish consistency of PEOs with Mission of the Department (15)

Initiatives Taken

To strengthen the mapping of PEOs to the mission elements of the department, discussions were held in various sessions and in Program Assessment Committee meeting.

Implementation

PEOs were finalized after having discussions with all the stake holders and correlations have been considered. The following gives the details of important points of the mission statement and PEOs from one to three.

M1: Balanced curriculum, best teaching methods

M2: Innovation

M3: Mentoring

M4: Industry-Institute Interaction

PEO-1: Successful professional career in Information Science and Technology.

PEO-2: Pursue higher studies and research for advancement of knowledge in IT industry.

PEO-3: Exhibit professionalism and team work with social concern.

PEOs	M1 (Balanced curriculum, best teaching methods)	M2 (Innovation)	M3 (Mentoring)	M4 (Industry- Institute Interaction)
PEO-1: Successful professional career in Information Science and Technology	3	2	3	2
PEO-2: Pursue higher studies and research for advancement of knowledge in IT industry	3	3	3	2
PEO-3: Exhibit professionalism and team work with social concern	3	3	3	3

*Table B.1.5 Established consistency of PEOs with Mission of the Department
1: Slight (Low), 2: Moderate (Medium) and 3: Substantial (High)*

Justification for Mapping PEOs with Mission

J1:

1. **PEO1-M1:** Strong foundation will be achieved through the basic knowledge of Information Science and Technology.
2. **PEO1-M2:** Innovative and critical thinking make student's successful professional.
3. **PEO1-M3:** Appropriate mentoring helps for successful career in Information Science and Technology.
4. **PEO1-M4:** The industrial exposure provides base for successful career.

J2:

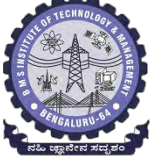
1. **PEO2-M1:** Curriculum and OBE helps students to pursue research and higher studies.
2. **PEO2-M2:** Quality education and constructive environment are pre-requisites for higher education.
3. **PEO2-M3:** Mentoring helps students to pursue in high QS rank institutions by balancing research and leadership skills.
4. **PEO2-M4:** Industrial exposure helps students to compete for higher studies abroad.

J3:

1. **PEO3-M1:** Sound knowledge is the key for professionalism and team work.
2. **PEO3-M2:** Innovation leads to better decision making and problem solving skills.
3. **PEO3-M3:** Mentoring helps students to exhibit professionalism and team work with social concern.
4. **PEO3-M4:** Industrial exposure helps students to exhibit professionalism with ethical values.

PEOs	Mapping with correlation 1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)	Justification
PEO-1 (Successful professional career in Information Science and Technology)	M1 - 3	The program focuses on the latest curriculum with OBE, which includes activities like teaching, Assessments through Tests, Quizzes, Assignments, Group tasks, flipped classrooms, Cooperative learning, Paper/Poster presentation, Seminars, Project Based Learning, Internships, MOOCs, Open courses, Skill development programs.
	M2 - 2	The Program will focus on higher order cognitive levels, Design thinking, Internships, MOOCs, Open courses, Skill development programs, Project-based learning, final year Projects and Technical seminars, attending Innovation and Entrepreneurship activities.
	M3 - 3	Focuses on general attributes of a graduate such as – graduates be socially responsible, shall take up leading roles in their career, excel in pursuing post-graduation degrees in reputed National/International Institutes. In continuation, Proctorial system is in place for general counselling.

	M4 - 2	The Program facilitates industry related activities like student internship, project-based learning, final year projects, Open courses, industry visits, expert talk from industry, partial delivery.
PEO-2 (Pursue higher studies and research for advancement of knowledge in IT industry)	M1 - 3	The program provides a learning environment which covers advanced topics in the syllabus, practical learning of various techniques innovatively provides more exposure to research in specialized areas and pursue higher education and also through open courses and MOOCs.
	M2 - 3	Knowledge gained through this program and work experience in IT industries shall enhance the capacity of graduates to provide innovative solutions to real-world problems through software products creation, adopting recent trends in information technology and carrying out interdisciplinary activities in association.
	M3 - 3	The program provides measures to counsel students to pursue higher studies and research through Higher education cell.
	M4 - 2	The department encourages students to interact with industry in all possible ways with the spirit of deriving mutual benefit. Visits of industry executives and practising engineers to the Institute for discussions and delivering lectures on industrial practices, trends and experiences.
PEO-3 (Exhibit professionalism and team work with social concern)	M1 - 3	Category of subjects in curriculum enables students to learn professional behaviour. Team works are introduced wherever necessary like project works, presentations, group activities and societal concerns through AICTE activities as well Humanity and social science subjects.
	M2 - 3	Program supports mentoring that increases self-confidence, leadership skills for starts ups. At college level for all first year students BISCP conducts one hour session on innovation. In Curriculum Design Thinking provides inputs to students get themselves involved in critical think and innovative ideas.
	M3 - 3	Program supports mentoring that increases self-confidence, self-awareness, leadership skill development, strong communication skills and exposure to new and different perspectives in a team.
	M4 - 3	The program supports industry institute interaction to empower professionalism through interaction with industry people, internships, projects work, and extracurricular activities.



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Under VTU)

Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CRITERION - 2

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

CRITERION 2	Program Curriculum and Teaching- Learning Processes	120
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2.1 Program Curriculum (20)

2.1.1 State the processes used to identify extent of compliance of the University curriculum for attaining the Program Outcomes(POs) and Program Specific Outcomes(PSOs) as mentioned in Annexure I. Also mentioned the identified curricular gaps if any (10)

(State the process details; also mention identified curricular gaps). Note: In case all POs are being demonstrably met through University Curriculum then 2.1.2 will not be applicable and the weightage of 2.1.1 will be 20.)

B.M.S Institute of Technology and Management is affiliated with Visvesvaraya Technological University (VTU) Belagavi, Karnataka. ISE Department started in the year 2010 with an intake of 60, subsequently enhanced to 120 in 2018, 180 in 2019 and 240 in 2023. The curriculum of the Information Science and Engineering Programme is as per the scheme disseminated by the affiliated university.

Information Science and Engineering span for four years, and the UG program curriculum is approved by the board of studies expert members and Institute academic council committee. In general Curriculum maintains a blend of Basic Sciences, Humanities, Engineering Sciences, Program core, Program electives and Open Electives, Capstone projects, Internships and Massive open online Courses that helps students to explore various fields to pursue higher studies or employment. The department frames its program curriculum based on the vision and mission of the institution and the department. The curriculum is revised to help students to be industry ready.

The list of courses and analysis of curricular Gaps for ISE Program based on AICTE Model Curriculum for 2018 scheme are given in the following tables 2.1,1(a),2.1.1(b) respectively.

Table 2.1.1(a) list of courses**B.E. Program - Batch: 2018 -2022**

Department of Information Science and Engineering

SCHEME OF TEACHING AND EXAMINATION**VTU Curriculum**

Course Code	Course Title	Teaching Hours/ Week				Credits
		L	T	P	PW	
18MAT11	Calculus & Linear Algebra	3	2			4
18PHY12	Engineering Physics	3	2			4
18ELE13	Basic Electrical Engineering	2	2			3
18CIV14	Elements of Civil Engineering and Mechanics	2	2			3
18EVNL15	Engineering Graphics	2		2		1
18PHYL16	Engineering Physics Laboratory			2		1
18EEL17	Basic Electrical Engineering Laboratory			2		1
18EGH18	Technical English-I		2			1
18MAT21	Advanced Calculus and Numerical Methods	3	2			4
18CHE22	Engineering Chemistry	3	2			4
18CPS23	C programming for Problem-Solving	2	2			3
18ELN24	Basic Electronics	2	2			3
18EME25	Elements of Mechanical Engineering	2	2			3
18CHEL26	Engineering Chemistry Laboratory			2		1
18CPL27	C Programming Laboratory			2		1
18EGH28	Technical English II		2			1
18MAT31	Transform Calculus, Fourier Series And Numerical Techniques	2	2			3

18CS32	Data Structures and Applications	3	2		0	4
18CS33	Analog and Digital Electronics	3	0		0	3
18CS34	Computer Organization	3	0		0	3
18CS35	Software Engineering	3	0		0	3
18CS36	Discrete Mathematical Structures	3	0		0	3
18CSL37	Analog and Digital Electronics Laboratory		2	2	0	2
18CSL38	Data Structures Laboratory		2	2	0	2
18KVK39	Vyavaharika Kannada (Kannada for communication)		2			1
18KAK39	Aadalitha Kannada (Kannada for Administration)		2		0	1
18MAT41	Complex analysis, Probability and Statistical Methods	2	2		0	3
18CS42	Design and Analysis of Algorithms	3	2		0	4
18CS43	Operating Systems	3	0		0	3
18SC44	Microcontroller and Embedded Systems	3	0		0	3
18CS45	Object Oriented Concepts	3	0		0	3
18CS46	Data Communication	3	0		0	3
18CSL47	Design and Analysis of Algorithm Laboratory		2	2	0	2
18CSL48	Microcontroller and Embedded Systems		2	2	0	2
18CPC49	Constitution of India, Professional Ethics and Cyber Law	1			0	1
18CS51	Management, Entrepreneurship for IT Industry	2	2		0	3
18CS52	Computer Networks and Security	3	2		0	4
18CS53	Database Management System	3	2		0	4
18CS54	Automata theory and Computability	3			0	3

18CS55	Application Development using Python	3			0	3
18CS56	Unix Programming	3			0	3
18CSL57	Computer Network Laboratory		2	2	0	2
18CSL58	DBMS Laboratory with mini project		2	2	0	2
18CIV59	Environmental Studies	1			0	1
18IS61	File Structures	3	2		0	4
18IS62	Software Testing	3	2		0	4
18CS63	Web Technology and its applications	3	2		0	4
18CS641	Data Mining and Data Warehousing	3			0	3
18CS642	Object Oriented Modelling and Design	3			0	3
18CS643	Cloud Computing and its Applications	3			0	3
18CS644	Advanced JAVA and J2EE	3			0	3
18IS645	Information Management System	3			0	3
18CS651	Mobile Application Development				0	
18CS652	Introduction to Data Structures and Algorithms	3			0	3
18CS653	Programming in JAVA	3			0	3
18CS654	Introduction to Operating System	3			0	3
18ISL66	Software Testing Laboratory		2	2		2
18ISL67	File Structures Laboratory with mini project		2	2		2
18CSMP68	Mobile Application Development			2		2
18CS71	Artificial Intelligence and Machine Learning	4				4
18CS72	Big Data Analytics	4				4
18CS731	Software Architecture and Design Patterns	3				3
18CS732	High Performance Computing	3				3

18CS733	Advanced Computer Architectures	3				3
18CS734	User Interface Design	3				3
18CS741	Digital Image Processing	3				3
18CS742	Network management	3				3
18CS743	Natural Language Processing	3				3
18CS744	Cryptography	3				3
18CS745	Robotic Process Automation Design & Development	3				3
18CS751	Introduction to Big Data Analytics	3				3
18CS752	Python Application Programming	3				3
18CS753	Introduction to Artificial Intelligence	3				3
18CS754	Introduction to Dot Net framework for Application Development	3				3
18CSL76	Artificial Intelligence and Machine Learning Laboratory			2		2
18CSP77	Project Work Phase – 1				2	1
18CS81	Internet of Things	3				3
18CS821	Mobile Computing	3				3
18CS822	Storage Area Networks	3				3
18CS823	NoSQL Database	3				3
18CS824	Multicore Architecture and Programming	3				3
18CSP83	Project Work Phase – 2				2	8
18CSS84	Technical Seminar			2		1
18CSI85	Internship					3

Table 2.1.1(b) Identification and analysis of Curricular Gaps for ISE Program based on AICTE Model Curriculum

Course Component	AICTE (credits)	VTU (Credits)	Curriculum Gap (credits)
Basic Sciences	24	24	0
Engineering Sciences	29	20	9
Humanities and Social Sciences including Management courses	12	8	4
Program Core	49	90	0
Program Electives	18	12	6
Open Electives	12	6	6
Project(s)/ Internships/Seminars	15	15	0
Total Credits	159	175	

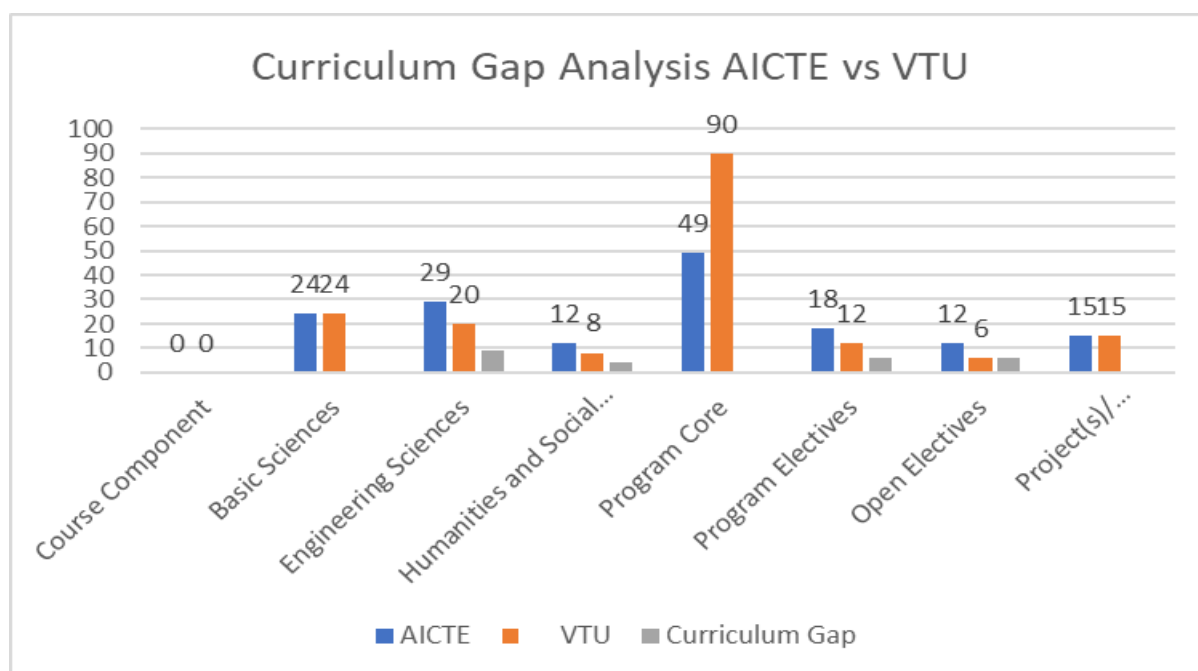


Figure 2.1.1(a) Curriculum Gap Analysis

From the above figure 2.2.1(a) it is observed that numbers of Information Science core courses and Information science elective courses offered by VTU are mapping with good

proportion to that of AICTE, however number of courses offered by VTU in open subject elective is less compared to AICTE. So, there is a major curricular gap in professional and open electives in VTU curriculum.

From 2018-19 the syllabus has been revised and included the latest technologies like Machine Learning, IOT, Data Science, Big data, Cyber Security, Artificial Intelligence and Robotic Process Automation.

Each course in the curriculum is described by its course outcomes. Course outcomes of each course are mapped with Programme outcomes specified by NBA and program-specific outcomes formulated by the Department. Draft mapping between COs and POs framed by course coordinators are scrutinized by Module Coordinators and approved by Program Assessment Committee (PAC). Activities required addressing the curriculum gaps are discussed during the meeting and a course of the action plan will be prepared.

Evaluation of attainment of POs and PSOs are based on Direct and Indirect Method.

- In Direct Method, evaluation of the attainment of POs and PSOs are based on the mapping between COs & POs, PSOs and attainment of COs through the performance of students in different assessments such as CIE, Assignments/quizzes and SEE exam.
- In Indirect Method, course end surveys, graduate exit survey, AICTE activity points are used to calculate the attainment of POs and PSOs.

The following processes are used to identify the extent of compliance with the University curriculum for attaining the Program Outcomes (POs) and Program Specific Outcomes (PSOs) and is illustrated in Figure 2.1.1(b).

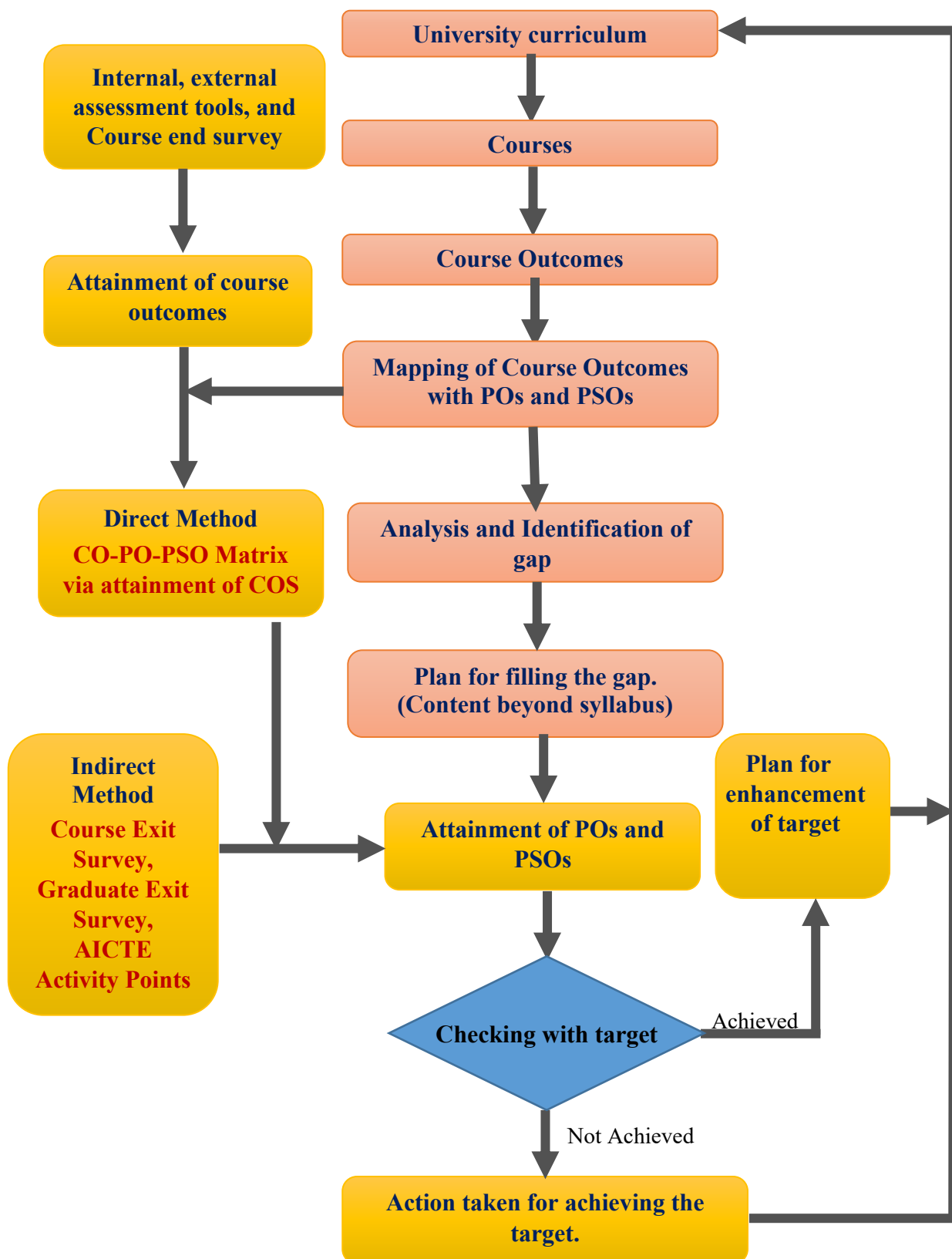


Figure 2.1.1(b) Process - Identifying curriculum gap as well as attainment method

Closing the loop:

Target levels of attainment of POs and PSOs are set and actual attainment of POs and PSOs are computed. Based on these two, loops are closed either by increasing the target level for the next cycle of the program or by planning suitable improvements in all the relevant activities to increase the actual attainment.

- Process followed to develop the Program Curriculum for Autonomous system.

From the academic year 2021-22, Institution has become autonomous under VTU. The department has followed the following procedure to frame the scheme & syllabus.

1. Based on Institute/Department mission and vision, National Education policy, NBA / AICTE guidelines the department formulated its PSOs.
2. Referring to the Autonomous curriculum as prescribed by Statutory bodies and on par with the International Premier Institutes like IITs and IISc, HoD along with all the faculty members framed the outline of the curriculum.
3. The syllabi of various courses are framed and the course outcomes of all the courses of the curriculum are planned according to the POs and PSOs.
4. The curriculum is presented in the Program Assessment Committee and the necessary changes are incorporated.
5. The curriculum has been presented to Board of Studies (BoS) expert members (including Industry, academicians, alumni, parents, and our management representatives) for approval.
6. The recommendations and modifications suggested by BoS members are incorporated in curriculum and forwarded to Academic Council.
7. The final approval of curriculum and syllabus is done by Institute academic council committee.
8. The curriculum is implemented, and the impact will be considered for further implementations.

Curriculum Gaps:

The gaps in the curriculum are identified by the program articulation matrix between the Courses vs. Programme Outcomes & Programme Specific Outcomes. Program articulation matrix is presented in Table 2.1.1(d) for 2018 scheme.

Table 2.1.1 (d) – Articulation Matrix (2018 scheme)

Sl.No	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1	C111 M1	√	√	√	-	-	-	-	-	-	-	-	-	-	-
2	C112CHE	√	√	√	√	√	-	√	√	-	-	-	-	-	-
3	C113CPS	√	√	√	-	√	-	-	-	-	-	-	-	-	-
4	C114ELN	√	√	√	-	√	-	-	-	√	√	-	-	-	-
5	C115ME	√	√	-	-	-	-	-	-	-	-	-	-	-	-
6	C116CHEL	√	√	-	√	√	-	-	-	-	-	-	-	-	-
7	C117CPL	√	√	√	√	√	-	-	-	-	-	-	√	-	-
8	C11EGH18	-	-	-	-	-	-	-	-	√	√	-	√	-	-
9	C121MAT	√	√	√	-	-	-	-	-	-	-	-	-	-	-
10	C122PHY	√	√	-	√	-	-	-	-	-	-	-	-	-	-
11	C123ELE	√	√	-	-	-	√	-	-	-	-	-	-	-	-
12	C124CIV	√	√	-	-	-	-	-	-	-	-	-	√	-	-
13	C125EGDL	-	-	-	-	√	-	-	-	√	√	-	√	-	-
14	C126PHYL	√	√	-	-	-	-	-	-	-	-	-	-	-	-
15	C127ELEL	-	-	-	√	√	-	-	-	-	-	-	-	-	-
16	C128ENG2	-	-	-	-	-	-	-	-	√	√	-	√	-	-
17	C231MAT31	√	√	√	-	-	-	-	-	√	√	√	√	-	-
18	C232 DS	√	√	√	√	√	-	-	-	√	√	-	√	√	-
19	C233 ADE	√	√	√	√	√	-	-	-	√	√	√	√	√	√
20	C234 CO	√	√	√	√	-	-	-	-	√	√	-	-	√	√
21	C235 SE	√	√	√	-	√	√	-	√	√	√	√	√	√	√

Sl. No	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
22	C236 DMS	√	√	√	-	√	-	-	-	√	√	-	-	√	√
23	C237 ADE Lab	√	√	√	√	√	-	-	-	√	√	-	√	√	√
24	C238 DS Lab	√	-	√	√	√	-	-	√	√	√	-	√	√	-
25	C239 CPS	-	-	-	-	-	√	√	√	-	-	-	-	-	-
26	C241 MAT41	√	√	√	-	-	-	-	-	-	-	-	-	-	-
27	C242 DAA	√	√	√	-	√	-	-	-	-	-	-	-	√	-
28	C243 OS	√	√	-	-	-	√	√	-	√	-	-	√	√	√
29	C244 MP &MC	√	√	√	-	√	-	-	-	-	-	-	√	√	
30	C245 OOC	√	√	√	-	√	-	-	-	√	√	-	√	√	√
31	C246 DC	√	√	√	-	-	-	-	-	√	√	-	-	√	√
32	C247 DAA Lab	√	√	√	-	√	-	-	-	-	-	-	√	√	-
33	C248 MP Lab	√	√	√	√	√	-	-	√	√	√	√	√	√	√
34	C351 ME	√	√	-	-	-	√	-	√	-	-	-	√	√	-
35	C352 CN	√	√	√	-	-	-	√	√	√	-	√	√	√	√
36	C353 DBMS	√	√	√	√	√	-	-	-	-	-	-	-	√	√
37	C354 ATC	√	√	√	-	√	-	-	-	√	√	-	√	√	√
38	C355 ADP (Python)	√	√	√	√	√	-	-	-	√	-	-	√	√	-
39	C356 USP	√	√	√	-	√	-	-	-	√	√	-	√	√	√
40	C357 CN Lab	√	√	√	-	√	-	-	√	-	√	-	-	√	√
41	C358 DBMS Lab	√	√	√	√	√	-	-	-	-	-	-	-	-	√

Sl.No	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
42	C361 FS	√	√	√	√	√	-	-	-	-	-	-	-	√	√
43	C362 ST	√	√	√	-	√	-	-	-	-	√	-	-	√	√
44	C363 WTA	√	√	√	-	√	-	-	-	√	√	√	√	√	-
45	C366 ST Lab	√	-	√	√	√	-	-	√	√	√	-	√	√	-
46	C367 FS Lab	√	√	√	√	√	√	√	√	√	√	√	√	√	√
47	C368 MAD	√	√	√	-	√	√	-	√	√	√	-	√	√	-
48	C471 AIML	√	√	√	-	-	-	-	-	-	-	-	-	√	-
49	C472 BDA	√	√	√	√	√	√	-	-	√	√	√	√	√	√
50	C476 AIML Lab	√	√	√	-	-	-	-	-	-	-	-	√	√	-
51	C477 CSP(project)	√	√	√	√	√	√	√	√	√	√	√	√	√	√
52	C481 IOT	√	√	√	-	√	-	-	-	√	√	-	√	√	√
53	C4CSP83 Project	√	√	√	√	√	√	√	√	√	√	√	√	√	√
54	C4CSS84 Seminar	√	√	√	√	√	√	√	√	√	√	-	√	√	√
55	C4CSI85 (Internship)	√	√	√	-	√	√	-	-	√	√	√	√	√	-
Number of Courses Mapped		50	48	42	21	35	13	8	14	30	29	11	32	35	23
Percentage of Courses Mapped		91%	87%	76%	38%	63%	24%	15%	26%	55%	53%	20%	58%	63%	41%

The graph has been drawn between the number of courses mapped with concerned POs and PSOs as shown in Figure 2.1.1(c) for the 2018 scheme

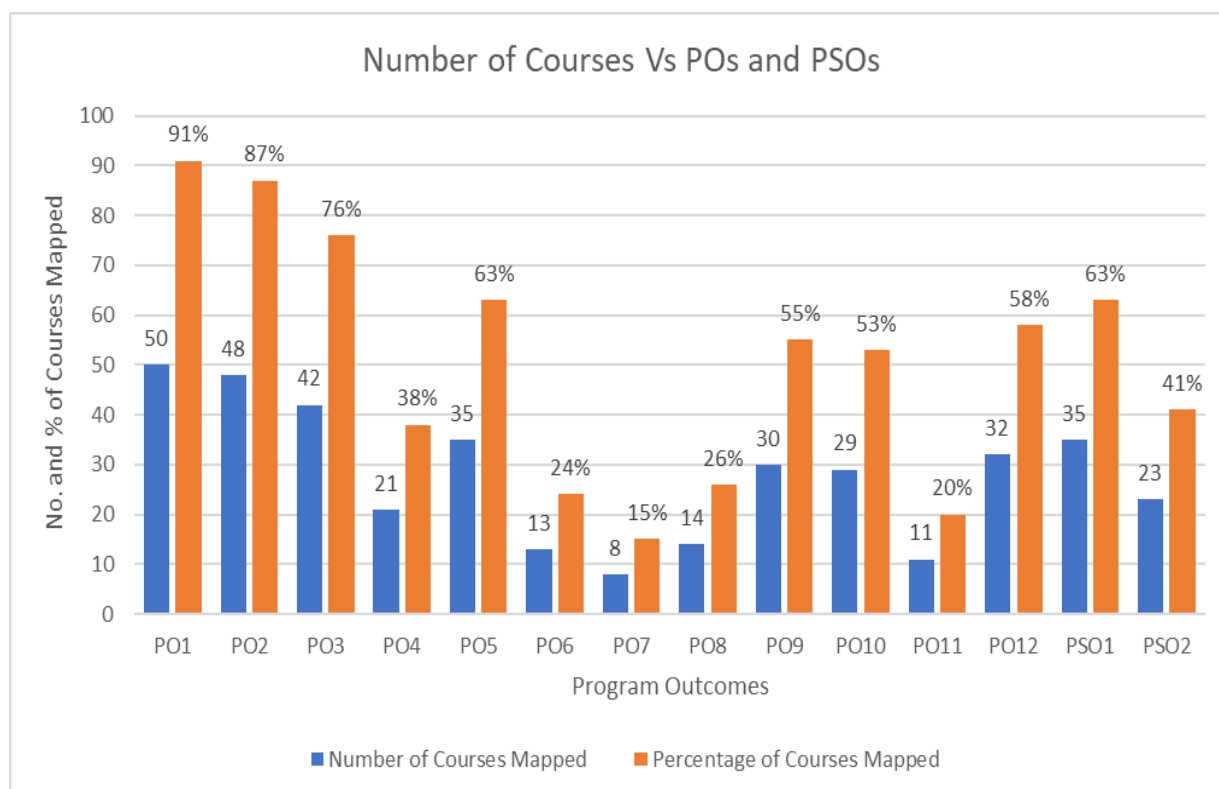


Figure 2.1.1(c): Number of courses vs. POs & PSOs

Based on the suggestions of committee members, POs that are mapped below 60% from PO1 to PO5 and below 40% from PO6 to PO12 of the courses are considered as gaps in the curriculum. Analysis of mapping of all courses to POs and PSOs reveals that the **PO4, PO6, PO7, PO8, PO11 and PSO2** are not being addressed adequately as shown in Table 2.1.1(e).

Table 2.1.1(e) Curriculum Gaps

S. No.	GA P	Respective POs
1	Conduct Investigation of Complex problems	PO4
2	Engineer and Society	PO6
3	Environment and Sustainability	PO7
4	Ethics	PO8
5	Project and Finance Management	PO11

❖ **Bridging the Curriculum Gaps**

The gap between the syllabus and program outcomes is bridged by organizing various OBE activities in the department:

- Technical talks by renowned industrialists / academicians – PO4
- Skill development program / Workshops / Conferences – PO6, PO8
- Industrial Visits – PO7
- Techtransform / Tech fest – PO9
- Internships for Students and Faculty – PO11
- Innovative and Case study Related Questions – PO4
- Open courses – PO4
- Project based Learning – PO11
- MOOCs certification – PO12
- AICTE Activity Point Program - PO6, PO7

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)

(Provide details of the additional course/learning material/content/laboratory experiments/projects etc., arising from the gaps identified in 2.1.1 in a tabular form in the format given below)

Note: Please mention in detail whether the Institution has given such inputs and suggestions to the Affiliating University regarding curricular gaps and possible addition of new content/add-on courses in the curriculum, to bridge the gap and to better attain program outcome(s)

To fulfil the curriculum gaps suggestions as shown in Figure 2.1.2 have been sent to the Chairman, Board of studies in Information Science Engineering, Visveswaraya Technological University (VTU), Belagavi.

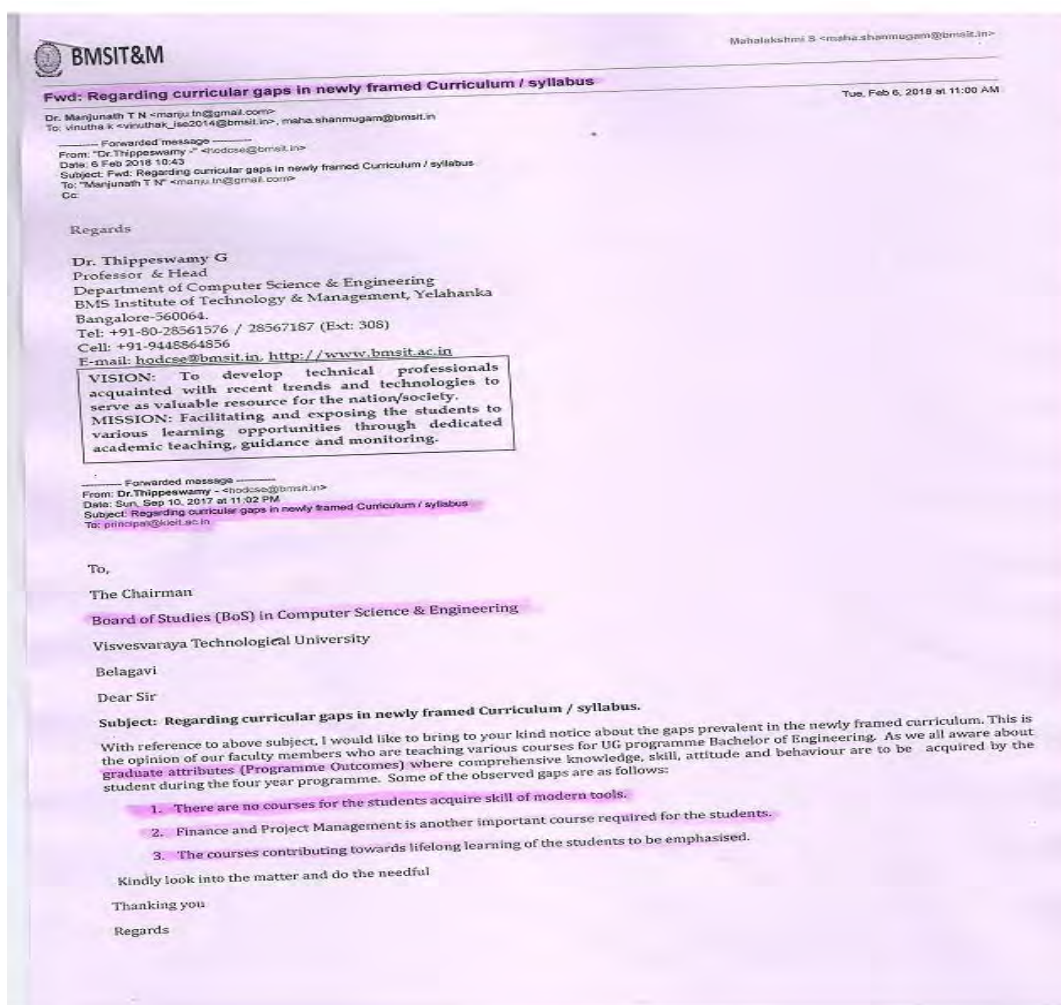


Figure 2.1.2 : Evidence for sending suggestions via mail to the VTU

To fulfill the gaps identified, Programs conducted with outcomes are given in the Table 2.1.2.

Table 2.1.2 Content beyond the syllabus for the attainment of POs and PSOs CAY (2023-24)

Sl.No	Gap	Action Taken	Date-Month-Year	Resource Person with designation	No of Students Present	Relevance to POs & PSO's
1	Life long learning	Workshop on Recent Trends and Job opportunities of RPA in Automation Industry	24.11.23	Anuj Srivastava, Program Manager, UIPath	135	PO12, PSO1
2	Modern Tools Usage	Skill Development Program on RPA	25.11.23	Mr.Muktheshwar B.R Associate Consultant, Oracle	40	PO5, PSO1
3	Engineer and Society	Career opportunities in Cyber security	19.10.2023	Samarth Bhaskar Bhat, Director of Reverse Engineering Infosec Private Limited.	120	PO6, PSO1

Table 2.1.2 Content beyond the syllabus for the attainment of POs and PSOs CAY (2022-23)

Sl.No	Gap	Action Taken	Date-Month-Year	Resource Person with designation	No of Students Present	Relevance to POs & PSO's
1	Environment and Sustainability, Team work	Survey on capability-based system in LINUX	22.09.2022	Dr. Karthik and Dr. Savitha Dept. of ISE, BMSIT&M	46 (78%)	PO7, PO9, PSO2

2	Investigations of complex problems, Modern tool usage, The engineer and society, Communication, Project management and finance, Life-long learning	Mini Project on IoT	10.06.2022	Dr. Narasimha Murthy, Prof. Vinutha K	220 (100%)	PO4, PO5, PO6, PO10, PO11, PO12 PSO1, PSO2
3	Ethics	Computer forensics and need for computer forensics	12.6.2023 - 16.6. 2023	Dr. Swetha M. S. Assistant Professor, Dept. of ISE, BMSIT&M	45 (76%)	PO8, PSO2
4	Complex Problems, Modern tool Usage, Individual and Teamwork	Partial Delivery on RPA	4.11.2023 - 5.11.2023	Mrs. S Mahalakshmi Assistant Professor, Dept. of ISE, BMSIT&M	167 (98%)	PO4, PO5, PO9, PSO1
5	The Engineer and Society	Outreach Activity	2023	All Faculty, Dept. of ISE, BMSIT&M	All Students (100%)	PO6, PO7, PO9, PO10, PO12, PSO1
6	Lifelong learning	MOOC	2023	Proctor Dept. of ISE, BMSIT&M	All Students (100%)	PO12, PSO1
7	Project management and finance, Life-long learning	Project Based Learning	13.1.2023	Mr. Kumar Goud, Manager, Capgemini. Mrs. Praveen CEO of Digipix Technology	All Students (100%)	PO11, PO12 PSO1, PSO2
8	Engineer and Society, Ethics, Team work, lifelong learning	Group seminar on Cryptography	7.12.2022	Dr. Swetha M. S. Assistant Professor, Dept. of ISE, BMSIT&M	100%	PO2, PO6, PO8, PO9, PO11, PO12, PSO1, PSO2

Table 2.1.2 Content beyond the syllabus for the attainment of POs and PSOs CAY (2021-22)

Sl. No	Gap	Action Taken	Date-Month-Year	Resource Person with designation	No of Students Present	Relevance to POs & PSO's
1	Team work, Communication, Lifelong Learning	Group Seminar on Competitive strategies in real time business	29.06.2022 - 06.7.2022	Prof.S. Mahalakshmi Dept. of ISE, BMSIT&M	92 (100%)	PO9, PO10, PO12, PSO1
2	Lifelong Learning	Expert Talk on Block Chain and Crypto	04.07.2022	Arifa Khan, India Partner of the Ethereum Foundation & Dr.Mohan B.A. Asst.Professor, Dept. of ISE, BMSIT&M	67(86%)	PO12, PSO1
3	Conduct investigations of complex problems, Lifelong Learning	Group Assignment on "Computer Networks"	10.01.2022	Dr. Surekha K B Associate Professor, Dept.of ISE, BMSIT&M	110(100%)	PO2, PO4, PO9, PO12,
4	Conduct investigations of complex problems, Lifelong Learning	Expert Talk on "Applications of Python in Industry"	22.01.2022	Mr. Pritam Kulkarni - Principal Product Engineer,Randstad RiseSmart,Pune	120 (98%)	PO4, PO12, PSO1
5	Modern tool usage, Lifelong Learning	Expert Talk BDA	30.11.2021	Dr. Prakash G L Associate Professor, Dept.of ISE, BMSIT&M	98 (89%)	PO5, PO12, PSO2
6	Problem analysis, Modern tool usage, Lifelong Learning	Skill Development Program on "wire Shark"	11.12.2021	Dr. Surekha K B Associate Professor, Dept.of ISE ,BMSIT&M	70 (95%)	PO2, PO5, PO12, PSO1
7	Engineering knowledge	Quiz on Data Communication	26.04.2021	Ms. S. Mahalakshmi Assistant Professor, Dept.of ISE, BMSIT&M	60(100%)	PO1, PSO1
8	Ethics, Lifelong Learning	Hands on AWS	26.5.2022 - 27.5.2022	Dr. Swetha M. S. Assistant Professor, Dept. of ISE, BMSIT&M	44 (84%)	PO2, PO3, PO5, PO8, PO12, PSO1
9	Modern Tools usage, Lifelong Learning	Technical Talk on "Web Development using React"	28.05.2022	Mr. SatishKumar Agarwal Software Development Engineer, Microsoft Inc.,	32 (71%)	PO5,PO12, PSO1

Table 2.1.2 Content beyond the syllabus for the attainment of POs and PSOs CAY (2020-21)

Sl.No	Gap	Action Taken	Date-Month-Year	Resource Person with designation	No of Students Present	Relevance to POs & PSO's
1	Lifelong Learning	Expert talk on the topic “ IOT Applications using Raspberry Pi”	22.10.2020	Mr. Krishna V, Design Engineer, Infidata Technologies.	60 (98%)	PO12, PSO2
2	Ethics, Engineer, and Society	Technical talk on “Importance of Cyber Security”	20.11.2020	Mr.Kaushik S A, CEO, InShoot	84(95%)	PO6, PO8, PSO1
3	Engineer and Society	A webinar on “College vs Corporate: Expectation vs Reality”	28.11.2020	Ms. Aishwarya Puranik co-founder of CoachEd	75(95%)	PO6, PSO1
4	Engineer and Society	expert talk on the topic “Software Testing”	19.11.2020	Mrs. Megha Borkar, Test Lead, ATOS Syntel	150 (96%)	PO6, PSO2
5	Project management and finance, Life-long learning	Project Based Learning	04.12.2020 & 07.12.2020	Mr. SharathKumar, Assistant Manager, Genpact, and Mr. Praveen A L, Founder & Developer (proprietor), Digipix Technologies	336 (98%)	PO11, PO12 PSO1, PSO2
6	Professional ethics	Motivational talk on Universal Human Values	16.02.2021	Prof. Satyanarana Raju Professor and chief mentor in Nagarjuna Group of Institutions	132 (94%)	PO8, PSO1
7	Life long learning	webinar on “Edge Analytics for Aerial Unmanned Vehicles”	24.07.2021	Dr. Sreejith Vidyadharan Post-Doctoral Research Fellow, North Dakota, University, USA.	60 (86%)	PO12, PSO1

2.2 Teaching Learning Process

(100)

2.2.1 Describe Processes followed to improve quality of Teaching & Learning (25)

(Processes may include adherence to academic calendar and improving instruction methods using pedagogical initiatives such as real-world examples, collaborative learning, quality of laboratory experience with regards to conducting experiments, recording observations, analysis of data etc. encouraging bright students, assisting weak students etc. The implementation details and impact analysis need to be documented)

Initiatives and implementation details of Improving Instruction Methods

The teaching & learning process is illustrated in Figure 2.2.1(a)

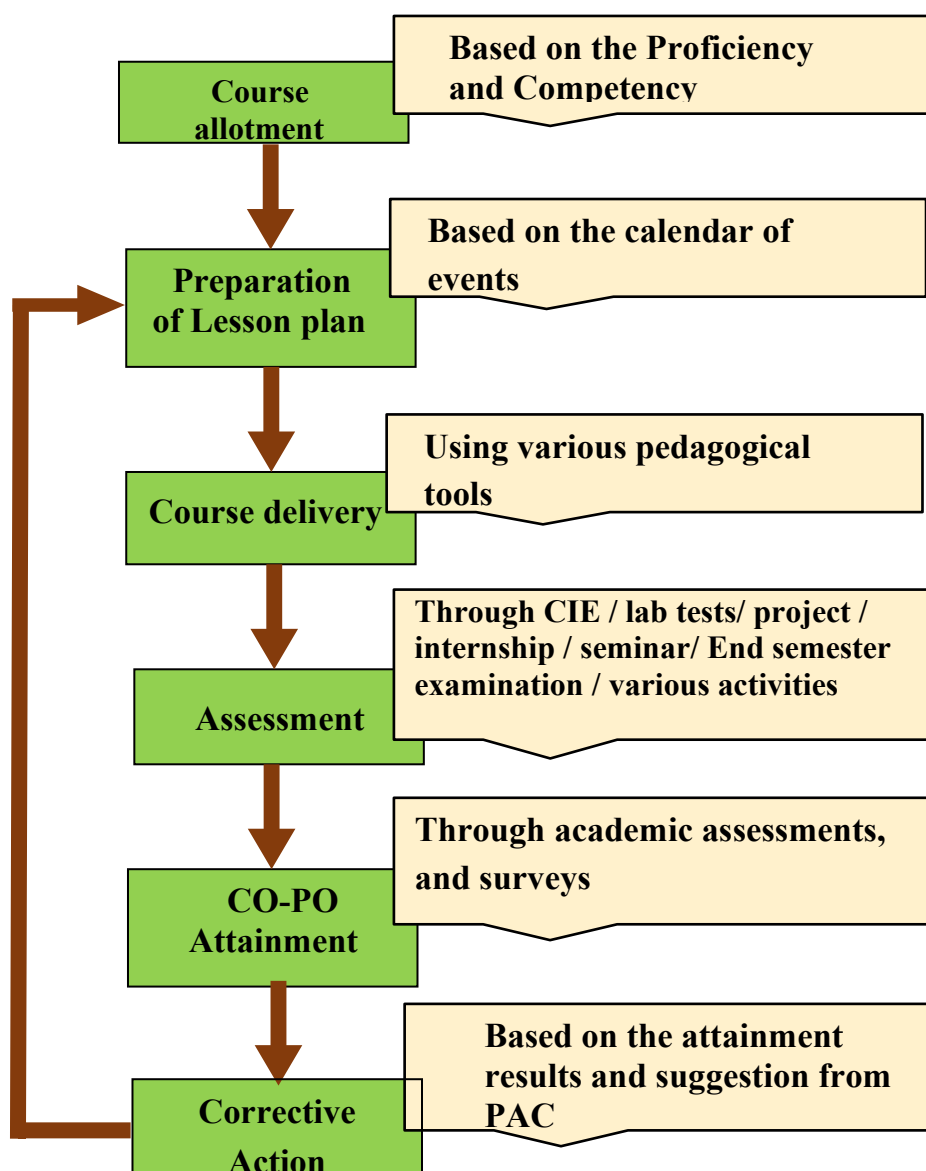


Figure. 2.2.1(a) Process followed to improve teaching learning process

To strengthen the teaching-learning process, the following initiatives have been taken:

❖ Adherence to Academic Calendar

- Preparation of academic action plans/Lesson Plan

❖ Pedagogical Initiatives

- Course Delivery (method of instruction)
- Digital library
- GNUMS -LMS
- Project Based Learning

❖ Methodologies to support weak students and encourage bright Students

- Mentoring System
- Identification of slow learners / Fast Learners
- Action Taken

❖ Quality of Class Room Teaching

❖ Conduct of Experiments


❖ Student Feedback and action taken

❖ **Adherence to Academic Calendar**

- At the beginning of every semester, a calendar of events will be framed and circulated based on the academic calendar circulated by the VTU. The academic calendar of VTU highlights the commencement of the current semester, the last working day of the current semester, the commencement practical and theoretical examination, and the commencement of the next Semester. Figure 2.2.1(b)(c) shows the sample VTU guidelines for the academic calendar.
- Based on the academic calendar disseminated by the University, the Calendar of Events at the institutional level is scheduled. The department Calendar of Events is scheduled in line with the institution-level schedule. Figures 2.2.1(d)(e) shows the Institution and department level academic calendars respectively for the year 2021-2022.
- The calendar of events at the institutional level indicates the total number of working days in the semester, the commencement of internal assessment exams, the dispatching of marks to the parents, the date for students' feedback, and planning for parents' teachers

meeting other centric co-curricular and extracurricular activities. List holidays also mentioned.

- The department calendar of events is planned with succeeding the calendar events framed by the institution. It chalks out the activities planned to address the gaps in attaining the POs and PSOs. Activities like invited talks and Industrial visits are scheduled in accordance with the academic calendar to supplement the teaching-learning process.
- At first, subjects are assigned based on the specialization of faculty members and their willingness. The timetable is prepared by the timetable coordinator. The course coordinator prepares the course plan in accordance with the calendar of events. The course plan for each course is scrutinized by the module coordinator, and program coordinator under the guidance of the Head of the Department.
- Based on the course plan, the delivery is recorded accordingly in the work diary and reviewed by the Head of the Department. The teaching-learning process is evaluated based on the data recorded in the Work Diary. The academic audit has also reviewed documents related to teaching-learning process.

ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

Visvesvaraya Technological University
 (State University of Government of Karnataka established in per the VTU Act, 1984)
 "Innovative, Sustainable" Pathway to Quality Education
 Belagavi-590018, Karnataka, India
 Phone: (0831) 2498100 Fax: (0831) 2405467

Registrar
 Ref: VTU/BOS/SO2/2021-22/ 64-87
 Date: **25 MAR 2022**

NOTIFICATION

Subject: -Academic Calendar of EVEN semesters of UG & PG programs of University regarding...

Reference: Hon'ble Vice-Chancellor's approval dated: 25.03.2022

The academic calendar concerned to IV semesters of B.Plan/B.Arch., VI/VIII semesters of B.E./B.Tech./B.Plan/B.Arch., IV semesters of MCA/M.Arch/M.Tech., and VI semester of MCA(2018 scheme). Programs of University is hereby notified in enclosed sheet;

The Principals of Affiliated, Constituent and Autonomous Engineering Colleges are hereby informed to bring the content of this circular to the notice of all the concerned.

Sd/-
REGISTRAR

To,

1. The Principals of all affiliated/ constituent /Autonomous Engineering Colleges under the ambit of VTU Belagavi.

Copy to.

1. To the Hon'ble Vice-Chancellor through the secretary to VC, VTU Belagavi for information
2. The Registrar (Evaluation), VTU Belagavi for information.
3. The Regional Directors (I/c) of all the regional offices of VTU for circulation.
4. The Director SMU ITI CNC, VTU Belagavi requested to make arrangements to upload Academic Calendar on the VTU web portal
5. PS to Registrar VTU Belagavi
6. All the concerned Special Officer/s and Caseworker/s of the academic section, VTU, Belagavi

Figure 2.2.1 (b): VTU Circular

Academic Calendar for EVEN Semester of UG & PG programs for the year 2021-22

	VI semester B.E./B.Tech. B.Plan	VII semester B.E./B.Tech. B.Plan/B.Arch	VIII semester B.E./B.Tech. B.Plan/B.Arch	IX semester B.Arch I	X semester B.Arch I	IV semester B.Arch I	IV semester MCA	IV semester M.Tech.	IV semester M.Arch	VI Sem MCA (2018 scheme)
Commencement of EVEN Semester	04.04.2022	04.04.2022	04.04.2022	04.04.2022	14.02.2022	11.04.2022	11.04.2022	04.04.2022	04.04.2022	04.04.2022
Last Working Day of EVEN Semester	16.07.2022	16.07.2022	16.06.2022	16.06.2022	10.06.2022	23.07.2022	23.07.2022	30.06.2022	30.06.2022	30.06.2022
Practical/Viva Examination	18.07.2022	18.07.2022	—	—	20.06.2022	25.07.2022	25.07.2022	04.07.2022	—	—
Theory Examinations	25.07.2022	25.07.2022	—	—	21.06.2022	30.07.2022	30.07.2022	05.07.2022	—	—
Intership	01.08.2022	01.08.2022	04.07.2022	04.07.2022	01.08.2022	01.08.2022	11.07.2022	20.07.2022	—	—
Intership (Viva/Venue) Project viva	20.08.2022	20.08.2022	20.07.2022	20.07.2022	20.08.2022	20.08.2022	28.07.2022	10.08.2022	—	—
Summer Project / Professional training / Organization Study	—	—	22.07.2022	22.07.2022	—	—	—	—	—	—
Submission of the report to University	—	—	30.07.2022	30.07.2022	—	—	—	—	—	—
Commencement of ODD Semester	22.08.2022	22.08.2022	—	—	22.08.2022	22.08.2022	—	—	—	—

4 B.Arch. I and X semester swapped for AY 2021-22

Please Note:

- The academic semesters for EVEN semesters should commence from the dates mentioned above.
- The Institutions can plan to have extra classes before the last working day to complete the requisite hours of teaching and learning of courses as per the scheme.
- Faculty should conduct additional tutorial classes in the last week to assist the students.
- The faculty staff will be available to undertake any work assigned by the university.
- Notification regarding the Calendar of Events relating to the conduct of University Examinations will be issued by the Registrar (Evaluation) from time to time.
- Academic Calendar may be modified based on guidelines/instructions issued in the future by VTU, UGC/AICTE/State Government.
- Academic Calendar is also applicable for Autonomous Colleges. In case any changes are to be effected by Autonomous Colleges to the academic terms and examination schedule, they could do so with the approval of the University.
- The college has to conduct office classes to cover 80% of the syllabus of the university, however, 20% of the syllabus can be covered in virtual (Online) mode. Attendance of the students for office and online classes is mandatory and records should be maintained and submitted to the university whenever informed.

Figure 2.2.1 (c): Academic Calendar

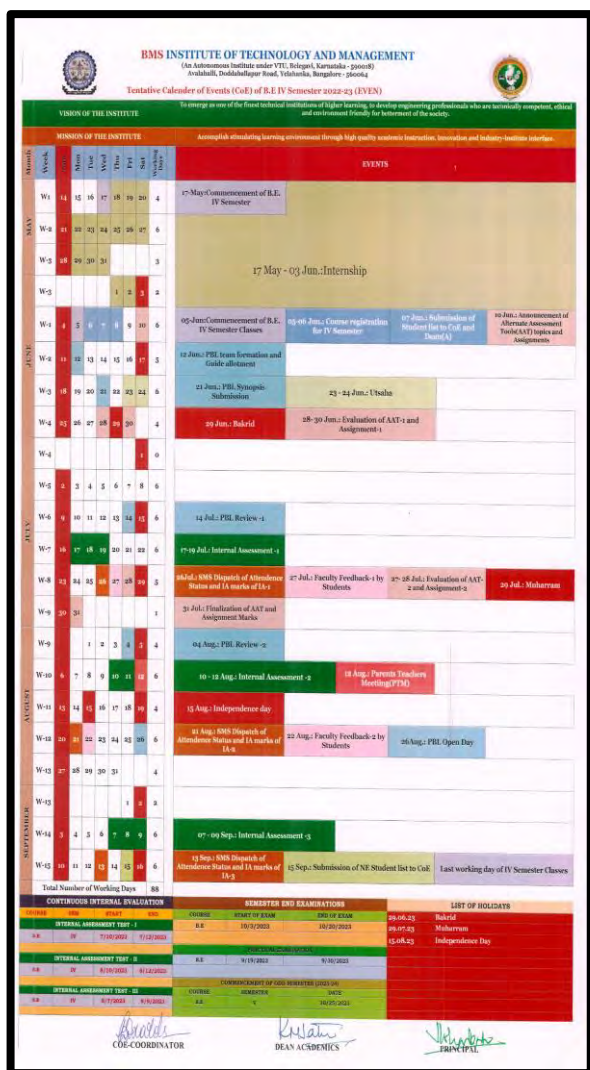


Figure 2.2.1 (d): College Level CoE

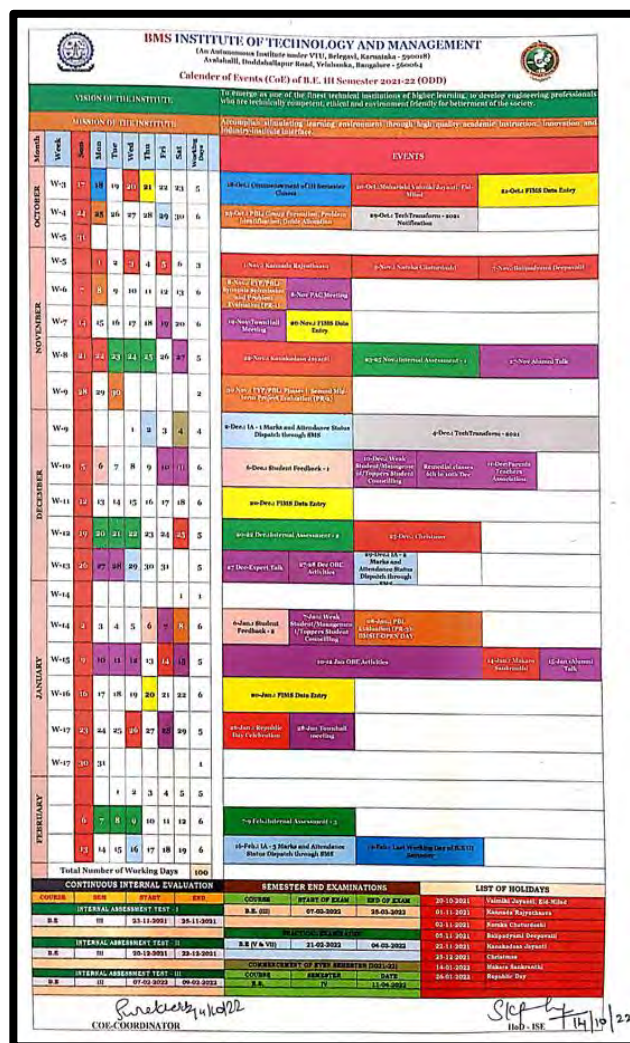


Figure 2.2.1 (e): Department Level CoE

❖ Various instructional methods and pedagogical initiatives

- Pedagogies play an important role in delivering content and it varies with the audience. Course allocation is made based on the choice/ expertise of the faculty members one month before the commencement of semester.
- Once the courses are allocated, the faculty members prepare a detailed lesson plan, assignments questions, quiz questions etc. for a particular course. Course handouts and materials are prepared keeping in mind the lesson plan and course outcomes. Course handout and any other related material uploaded on digital library.
- Faculty members use various pedagogical methods for effective teaching learning process. Fig 2.2.1(f) illustrates some of the pedagogical initiatives which are followed in the department. A well-defined process for course allotment and load distribution is adopted at the department level.
- Three to four choices are solicited from the faculty members. Course handouts and any other related material both for theory and lab are uploaded on digital library.

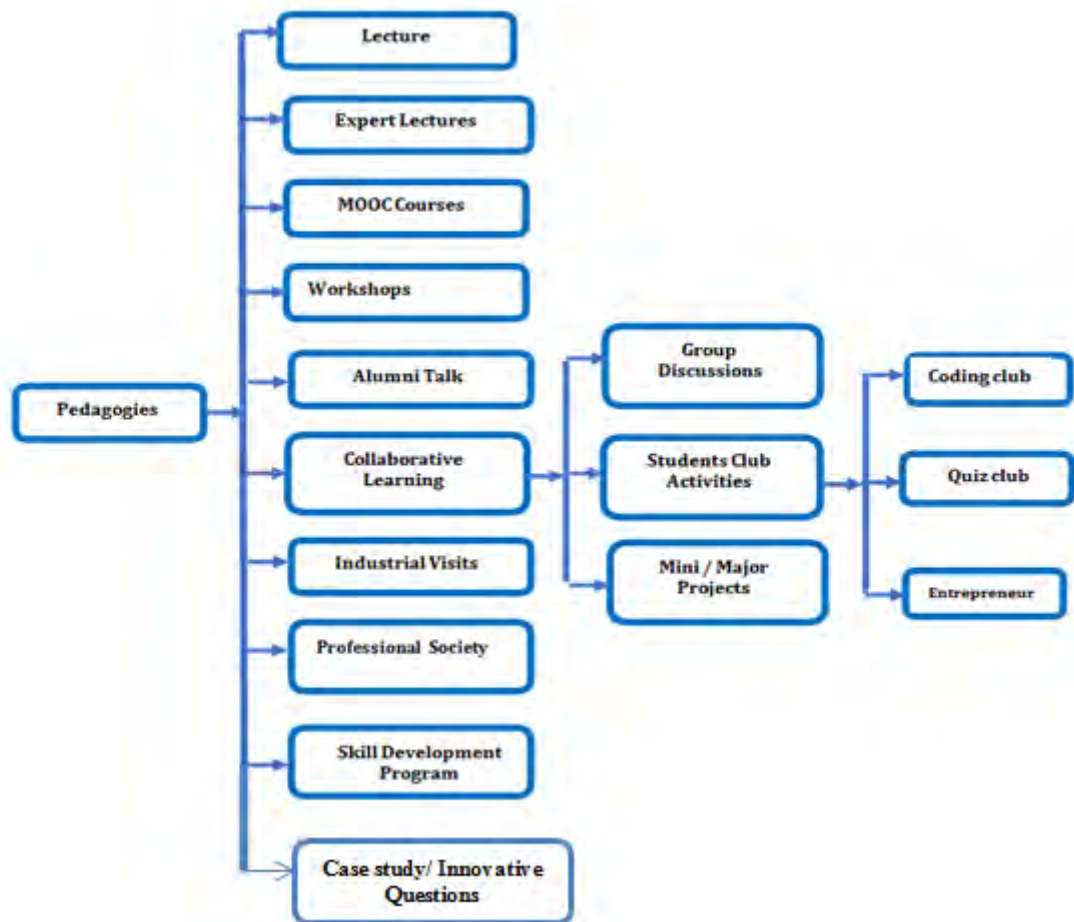


Figure 2.2.1(f): Pedagogical Initiatives

➤ Course Delivery Methods:

Classroom teaching: The course delivery by the faculty is through a set of educational technology/tools like

- Chalk and talk - green/black board.
- Power Point Presentation (PPT).
- Animated videos
- Real world examples for application-based courses.
- Case studies/Innovative Questions
- Project based Learning.
- Group discussions/tasks
- Collaborative learning /Cooperative learning /Flip classes
- Expert talk
- E-Studio
- Use of Open-Source Software's
- **ICT based learning:** Use of LCD projectors and provision for interactive teaching learning.
- **Collaborative / Cooperative teaching/ learning:** Students share knowledge or discuss topics in small group or in peer mode.

- **NPTEL and SWAYAM:** The faculty members are using E-sources such as NPTEL and SWAYAM courses for effective teaching. The same also provided to the students to develop self-learning and life-long learning skills.
- **Assignments based problem solving:** Assignments are given to students on problems and will be solved by themselves. Assignments are based on COs which helps to achieve Program Outcomes.
- **Laboratory/ video-based demonstration:** Demonstration of system or parts of a real-world system using modern tools.
- **Group discussion/ presentation:** Students who learn through group discussion are asked to deliver short presentation on a topic.
- **E-studio:** State-of-the-art video recording facility "e-Studio" which essentially helps in creating modern way of creating video lectures which will help students in understanding the course.
- **Expert Lecture:**
Department, with the prime vision of enhancing technical competency of our students, has organized various guest lectures by inviting experts from Industry and Academia to lend valuable guidance on latest technical drive, industry expectations and avenues for knowledge enhancement.
- **Industrial Visits**
Industrial visits are arranged to get the students acquainted with the industrial environment and work ethics.
- **Project Based Learning (PBL)**
Project Based Learning (PBL) is significantly more effective than traditional instruction to train competent and skilled practitioners and it promotes long-term retention of knowledge and skills. It is an innovative practice that is used to implement Outcome Based Education. Students are encouraged to carry out mini projects to apply their engineering knowledge from third semester onwards till seventh semester. Each student must take up mini project based on the core subject they learn in the current semester with help of faculty mentor. At the end of each semester projects are evaluated by the Industry Experts.

List of various instructional methods and pedagogical initiatives are shown in Table 2.2.1(a). List of open courses organized in the department academic year wise is shown in Table 2.2.1(b). Samples of various content delivery are shown in Figure 2.2.1(g)

Table 2.2.1(a) Use of various pedagogical initiatives sample.

Sl.no	Course Name	Initiatives	Implementation	Impact Analysis
1	Scientific Foundation of Health	Poster Presentation	Mrs.S.Mahalakshmi,, Dr. Sheela Kathavate ,Dr.Prakash G L has conducted poster presentation from 17th to 24 th Feb 2023 on Healthy diet and healthy behaviors.	Developing the healthy lifestyles for good health for their better future and how to Build a Healthy and caring relationships to meet the requirements of good/social/ positive life 100% result is achieved in semester exams.
2	Cryptography and Network security	Group Seminar	Dr.Swetha M S has conducted Group seminar activity from 30.11.22 to 7.12.22 to Analyse various Cryptography methods and its need to various real world application like Cryptocurrency, Smart Home Security Systems And Cyber Law And Ethics Cryptography Etc. Group were made to analyze and share their ideas among them and encourage them to working in Groups.	Students can apply Cyber security algorithms to solve real world problems. 100% result is achieved in semester end exams.
3	Discrete Mathematical Structures	Tutorial through Cooperative learning	OBE activity was held for 3rd semester students for the subject - Discrete Mathematical Structures (18CS36). Students were grouped into 18 batches, four students in each batch and students were informed to present mathematical concepts used in various distributions. Students presented the topic very enthusiastically.	Students able to understand the mathematical concepts and its application in real life situations. Also implement the same using programming language. 97% of results achieved in semester end exams.

4	Software Engineering	Quiz using Kahoot.	Dr. Usha B.A has conducted flipped classroom activity for 4th sem students on 2nd May 2019 for Software Engineering course. The activity is conducted through Quiz – Kahoot.	Understand the Concept of software Engineering well. Helped in the Placement 98% result achieved in semester end exam.
5	Micro processor	cooperative learning	Prof. S. Mahalakshmi has conducted cooperative learning for 4th sem students on 5.4.19 for Microprocessor Course.	100% result is achieved in semester exams.
4	Data Structures	Peer learning	Prof. S. Mahalakshmi has conducted peer learning for Tutorial class on 19.8.19 for the course Data structures and Applications.	99% result is achieved in semester exams.

Table 2.2.1(b): Open Courses Details AY 2022-2023

Sl. No.	Name of the Open course	Date of Conduction	No of Participants
1	AWS services and Tools for cloud computing	12.06. 2023 16.06. 2023	60
2	Data Analytics using Microsoft Power BI	12.06. 2023 16.06. 2023	60
3	Full Stack Web Development	12.06. 2023 16.06. 2023	60
4	Hands on Approach for Cyber Forensics and Crime Investigation	12.06. 2023 16.06. 2023	60
5	Programming for IT Career	12.06. 2023 16.06. 2023	60
6	Robotic Process Automation	12.06. 2023 16.06. 2023	60
7	Soft Computing Using Machine Learning Techniques to Build AI Applications	12.06. 2023 16.06. 2023	60
8	Spring Boot Fundamentals	12.06. 2023 16.06. 2023	60

AY 2021-2022

Sl. No.	Name of the Open course	Date of Conduction	No of Participants
1	Problem Solving Using Java Programming	13.06.2022 to 17.06.2022	60
2	Data Analytics Boot Camp Using Python	13.06.2022 to 17.06.2022	63
3	Complete Python Booting	13.06.2022 to 17.06.2022	60
4	Internet Of Things	13.06.2022 to 17.06.2022	58

AY 2020-2021

Sl. No.	Name of the Open course	Date of Conduction	No of Participants
1	Data Science Using Python	01.06.2021 to 05.06.2021	62
2	Programming for IT Career	01.06.2021 to 05.06.2021	71
3	Internet of Things(IOT)	01.06.2021 to 05.06.2021	44
4	ANDROID APP Development	01.06.2021 to 05.06.2021	81
5	Robotics with Artificial Intelligence	01.06.2021 to 05.06.2021	66



Figure 2.2.1(g): samples of Various Pedagogical Initiatives

Samples of various Instructional methods are shown in Fig 2.2.1 (h)



You tube videos for Theory and Lab courses



Course materials in Dspace and GNUMS ERP



ICT Tools-Projectors, PPT, Google Class rooms, E-studio



Iscribe tool for online teaching during covid

PBL presentation

Fig 2.2.1(h) samples of various Instructional methods



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT
Avalahalli, Doddaballapur Main Road, Bengaluru - 560064

Department of INFORMATION SCIENCE AND Engineering

OPEN DAY

Date: 13/1/2023

Project exhibition was organized on 13th January 2023 for 3rd year and 2nd year students of ISE Dept. and evaluation of projects were carried out by two eminent industry expert, Mrs. Praveen CEO of Digipix Technology, Bangalore and one more expert Mrs. Kumar Goud ,Manager of Capgemini after various process of PBL Reviews with in internal expert team evaluation from Dept. of ISE. and as per the calendar of events 20/10/2022 was for PBL team formation and guide allotment followed by 2/11/2022 for synopsis submission and 15/11/2022 PBL Review1 and 23/12/2022 PBL review2 and 13/1/2023 open day was organized



Open day



HOD and PBL coordinators on OPEN day

Impact analysis of Improving Instruction Methods

The following tablet shows the outcomes observed after adopting the above mentioned innovative TLP.

- Change from teacher centric to learner centric environment in each class
- Developed team building through collaborative learning.
- Improved internal assessment and University results.
- Better rapport between students and faculties.
- Appreciations from students through feedback.
- Able to achieve more program outcomes.

Course	Year	Internal Marks	Percentage of improvement
Data Structures - 3rd sem	2021-22	31-40: 95	44
		16-30: 120	56
		0-15: 0	0
	2019-20	31-40: 70	47
		16-30: 78	52
		0-15: 0	0
	2018-19	31-40: 19	26
		16-30: 53	74
		0-15: 0	0

❖ Methodologies to support weak students and encourage bright Students

Initiatives details of Assisting Slow Learner Students

Totally 25 to 30 students are allotted for each Proctor. The proctor regularly interacts with their allotted students once a week as per the allotted timetable. The proctors and respective course coordinators are responsible to identify students' categories based on their performance and providing the necessary action based on the category as shown in Figure 2.2.1(i). sample mentoring is shown in Figure 2.2.1(j)

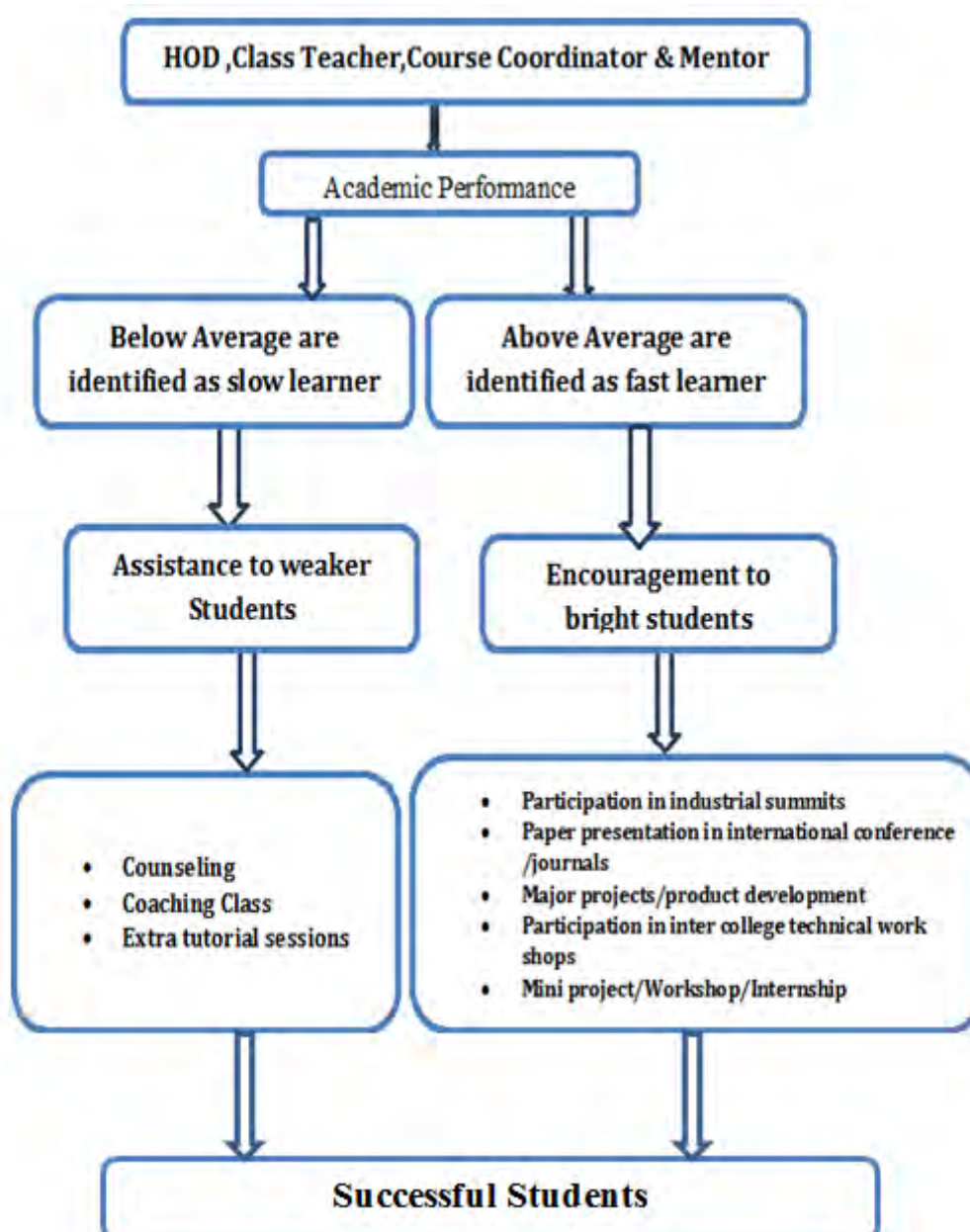


Figure 2.2.1(i): Process to identify and support weak students and encourage bright students

Implementation to Assist Slow Learners

Guidelines for identification of slow learners and action taken is shown in Table 2.2.1(c)

Table 2.2.1(c): Identification criteria & Action Taken – Slow learners

Identification criteria	Action Taken
Students scoring less than 40% of marks in Internal Assessment	<ul style="list-style-type: none"> Proctors continuously monitor the performance of slow learners Counselling is conducted by the proctor for such slow learners during proctoring periods. Every parent is informed about the IA marks and the attendance by proctor through SMS and mail through the GNUMS ERP software. Additional coaching is provided to slow learners through remedial classes by respective course coordinators.
Students who failed in semester exams and having more backlogs	Conduction of extra classes to those who failed in previous semester subjects or helping them to clear the exams by providing notes, question bank & important questions. etc.,

Proctoring History Proctoring

SEARCH

1BY - BMSIT&M

Select Institute-Program

Enter Proctee Name / USN

Enter From Date

Enter To Date

All

With Proctor Remarks

W/O Proctor Remarks

Current

Previous

All

Conducted

Scheduled

All

Search

Clear

Q

SEARCH RESULT

(Showing 1 to 100 of 112 records, Page : 1 of 2)

Proctoring Date & Time	Program	USN	Proctee	Issues Discussed Attn. (Attn. Remarks)	Stress Level	Learner Type	Next Proctoring	Next Proctoring Venue
22-07-2023 12:50 PM	(Auto)B.E - ISE	1BY21IS001	AADITYA NARAYAN	Agenda: Proctor Registration form, Attendance, Issues: Proctor Registration form, Attendance, Moocs <div>Present</div>		Average	04-08-2023 12:50 PM	
22-07-2023 12:50 PM	(Auto)B.E - ISE	1BY21IS002	AAKULA HARPITHA	Agenda: Proctor Registration form, Attendance, Issues: Proctor Registration form, Attendance, Moocs <div>Present</div>		Fast	04-08-2023 12:50 PM	
22-07-2023 12:50 PM	(Auto)B.E - ISE	1BY21IS003	AAYUSH PRAKASH TIWARY	Agenda: Proctor Registration form, Attendance, Issues: Proctor Registration form, Attendance, Moocs <div>Present</div>		Average	04-08-2023 12:50 PM	
22-07-2023 12:50 PM	(Auto)B.E - ISE	1BY21IS004	ABHIJEET KUMAR PATHAK	Agenda: Proctor Registration form, Attendance, Issues: Proctor Registration form, Attendance, Moocs <div>Present</div>		Average	04-08-2023 12:50 PM	

Figure 2.2.1(j): Implementation to support weak students through mentoring

Impact Analysis of Assisting Slow Learners

Improving overall pass percentage and reducing the number of failures so that to increase the success rate of students. The impact analysis of assisting slow learners is shown in Table 2.2.1(d) and figure 2.2.1(k)

Table 2.2.1(d) Impact Analysis of Assisting slow Learners

Batch		Impact Analysis Success rate (%)
2019-2023	4 th	99
	3 rd	97
	2 nd	100
2018-2022	4 th	99
	3 rd	99
	2 nd	99

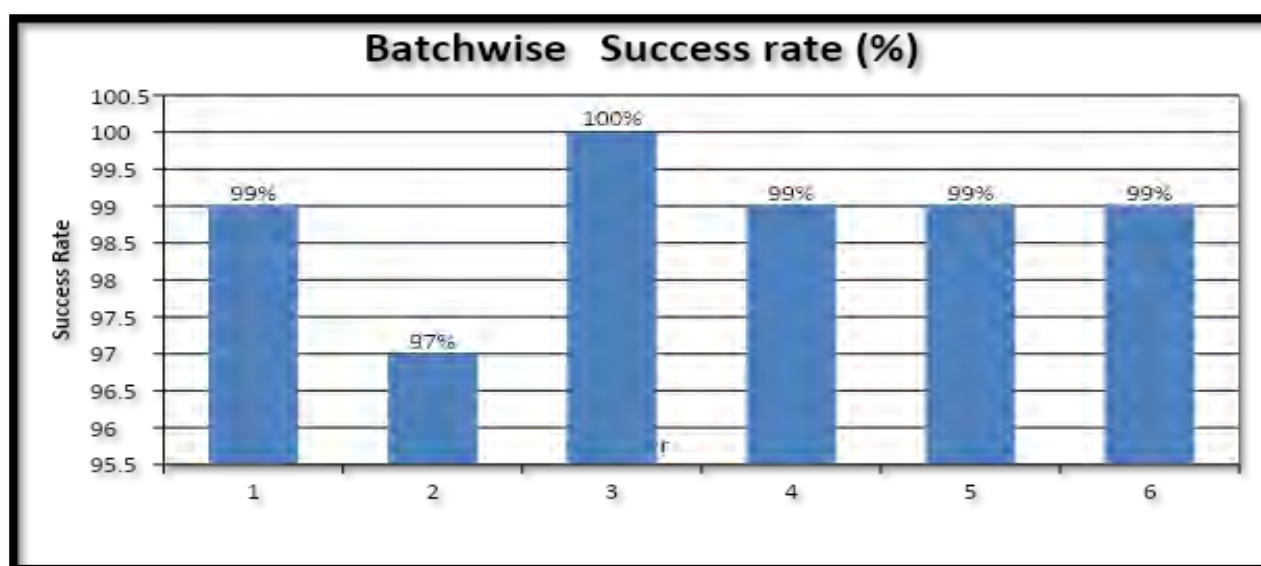


Fig 2.2.1(k) Impact Analysis of Assisting slow Learners

Initiatives details of Encouraging Bright Students

- Bright students are encouraged by providing necessary guidance by Toppers Coordinator and moral support to aim for university rank.
- Well performing students are recommended for BMSET scholarship from Department.

- Students having orientation to research are encouraged by faculties and their proctors to do paper publications in National, International conference & International Journals.
- Students having high academic track records are encouraged by faculties and their proctors 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 orientation towards Entrepreneurship is encouraged by the college and department to develop their entrepreneur skills through Innovation Cell.

Implementation details of Encouraging Bright Students

Guidelines to encourage bright students is shown in Table 2.2.1(e)

Table 2.2.1(e): Identification criteria & Action Taken – Bright Students

Identification criteria	Action Taken
Students with first class	<ul style="list-style-type: none"> ● Bright students are encouraged by providing necessary guidance and moral support to aim for university rank. Well performing students are recommended for Institute level “Late Sri. B.M Sreenivasaiah” scholarship from the Department. ● Students having orientation to research are encouraged by the faculty and their proctors to publish research papers in National & International Journals. ● Students having high academic track records are encouraged by faculty and their proctors to take up competitive exams like GATE etc. ● Students are encouraged to participate in inter-cultural events and global education through symposia and online activities. ● The bright students having orientation towards Entrepreneurship are encouraged by the college and department
Semester toppers and Subject toppers	
Rank holders	

Sample implementation details for encouraging Bright students

➤ **AICTE IDE -Innovation, Design and Entrepreneurship boot camp**

- Two teams from ISE dept have qualified for the Innovation, Design and Entrepreneurship boot camp at NITTR Chennai and INDIAN INSTITUTE OF TECHNOLOGY, GUWAHATI which is scheduled from 22nd-26th June 2023.
- Three teams which have qualified are:
 1. Tejas Mutalik Desai (1BY21IS182) and Siddarth Ashok Kumar – Team Name- Team IOT-Onco (ISE)
 2. Lokesh E (1BY20IS073) and Jitendriyadeep- Team Name -CODE_18 (ISE)
- These teams were partially funded to attend the bootcamp offered by MOE at various locations in India
- Promoting Innovative competitions

Team Innovation and Entrepreneurship facilitates students to participate in various competitions by providing registration fees for competitions like National Level Project Competition (NLPC) at MSRIT, MANTHAN-Business Plan Competition. One project from each department is selected internally and nominated to participate in such competitions. About 8 projects were funded for and 3 business ideas were registered for MANTHAN-Business Plan Competition.



KAVACH 2023 Cyber Security Hackathon

It is a platform to showcase talent and creativity in the field of cyber security. It is an unique opportunity to work on real-world problems, collaborate with like-minded individuals. KAVACH 2023 will have two phases. The submitted ideas will be evaluated by a group of experts in the field and only the innovative ideas will be selected for the Grand Finale or 2nd round. During the Grand Finale, selected participants are expected to build the solution to

demonstrate their concepts and prove to the juries that their ideas are technically feasible and more importantly implementable. Best ideas will be declared winners. During this 36 hours' hackathon, scheduled in the month of July-23, selected youths from education institutions across the country will participate to offer strong, safe, and effective technology solutions using their technical expertise and innovative skills. Total Prize money worth Rs. 20,00,000 is announced for the winning teams.

- This hackathon has 20 Problem statements related to the cyber security domain against which the innovative minds will be able to submit their ideas and compete against each other
- 2 teams of ISE students shortlisted for the competition out of 4 teams
 - 1.Mr. Suhas Pete Team- ISE Department
 - 2.Mr. Lokesh and Team- ISE Department

Impact analysis of Encouraging Bright Students

- Students getting stipend internships is improved
- KSCST Funded Final year project
- Many students have cleared competitive exams like GATE, TOFEL, GRE.
- Improving Number of Students turned Entrepreneur in engineering & Technology.

Table 2.2.1(f) Impact Analysis of Encouraging Bright Students

Sl.No	Batch	University Ranks	Admitted to Higher Studies	Entrepreneur	Placement
1.	2017-21	1	5	1	62
2	2018-22	3	7	1	118
3.	2019-23	1	5	0	172



Name: VENKATESH, SHREYA

Last (Family/Surname) Name, First (Given) Name Middle Name

Email: shreyav0227@gmail.com

Gender: F

Date of Birth: February 27, 2001

Appointment Number: 6858 4102 1497 1674

Test Date: October 09, 2021

VENKATESH, SHREYA
2905, 13TH MAIN ROAD, OPP. GAYATHRINAGAR POSTOFFICE
RAJAJINAGAR 2ND STAGE
BENGALURU, Karnataka 560010
India

Inst. Code	Dept. Code
5111	78
5944	78
4852	78
6897	78

Country of Birth: India

Native Language: Kannada

Test Center: STN15484A - Kalvi Institute Private Ltd - Bangalore

Test Center Country: India

ID Type: PASSPORT

ID No.: xxxxxxxxxxxxxxxxxxxxx2281

Issuing Country: India

THIS IS A PDF SCORE REPORT, DOWNLOADED AND PRINTED BY THE TEST TAKER.

October 09, 2021 Test Date Scores

Total Score
91
out of 120

Reading: 23
Listening: 21
Speaking: 24
Writing: 23

MyBest® Scores

Your highest section scores from all valid test dates, as of October 12, 2021.

Sum of Highest
Section Scores
91
out of 120

Reading: 23
Listening: 21
Speaking: 24
Writing: 23

A total score is not reported when one or more sections have not been administered.
Expired scores are not included in MyBest® calculations.

Note: This report is not valid for transmission of scores to an institution.

SHREYA VENKATESH

Most Recent Test Date: November 3, 2021

Address: 2905 13TH MAIN ROAD, RAJAJINAGAR 2ND STAGE, BENGALURU, IN-KA,
560010 India

Registration Number: 0142747

Print Date: December 4, 2021

Email: shreyav0227@gmail.com

Phone: 91-9380262228

Date of Birth: February 27, 2001

Social Security Number (Last Four Digits):

Gender: Female

Intended Graduate Major: Computer Science (0402)

Your Scores for the General Test Taken on November 3, 2021



Your Test Score History

General Test Scores

Test Date	Verbal Reasoning		Quantitative Reasoning		Analytical Writing	
	Scaled Score	Percentile	Scaled Score	Percentile	Score	Percentile
November 3, 2021	139	10	145	18	4.0	54
October 4, 2021	136	5	147	25	3.0	13

TECIDEXA SERVICES PRIVATE LIMITED

Company Details

CIN	U72900KA2018PTC113973
Company Name	TECIDEXA SERVICES PRIVATE LIMITED
Company Status	Active
RoC	RoC-Bangalore
Registration Number	113973
Date of Incorporation	15 June 2018

Director Details

DIN	Director Name	Designation	Appointment Date
08158291	MOHD RAHMAT KHAN	Director	15 June 2018
08158292	RITWILRAI	Director	15 June 2018



◆ Quality of Class Room Teaching

Quality of teaching is a very important factor for quality learning. The following aspects are considered to ensure a good quality classroom teaching:

- ✓ Classroom ambience is made interactive and shown in Figure 2.2.1(I)
- ✓ Real components and models are taken by the faculty to the class room to demonstrate the concepts in a clear way to the students.
- ✓ Real time examples are cited in the form of videos.
- ✓ Complex tutorial problems are solved in the class rooms by the Faculty and students together.
- ✓ Quality of content delivery in live lectures is evaluated randomly by visiting ongoing lecture classes.
- ✓ The evaluation parameters broadly include the plan of presentation, communication skill, delivery methods and awareness of students.
- ✓ On the basis evaluation report, necessary feedback is given to the faculty members to improve the quality of lectures which improves the results.



Figure 2.2.1(I): Classroom ambience & 100% results in Theory courses

❖ Quality of Laboratory Experiments

Initiatives to Improve Quality of Laboratory Experiments

At the beginning of every semester, the required software is installed. Faculty members instruct the students about the Syllabus, Course objectives, Course outcomes, and grading methods and how to debug and test with different inputs of the laboratory course before doing the regular laboratory experiments.

Laboratory manuals explaining the details of the experiment are available with the course teacher and are provided to students at the commencement of the semester. These Manuals are checked and verified by Faculty members before the commencement of each semester. Viva voce is conducted for the students to test their knowledge in the experiment. The Laboratory assessment is performed based on rubrics such as, submission of laboratory records, participation in performing the experiment, analysis, and interpretation of experiments.

Implementation analysis of Improving Quality of Laboratory Experiments

Scenario based problems will be given to students for programming subjects such as Computer Programming, Object Oriented Programming and Java Programming. For each laboratory course, 10-12 experiments are to be conducted in the syllabus. Open ended experiments are also conducted beyond the specified list for relevant courses wherever necessary.

Students were encouraged to do open ended experiments for each lab course to analyze problems and design solutions to the given problem. Skill development programs are organized for labs to train the students and open-ended experiments were given to test the knowledge gained by them. Modern tools which are popular in industry are made to learn. Students are allowed to test their laboratory experiments in modern tools and discuss the knowledge gained by them during their labs.

The Laboratories are evaluated by the faculty for 25 marks at two levels.

Level	Evaluation Type	
1.	Continuous Evaluation in every lab session	10 marks
2.	Internal Examination	15 marks

The following are the rubrics followed to evaluate at two different levels

- Level 1: Continuous Evaluation in every lab session (10 marks)

The Continuous Evaluation is done by the faculty in every lab session for 10 marks based on rubrics defined in table 2.10 and the average marks of all sessions will be considered for awarding final internal assessment marks.

Rubrics used for Continuous Evaluation in every lab session (10M)

Parameter	Allocated Marks	LOW	MEDIUM	HIGH
Execution	02	The given program was not code/ debug/execute in the lab session	The given program was coded & debugged but not executed in the lab session	The given program was coded, debugged and executed in the lab session
		0 Marks	1 Marks	2 Marks
Viva-voce	02	The student did not answered any viva questions asked	The student answered few viva questions asked	The student answered all viva questions asked
		0 Marks	1 Marks	2 Marks
Record writing	06	The record was not submitted in the lab session	The record was submitted in the lab session but was incomplete (no Algorithm / wrong Algorithm & no Flowchart /wrong Flowchart)	Completed record was submitted in the lab session
		0 Marks	1-4Marks	5-6 Marks

Every program is evaluated for 10 Marks and average of all programs for 10 Marks will be calculated.

- Level 2: Lab Internal test (20 Marks)

Two Lab Internals will be conducted:

The Marks awarded for each lab internal is 10 based on rubrics defined in below table..

Rubrics used for Lab Internal Test (Average of 2 test to be considered)

Parameter	Allocated Marks	LOW	MEDIUM	HIGH
Program Write-up	03	The student was not able to write the program & Algorithm or flowchart	The student was able to write the program & Algorithm or flowchart with mistakes	The student was able to write the program & Algorithm or flowchart correctly
		0 Marks	1-2 Marks	3 Marks
Execution	05	The student was not able to code/ debug/ execute the program	The student was partially able to code/debug/execute. the program	The student was able to code/debug/execute the program
		0 Marks	1-2 Marks	3-5 Marks
Viva-voce	02	The student did not answered any viva questions asked	The student answered few viva questions asked	The student answered all viva questions asked
		0 Marks	1 Marks	2 Marks

Activity Conducted: PBL/Presentation/Open Ended Experiment :10 Marks

10M (Continuous Evaluation) +20M(Lab Internals)+10 M Activity Conducted/Mini Project

Impact analysis of Improving Quality of Laboratory Experiments

- Improved results in lab examination shown in Table 2.2.1(g). Students complete the experiments in examinations within 40-50 minutes.
- Improvement in analytical abilities of students thus improves the placement.
- The stimulating environment made students learn other programming languages apart from curriculum by doing certification courses using MOOCs.
- The software club made students expert programmers and students develop small projects and participate in various coding and debugging contests and win prizes.

Table 2.2.1(g): Sample for Impact Analysis of improving Quality of Laboratory Experiments

Lab	Year	Pass Percentage
File structures Lab	2022-23	100
	2021-22	96
Software testing Lab	2022-23	98
	2021-22	93

From the above Table 2.2.1(g) it's observed that by doing Continuous Evaluation in every lab session & internal assessment the overall pass percentage is maintained and improving.

Table 2.2.1(h) Modern Tools Usage

Lab	Modern Tool
DBMS	Sql developer
ADA	Eclipse IDE
Networking programming	NS2,NS3
Project	JIRA Tool,Github
Web programming	Vamp, Ramp, NodeJs, VS Code
Artificial Intelligence & Machine learning Lab	Google colab,Phycham
MAD Lab	Android studio
Micro controller	Keil Software
RPA	UiPath, Automation Anywhere
Computer System Design	Xiliux

From above table2.2.1(h) it is observed that due to continues improvement in labs, students are getting trained in advanced modern tools so gap in PO5 i.e., modern tools usage is bridged.

◆ Student Feedback and action taken.

Student feedback is taken from students on the effectiveness of teaching and subject learning at different points of time during the semester. Initially, feedback is taken from representative students from each class informally by HOD after 1-2 weeks of commencement of class work. If students are facing difficulty in any subject, the concerned faculty member is informed of the same. Necessary guidance and support is given by HOD and another senior subject faculty member. Besides the above, on-line

students Feedback is taken twice every semester. The feedback is summarized and communicated to all faculty members. This feedback is considered part of the Annual Performance Appraisal of the faculty member with a weightage of 10 marks. Figure 2.2.1 (m) indicates different performance parameters.


 BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT (Autonomous Under VTU)		My Feedback Performance Academic Feedback for Theory Subject_2022- 23_Odd_BE_7Sem_Feedback2 2022-23 28-11-2022 To 01-12-2022
18CS745 - Robotic Process Automation Design & Development		
Division - ISE - 7 - A		Filled By - 62
Semester - 7		Average - 91.32
Question		
Q. 1 Adequacy of Depth of Coverage of syllabus		92.26
Q. 2 Black Board Writing Clarity / Organization		91.29
Q. 3 Punctuality of faculty member to class		92.26
Q. 4 Effective use of class time		90.97
Q. 5 The test and assignment valued in time		90.97
Q. 6 The Faculty member communicated the information effectively		90.65
Q. 7 Fairness in evaluation		92.26
Q. 8 Course coverage as per lesson plan		91.61
Q. 9 Help in solving your academic difficulties		91.29
Q. 10 Class room discipline /management		90.32
Q. 11 Usage of real world examples / case studies		91.61
Q. 12 Presentation style of the faculty member		90.65
Q. 13 Availability of Faculty Member to students during working hours		91.94
Q. 14 Encourages students to participate in discussion		90.65
Q. 15 Making you to think through challenging questions		91.29
Q. 16 Preparedness of faculty member to the class		91.29
Q. 17 Clarity in defining and explaining the course objectives and expectations		91.29
Q. 18 Encouragement to take an active role in self learning		91.29
Q. 19 Establishing good rapport with students		90.97
Q. 20 Inspiring students to think innovatively		91.61

Figure 2.2.1(m): Student Feedback Report

2.2.2	Quality of internal semester Question papers, Assignments and Evaluation	(20)
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(Mention the initiatives, implementation details and analysis of learning levels related to quality of semester question papers, assignments, and evaluation)

❖ Quality of question papers

Initiatives of the Quality of mid-term test

- Faculty will set questions based on bloom's taxonomy, it is always good to set the question paper based on real world example wherever it is possible or applicable.
- Question paper will have 60% of the questions answerable by average students whereas the rest 40% will be higher order thinking questions, logical question will help students to improve their understanding and their thinking capability.
- The question paper will have options. The students are expected to answer any three questions from part A Part B & Part C contains question based on case study and innovation. Case study material based on each course will be circulated and questions will be asked from the material in Part C. This initiative has started to attain program outcomes which will not be directly attained through curriculum.
- Part B has an innovative question where the students must think and give their comments/suggestions/ create new design /process for the existing problem. This initiative was also taken to improve the level of thinking of students and attain program outcomes.
- The question paper is set for 50 marks. The duration of the test is 90 minutes.
- Test assessment Committee or module coordinators were formed to assess the quality of midterm test under department Quality assurance cell.

Implementation of Quality of mid-term tests

- The Question papers will be scrutinized by module coordinators. The module coordinators verify whether the question paper is according to Bloom's Taxonomy, CO's are mapped properly with PO's & PSO's and validate, then the question paper is given to students for answering. If the paper is not according to standard it will be reviewed again by the Course coordinator.
- Every test has provision for a case study and open-ended question which summarizes the content of study throughout the period till the internal test time. The answer to this

question will generally be different as each student's approach will be different. It helps the students to understand, analyze, and apply it in solving the question. This develops self-learning ability and confidence in them.

- The scheme for valuation is prepared by the course coordinator and circulated to students to mail with key answer and split-up of marks and the way to answer the question will be discussed in class. Faculty will send the scheme for student reference and answers will be discussed in the class.
- The blue books are evaluated according to the scheme prepared.

Evidence of COs coverage in class test / mid-term tests



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Avalahalli, Doddaballapur Main Road, Bengaluru - 560064

FIRST INTERNAL ASSESSMENT TEST, OCTOBER 2023 - 24

Course Name	BIG DATA ANALYTICS	Course Code	18CS72
Branch & Semester	ISE & VII Sem	Date	11-10-2023 [2.00PM to 3.30PM]
Name of the Course Coordinator (s)	Dr. Manjunath T N Dr. Pushpa S K Dr. Gireesh Babu C N	Max. Marks	50

Note: Answer **THREE** full questions from Part A and Part B questions are compulsory.

Qn. No.	PART A	Marks	CO
1.	The rise in technology has led to the production and storage of voluminous amounts of data, i.e. petabytes of data. Conventional system for storage, processing and analysis pose challenges due to large growth in data. Data needs new tools for storing, processing and analyzing. In this context sketch evolution of Big data and their characteristics with example.	10 M	COs:1 K:3
	OR		
2.	Consider satellite images of the Earth's atmosphere and its regions. A number of satellites generate data continuously. Apply SVs features of Big Data with reference to satellite data.	10 M	COs:1 K:3
3.	Traditional data store use RDBMS tables or data warehouse. Big data processing and analytics requires scaling up and scaling out, both vertical and horizontal computing resources. Scaling requires massively parallel processing platforms. Interpret between Distributed, Grid & Cluster computing, Cloud computing and its services	10 M	COs:1 K:3
	OR		
4.	Characteristics of Big data make designing Big data architecture a complex process. Further, additions of new technological innovations increase the complexity in designing. Develop five logical layers in designing data processing architecture and its functions in the layer.	10 M	COs:1 K:3
5.	Distinguish between 1. Traditional data store and Big data store. 2. In-memory column format and In-memory row format.	10 M	COs:2 K:4
	OR		
6.	Big Data analytics applications are software applications that leverage large scale data. The application analyse Big Data using massive parallel processing framework. Compare main components of Hadoop ecosystem with a neat diagram.	10 M	COs:2 K:4
	PART B		



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Avalahalli, Doddaballapur Main Road, Bengaluru - 560064

FIRST INTERNAL ASSESSMENT TEST, OCTOBER 2023 - 24

7.	Consider data storage for BMSIT student details. Each student data is in a file of size 64MB. A data block stores the full file data for student (number of students is $N = 1$ to 500). i. How the files of each student will be distributed at a Hadoop cluster? How many student data can be stored at one cluster? Assume that each rack has two Data Nodes each with 64GB memory and each cluster consists of 120 racks. ii. Show the distributed blocks for student with ID=96 and 1025. Assume default replication in the DataNodes=3.	5 M	COs:3 K:3
8.	Data are important for most aspects of marketing, sales and advertising. Customer Value depends on three factors - quality, service and price. Analyze a solution to improve customer value analytics using big data in marketing and sales domain and its challenges.	10 M	COs:3 K:4

Course Outcomes (COs)

CO1:	Apply the fundamental concepts of Big Data analytics.
CO2:	Analyze the concepts of NoSQL and Mapreduce programming concepts for Big Data Applications.
CO3:	Design solutions for different case studies/problem statements.
CO4:	Study and demonstrate big data tools to solve real time problems.

Bloom's Category

Remembering (K1)	Understanding (K2)	Applying (K3)	Analyzing (K4)	Evaluating (K5)	Creating (K6)
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Signatures of the Question Paper Scrutiny Committee

Course Coordinator(s)	Module Coordinator(s)	Program Coordinator	Head of the Department

Impact analysis of Quality of mid-term tests

The determination to adapt to Bloom's taxonomy for maintaining the quality of the question papers has greatly improved the ability of the students to apply and analyze solutions for tricky and challenging questions. The institution has witnessed an enhancement in the student's problem-solving ability, imagination, and creativity. Students can answer questions of higher order thinking level and Improvements in their internal test marks which is shown in Table 2.2.2. It also improves their performance during placement interviews.

Table 2.2.2 Impact Analysis of Quality of Mid term Tests

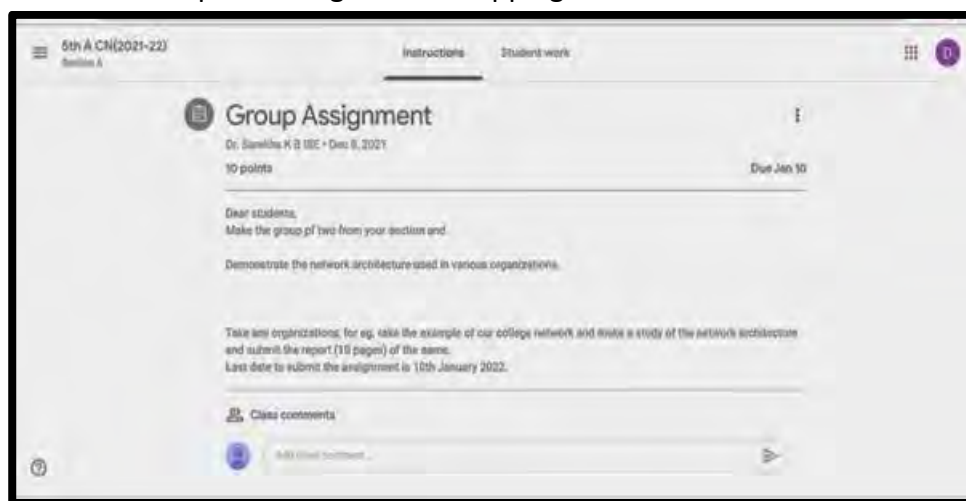
Course	Year	Internal Marks	Percentage of improvement
Data Structures - 3rd sem	2021-22	31-40: 95	44
		16-30: 120	56
		0-15: 0	0
	2019-20	31-40: 70	47
		16-30: 78	52
		0-15: 0	0
	2018-19	31-40: 19	26
		16-30: 53	74
		0-15: 0	0

❖ Quality of Assignment and its relevance to COs

As per the institution norms the assignment is framed in such a way that it meets the higher level blooms taxonomy.

- The assignment disseminated to the students includes MOOCs, group presentation, poster presentation, etc.,
- Assignment questions mapped with respective COs
- The evaluation of the assignment will be done as per the rubrics framed by the respective course-coordinators .

Sample of Assignments mapping with COs and Rubrics



CO5:	Demonstrate the network architecture used in various organizations.
PO	PO2, PO4, PO9, PO12

Rubrics to Evaluate Assignment

Sl.No.	Component	Rubric
1	Analysis of the Organization's network (3M)	1.Analyzed all the components of network -3M 2.Partial Components 1-2M 3.No Components-0M
2.	Documentation (2M)	Complete Content with Proper formatting (Alignment, Uniform Font, Font Size for all Titles and Contents) -2M No proper formatting 0-1M
3.	Presentation (3M)	Completeness of the Presentation, Confidence-3M Incompleteness-0-2M
4.	Viva voce (2M)	Answered all questions with relevant answers-2M. Few questions answered-1M No questions answered-0M

2.2.3	Quality of student projects	(25)
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(Quality of the project is measured in terms of consideration to factors including, but not limited to, environment, safety, ethics, cost, type (application, product, research, review etc.) and standards. Processes related to project identification, allotment, continuous monitoring, evaluation including demonstration of working prototypes and enhancing the relevance of projects. Mention Implementation details including details of POs and PSOs addressed through the projects with justification)

◆ Identification of projects and allocation methodology to Faculty Members

Institution has a separate committee called SPARC (Student Project and Review Assessment Committee) for reviewing the Project activities. The committee formulate the guide allocation process and guidelines for evaluation and sent across all the departments of the Institution. The Process is shown in Figure 2.2.3(b). Each department has a faculty member as SPARC Coordinator at department level. As per the Institute norms department Project coordinator will prepare faculty area of specialization as shown in Table 2.2.3(a) and circulate among students. Calendar of events for project will be prepared as shown in Figure 2.2.3(c). Students are asked to fill the pre assessment form which includes the skill they have and which domain they are interested on. Guide allotment is based on the domain knowledge of faculty and interested domain filled by the students in pre assessment form as shown in Table 2.2.3(a).

Figure 2.2.3(a) shows the process for evaluation of project

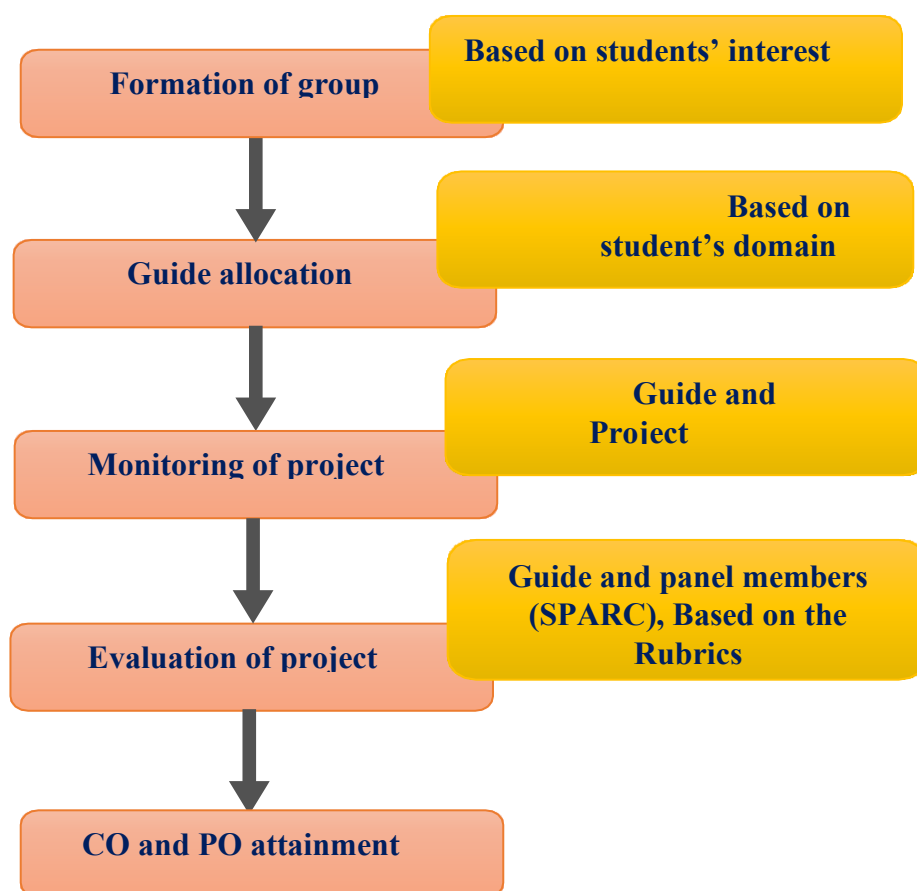


Figure 2.2.3(a): Project Evaluation



BMS Institute of Technology & Management

Yelahanka, Bengaluru – 560064

The following are the PROJECT ALLOCATION, GUIDANCE, AND EVALUATION process guidelines.

A. Projects Batch selection and Guide allocation process

1. As per the existing curriculum, under the project work phase – I review 1 which is in the VII semester and the report has to be submitted. Further, the students are supposed to prepare a report as a prerequisite to Project work for phase 2 in the VIII Semester. Hence, the project allocation, and guide allocation are done during the VII semester itself.
2. A faculty member is nominated as department-level project coordinator to coordinate the project allocation, guide allocation, and evaluation. The number of project coordinators depends upon the sections.
3. List of faculty members and their specializations, and research areas will be communicated to the students through the project -pre-orientation session. The information is disseminated through presentation slides. The list of projects and their titles/themes should be identified and the same may be communicated to all the students. Project batches are formed by students of their choice from their respective sections.
4. Students are given the option of selecting the project titles.
5. It is to be ensured that no project batch should have more than 2 to 4 students.
6. Not more than two batches should be allocated to each project guide from the same section. In case of project continuation from the intermediate semester discretion is left to HoD to allocate from the same section to the concerned guide.
7. The final decision is taken by conducting a department staff meeting and selection of batches are done by random picking of group chits.

B. Project classification and mapping with program outcomes and program-specific outcomes.

Projects may be broadly classified into the following categories.

1. **Application-oriented:** When the project is related to hardware, then all the components are procured and assembled to get the desired outcome.
2. **Research-oriented:** In this category extensive review of the literature is done. This aims to learn new methods or procedures and validate results.
3. **Simulation projects:** These are mostly software-based projects, where Students will identify the problem or application. Then they go for coding or simulation procedures to execute and then to obtain results.

- A team comprising the Project coordinator along with guide SPARC(Student Project and Review Assessment Committee) members should ensure that the projects are selected in such a way that the program outcomes and program-specific outcomes are mapped with the themes of the project works.
- A document consisting of project titles, areas of specialization, and project guides should be prepared and submitted to the concerned HoD and should be put on the notice board and website. The theme of the work may be changed at the discretion of the project guide.

C. Regular follow up tracking mechanism and evaluation process

1. Project slots should be allocated as per the existing scheme and curriculum in the timetable.
2. A laboratory or a classroom should be identified for executing the project works. It is preferred to have a separate laboratory for the purpose of conducting the project work.
3. Each project batch is allowed to consult their respective guide to discuss their Progress during the project slot and the same is documented in the weekly progress report.
4. End of every month there will be an overall assessment of each project by the SPARC members and team in association with project guides.
5. The students' performance should be evaluated on a periodical basis (once a month) and documented.
6. A department staff meeting should be conducted to discuss the performance of the students in the projects and should be documented.

D. Procedure to assess individual as well as collective

Contributions/inference of the project:

1. The project guide should monitor the presence (attendance) of the each student in the project work.
2. Each student should give a PowerPoint presentation about their role in the project work after every week.
3. The project guide should ensure that the batch allocated to him can understand the project's objectives. He should also identify the project's requirements (hardware and software). If a particular software or hardware is not available, the same may be communicated to the HOD and may be procured based on the financial and budgetary requirements.
4. Evaluation of the project is based on
 - Understanding the objectives of the project.
 - Evaluation is made as per the rubrics (phase1 and phase2) may be included.
 - Selected projects will be identified for VTU funded projects.
 - Interdisciplinary projects will be submitted for KSCST projects.
 - Day-to-day work done by the students (Should be documented)
 - Partial/Full completion of the project

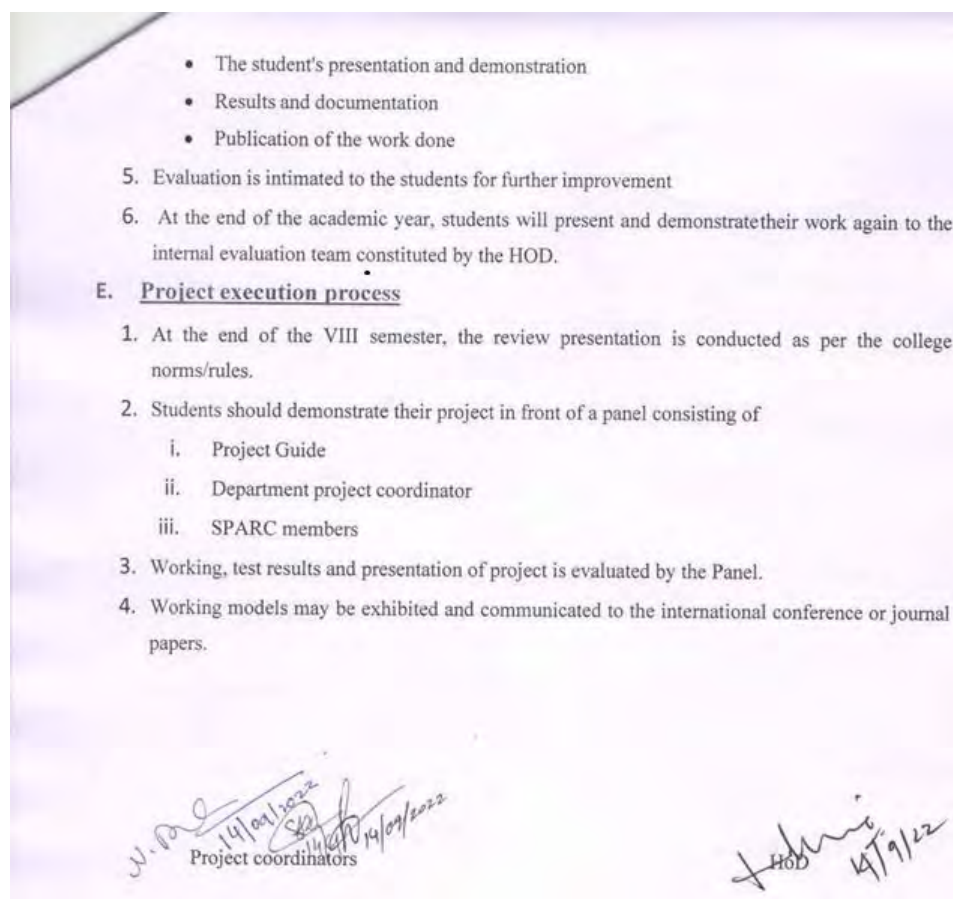


Figure 2.2.3(b) project Guide allocation & Evaluation process by SPARC


BMS Institute of Technology & Management
 Avalahalli, Yelahanka, Bengaluru – 560 064

Project Assessment & Review Committee
 Calendar of events of UG project 2022-23

Sr.No.	Milestones	Scheduled dates
1.	Project orientation	12.08.2022
2.	Pre-assessment	13.09.2022
3.	Allocation of guides	15.09.2022
4.	Submission of abstract	05.10.2022
5.	First meeting by SPARC	22.10.2022
6.	Re-defining the problem statement as per SPARC suggestions	25.10.2022
7.	First presentation	25-26 th October 2022
8.	Execution of project	26-27 th November 2022
9.	Phase 1 evaluation (50% weightage)	-
10.	Phase 2 evaluation (50% weightage)	-
11.	Phase 3 evaluation (100% weightage)	-

[Signatures and dates: 10/03/2022, 10/03/2022, 10/03/2022, 10/8/22]

Project coordinators

HOD

Figure 2.2.3(c) Dept Calendar of Events for Projects 2022-23

Table 2.2.3(a) Faculty with Research Domain 2022-23

Sl.No.	Name of faculty	Research area
1	Dr Manjunath T N	Data Management, Data mining & data warehouse, AI&ML, NWs
2	Dr. Pushpa S K	Data mining & data warehouse, Wireless Sensor Networks, AI&ML
3	Dr. Sudhamani M V	Image processing, AI&ML, NWs
4	Dr. Usha B A	Cyber Security
5	Dr. Anjan Krishnamurthy	Network Security and Forensics, Cyber Security, Computer Network
6	Dr. Sheela K	Parallel computing, Computer Network
7	Dr. Surekha K B	Wireless Sensor Networks, Computer Network
8	Dr. Geeta Amol Patil	Computer Architecture, Parallel computing
9	Dr. Rakesh N	Voice Security, Propagation Channel Modelling, Networks, IoT, AI&ML
10	Dr. Veena N	Brain Computer Interface, Computer Network
11	Dr. Shoba M	Wireless Sensor Networks, Computer Network
12	Dr. Prakash GL	Cloud Computing, Computer Network
13	Dr. Drakshaveni G	Data Analysis and Image Processing, Computer Network
14	Mrs. Chetana. C	Artificial Intelligence
15	Prof. Mahalakshmi S	Soft Computing, Computer Network
16	Dr. Shanthi D L	Wireless Networks, Computer Network
17	Dr. Chandrashekar K T	Artificial Intelligence, Computer Network
18	Dr. P Sudarsanam	Computer Networks, Parallel Computing
19	Dr. GireeshBabu C N	CSE, Data Science, AIML
20	Prof. Ambika R S	Artificial Intelligence
21	Dr. Swetha M S	Cyber Security, Computer Network, Information Security
22	Prof. Vinutha K	Machine Learning
23	Mr. Ravikumar B N	AIML
24	Dr. Narasimhamurthy M S	Software Engineering, Cloud computing , AI & ML
25	Dr. Mohan BA	Internet of Things
26	Dr. Anil Kumar	Networks on Chips , Machine Learning
27	Dr. Savitha S	Wireless Sensor Networks
28	Dr. Basavaraj GN	Wireless Sensor Networks
29	Dr. Karthik SA	Machine Learning
30	Dr. Kshama SB	Cloud Computing
31	Dr. Kantharaju V	Wireless sensor networks
32	Dr. Kalaivani Y S	Cyber Security, Machine Learning
33	Dr. Harishkumar	Internet of Things, Machine Learning
34	Mr. Srinivas B V	Cloud Computing, Computer Network
35	Ms. Bhavya G.	Machine Learning, Computer Network

❖ Types and relevance of the projects and their contribution towards attainment of POs and PSOs:

1. Project Review and Assessment committee, are designed to monitor the end-to-end project activities starting from Pre-Information Collection to project exhibition.
2. Supervisors are responsible for mentoring students to select & execute the best projects based on the current industry needs and social impact. Each project is selected either from the IEEE/ACM/ Science Direct research papers or from Smart India Hackathons problems and the problem statement will be defined by the student.
3. Final year Projects category and Number of projects for 2019-2023 batch as shown in below table 2.2.3(b)

Table 2.2.3(b) Final year Projects category and Number of projects for 2019-2023 batch

Category of Project	Count
Application Oriented	28
Environmental /Societal Product Development	14
Research oriented	8
Review project	7

Sample Project titles, their domains and PO/PSO Mapping for the AY 2022-23 is shown in the Table 2.2.3(c)

Table 2.2.3(c) Types and relevance of the projects and their contribution towards attainment of POs and PSOs: AY 2022-23

Sl.No	Project Title	DOMAIN	POs /PSO Mapped
1	Lung Cancer diagnosis and prediction using appropriate Deep learning algorithms.	Application	PO1,PO2, PO3, PO4 PO5,PO6, PO7, PO8, PO9,PO10,PO11,PO12, PSO1, PSO2
2	Book Recommendation system using ML	Application	PO1,PO2, PO3, PO4 PO5,PO8,PO9, PO10, PO11,PO12,PSO1, PSO2

3	ibeacon based smart shelves in a retail store	Application	PO1,PO2, PO3, PO4 PO5,PO8,PO9, PO10, PO11,PO12,PSO1, PSO2
4	Cost estimation in OO system using AI Anti theft protection of vehicles by GSM & GPS and accident detection system	Application	PO1,PO2, PO3, PO4 PO5, PO6,PO7, PO8, PO9, PO10, PO11,PO12,PSO1, PSO2
5	Brain Tremor Image segmentation using Deep learning	Application	PO1,PO2, PO3, PO4 PO5, PO6, PO7, PO8, PO9,PO10,PO11, PO12, PSO1, PSO2
6	Arrhythmia classification using ML	Application	PO1,PO2, PO3, PO4 PO5, PO6, PO7, PO8, PO9, PO10, PO11,PO12,PSO1, PSO2
7	Phishing website classification based on extreme machine learning	Application	PO1,PO2, PO3, PO4 PO5, PO6, PO7, PO8, PO9,PO10,PO11, PO12, PSO1, PSO2
8	A Deep Learning Framework for Neuromarketing Using EEG Signals	Environmental and Societal	PO1,PO2, PO3, PO5,PO6, PO7,PO8, PO9, PO10, PO11, PO12,PSO1, PSO2
9	Translative article summary generator using NLP	Research Project	PO1,PO2, PO3, PO4 PO5,PO7,PO8, PO9, PO10, PO11, PO12, PSO1, PSO2

SPARC team is responsible for mentoring students in the following aspects.

1. Guides students in selecting the right projects by exploring various possibilities, technical advancement, societal needs, research gaps etc.,
2. Inspires the students to think out of the box and come up with innovative ideas to be implemented as project and helps in setting achievable goals.
3. Checks the feasibility of the chosen projects and suggests the changes if any and assesses the motivation and utility of the project.
4. Helps students to form right blend of inter disciplinary teams.
5. Defines the activities at each stage of project work.

6. Decides the schedule of the project activates (calendar of events).
7. Defines the deliverables of the project and the format of the documentation (synopsis to final report).
8. Monitors and evaluate students at different stages continuously throughout the project work.
9. Apart from the above responsibilities SPARC motivates students and choose the best projects to be applied for funding from different agencies, also helps the students to get expert guidance if required and arrange for the project exhibition.



BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT
(An Autonomous institution, Affiliated under VTU Belagavi)
Yelahanka, Bengaluru-560 064

Ref: BMSIT&M/Academics/2023-24/02 Date: 14.09.2023

OFFICE ORDER

A Student Project Assessment and Review Committee (SPARC) with the following members is constituted at the institution level to monitor the UG final year project work Phase I & II for the academic year 2023-24.

1. Dr. Shoba M - Associate Professor, Dept of ISE, (SPARC Committee)
2. Dr. Arunakumari B N - SPARC Members, Dept. of CSE
3. Dr. Rakesh N, Dr. Basavaraj G.N & Dr. Karthika S.A - SPARC Members, Dept. of ISE
4. Dr. Saneesh & Dr. Jaganath K B - SPARC Members, Dept. of ECE
5. Dr. Chandrashekar B N - SPARC Member, Dept. of AI
6. Dr. Thejaswini S - SPARC Member, Dept. of ETE
7. Dr. Sanjay Lakshminarayanan - SPARC Member, Dept. of EEE
8. Dr. Anantha Krishna G.L - SPARC Member, Dept. of ME
9. Prof. Shobha R - SPARC Member, Dept. of CV

The committee is required to assess the final year UG student project as per the guidelines. The evaluation of project work phase-I and phase-II is to be carried out inline with the rubrics shared. The committee shall update the progress on regular basis to the undersigned.



DEAN ACADEMICS 14.09.2023



PRINCIPAL 14/9/23

Copy To:

1. Vice Principal
2. Dean's
3. HoD's
4. COE
5. All members of the Committee
6. Office Copy

**BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT**

YELAHANKA, BANGALORE – 560064

22/10/2022

Student Project Assessment and Review Committee Guidelines for Academic Year - 2022-23**PREAMBLE:**

- ♦ Project is being conducted in two phases.

Phase -1 is conducted for 100 marks in 7th semester and **Phase - 2** is conducted for 100 marks in 8th semester. Each project batch has a maximum of four students and minimum of two students. Every faculty will mention a list of projects in the project bank with their respective specialization and area of interest. Project bank with a list of faculty and respective domains will be shared with students in advance. Based on the topic chosen by the students' guide will be allotted. Each team shall choose a topic relevant to their area of interest and take the acceptance from the guide before the presentation.

Phase-1 includes the following stages:

1. Synopsis to be submitted
2. Review-1 of Synopsis by SPARC members and Guide
3. Approval by the SPARC members and Guide
4. Relevance of the topic, Literature Survey, Existing system
5. Proposed System
6. Methodology
7. Review-2 of Synopsis by SPARC members and Guide
8. Intermediate Report submission

Phase -2: includes the following stages:

1. Design and Implementation
2. Review -1 to SPARC members and Guide
3. Testing & Validation
4. Results and discussions
5. Conclusion & Future enhancement
6. Review - 2 to SPARC members and Guide
7. Final Report submission

Project Course Outcomes

CO1: Apply the engineering knowledge, which are acquired in the area to a given problem

CO2: Analyse the various problems and choose appropriate methodology to solve the problem

CO3: Design sustainable software solutions using relevant programming language for societal and environmental applications

CO4: Investigate modern programming languages and tools to solve relevant applications

CO5: Communicate effectively on demonstrating the functionalities of various software principles applied to one's own work

CO6: Develop professionalism, leadership capability and teamwork

COs/POs	Program Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2		3										
CO3			3			3	3					
CO4				3	3							
CO5									3	3	3	3
CO6								3				

❖ **Process for monitoring and evaluation:**

Separate slots for the project in the Timetable. Project students should meet their respective guides during the project hours and be asked to explain the progress they have done in their project that week.

They should submit a project progress report weekly once and get approved by the respective guide.

The project guides evaluate the report submitted by the students and help them to go with the project work. The project guide will assess each student in the team and make them work in the right way.

➤ **Evaluation:**

Project coordinator forms a committee of teachers to carry out the evaluation process. The committee comprises of guide and two faculty members. The project work is monitored in 3 phases during the 7th and 8th semesters. Split-up marks and rubrics to evaluate the project is presented in Tables 2.2.3(d) to 2.2.3(h).

Phases of Project Evaluation:

Table 2.2.3 (d): Split-up marks – Project - 2018 Regulation

Semester	Project	Max. Marks in		Final Marks
		CIE	SEE	
7	Phase 1	100	-	100
8	Phase 2	40	60	100

Table 2.2.3 (e): Split-up marks –Continuous Internal Evaluation

Review	Max. Marks awarded by		Final CIE Marks
	Guide	Panel	
Phase 1			
Review 1	60	40	100
Phase 2			
Review 1	24	16	40
Review 2	36	24	60
Phase 2 marks converted in to 40 marks			

Project phase 1 is monitored during 7th semester. During phase 1, emphasis is given for literature survey and formulating the objectives of project work. Students are encouraged to carry out extensive literature survey in their chosen field of interest. They can come out with problem definition and setting of objectives.

Evaluation of phase 1 is carried out at the end of the semester as per the calendar of events of the institute. Phase 1 evaluation carries a total of 100 marks. 60% of the marks i.e. 60 out of 100 marks will be awarded by the respective guide and 40% of the marks i.e. 40 out of 100 marks is awarded by the committee. Project coordinator will form a committee of teachers to carry out evaluation process.

Table 2.2.3 (f) Phase 1-Rubrics for Evaluation

Parameter	Allocated Marks		Low (0-20% of Marks)	Medium (21-60% of Marks)	High (61-100% of Marks)
	Guide (60)	Panel (40)			
Literature Survey & Relevance in present context	17	10	Poor/ Inadequate survey carried	Survey is conducted but not able to identify exact open issues	Relevant survey of existing systems and open issues
Problem formulation & Objectives	17	10	Objectives & Problem definition is not clearly specified	Objectives & Problem Definition are specified but needs improvement	Clear definition of Objectives & Problem Definition
Proposed Methodology & Expected Outcomes	10	7	Methodology & Expected Outcomes are not clearly specified	Methodology s & Expected Outcomes are specified but needs improvement	Clear definition of Methodology & Expected Outcomes
Progress in Work	10	7	Poor Progress	Moderate Progress	Significant Progress
Presentation Skills	6	6	Poor	Good	Excellent

Project Phase 2- Review 1 - Evaluation is carried out during the 8th semester.

Phase 2 – Review 1 evaluation is carried out during the 1st month of the semester and scheduled as per the calendar of events. In phase 2 emphasis is given to design specification and analysis of project work.

The total marks allotted for phase 2 evaluation is 40 marks. The respective guide will award 60% of marks i.e., 24 out of 40 marks. The committee will award 40% of marks i.e. 16 out of 40 marks.

Table 2.2.3 (g): Phase 2- Review 1 - Rubrics for Evaluation (intermediate stage)

Parameter	Allocated Marks		LOW (0-20% of Marks)	MEDIUM (21-60% of Marks)	HIGH (61-100% of Marks)
	Guide (24)	Panel (16)			
Design Specification	7	4	Not clearly Specified	Specified functionalities & other Parameters but insufficient	Relevant /Sufficient Specification of functionalities & other Parameters
Analysis, Experimentation and Optimization	7	5	Analysis, Experimentation and Optimization inadequate	Analysis, Experimentation and Optimization moderate	Analysis, Experimentation and Optimization sufficient
Work in progress	7	4	Poor Progress	Moderate Progress	Significant Progress
Intermediate Report	3	3	Report not in format, content not in order, language mistakes, not submitted in time	Report in format, content is not clearly written, submitted in time plagiarism not checked	Report in format, content is clearly written, submitted in time plagiarism checked

Phase 2- Review 2 project evaluation is carried out at the end of 8th semester.

In this evaluation, students are expected to complete the project work. Review 2 presentation is scheduled by the project coordinator as per the calendar of events of the institute. The total marks for this evaluation is 60 marks. Again the respective project guide will award 60% of the marks i.e. 36 marks out of 60 marks and the committee will award the remaining 40% of the marks i.e. 24 out of 60 marks.

Table 2.2.3 (h) Phase 2 - Review 2 - Evaluation

Parameter	Allocated Marks		LOW (0-20% of Marks)	MEDIUM (21-60% of Marks)	HIGH (61-100% of Marks)
	Guide (36)	Panel (24)			
Literature Review & Objectives	6	4	Poor/ Inadequate survey carried	Survey is conducted but not able to identify exact open issues	Relevant survey of existing systems and open issues
Methodology	9	6	Methodology is not clearly specified	Methodology is specified but needs improvement	Clear definition of Methodology
Fabrication/testing/Analysis, results & Discussions	15	10	Analysis, Experimentation and results & Discussions are inadequate	Analysis, Experimentation and results & Discussions are moderate	Analysis, Experimentation and results & Discussions are clearly specified
Report	6	4	Report not in format, content not in order, language mistakes, not submitted in time	Report in format, content is not clearly written, submitted in time plagiarism not checked	Report in format, content is clearly written, submitted in time plagiarism checked

➤ Process to assess individual and team performance sample.

						BMS Institute of Technology & Management Yelahanka, Bengaluru-560064. Department of Information Science and Engineering For A Section Students Only									
						SPARC Committee: Dr.Narasimhamurthy M.S, Dr.Savitha S, Dr.Surekha K.B.									
S.N o.	Group Number	Name	USN	Guide	Title of the Project	Marks(20)				Marks(40)					Final Review-2 Marks (60) (A+B)
						SPARC Committee (A)				Guide (B)					
						Implemen tation (10)	System Testing (5)	Results and Viva voce(5)	Total (20)	Imple menta tion	System Testing (10)	Results and Viva	Report (10)	Total(4 0)	
5	A2	Aftab Ahmed	1BY19IS011	Dr.Savitha S	Ridesharing	10	4	5	19	9	10	9	10	38	57
6		Amit Bhushan	1BY19IS022		Application Using	10	4	2	16	8	10	9	9	36	52
7		Chirag Mokashi	1BY19IS046		Block Chain	10	4	4	18	9	10	9	10	38	56
8		Harshit Panwar	1BY19IS066		Technology	10	4	2	16	8	10	9	10	37	53

➤ Impact analysis of improving the Quality of the final year project

The project guides encourage the students to publish their project work in conferences or journals.

- The SPARC will select the best projects of the year and ask students to demonstrate the same.

- The best selected project from SPARC committee will be exhibited in front of all the students which will further motivate the students to improve the quality of final year projects.
- The best projects were patented, funded by KSCST and VTU were listed in Table 2.2.3(i)

Table 2.2.3(i): Impact analysis of improving the Quality of the final year project

Sl.no	Year	Project name	Team members	Faculty co ordinator	Quality of Completed Projects
1	2023-24	Souls-Script (Mobile Application)	Krish Gupta & Team	Dr.Swetha M S	CODE Fiesta Tech Fest, Conducted by SJB Institute of Technology, Cash Prize 25K
2	2023-24	Remote work and Digital Collaboration	Raghav Kumar Jha & Team	Dr.Swetha M S	Girl Geek Hack 23 hosted 15K cash prize
3	2022-23	Soil analysis and crop suggestion using IoT and Machine learning	Tharang S Kaushik K. Sathvik P. Roshini Sanikop	Dr. Shanti D.L.	Rs. 4000/- funded by KSCST
4	2022-23	Transparency in Carbon Credits by Automating Data Management using Block Chain	Mr.Divya Kalash & Team	Dr.Pushpa SK, Dr.Swetha MS	NPCI(National Payments Corporation of India) Block Chain Hackathon: 15 Lakhs Cash
5	2022-23	Smart India Hackathon	Mr.Lokesh & Team	Dr.Gireesh Babu	Smart India Hackathon 2022, 50K Cash Prize
6	2021 -22	SvayaKT - An E-Agriculture Ecosystem	Karan & Team	Dr. Pushpa S.K	Funded by VTU
7	2021 -22	Adaptive Ambulance Monitoring System	Shohebahmed Pranav R D Sumukha S Nithin Urala M	Prof Mahalakshmi	Funded by VTU, Published paper in Elsevier, Nominated in Yukti Portal for second Round.
8	2021-22	Indian Crop And Fertilizer Recommendation System Using Ai And Machine Learning Techniques	Praveen & Team	Dr.Swetha M.S	Patent Filed: Patent Application Number: 202141032290

9	2020-21	Automatic waste segregation using Image processing and robotic arm	Hariprasad & team	Dr.Rudresh Shirwarkar	Funded by KSCST
10	2020-21	IoT based Smart Traffic Signal Monitoring System	Tanay Tadas & team	Dr. Shridhar Sanshi	Funded by VTU
11	2020-21	Human Trap Detection During Calamities using CNN	Simran & Team	Dr.Veena	Funded by VTU
12	2020-21	Detection of Covid 19 and its Severity using Deep Learning	Samrudhi Shetty & Team	Dr.Sheela Kathavate	Funded by VTU
13	2018-19	Mobile Railway Track Fault Detection System With Internet Of Thing And Machine Learning	Jayanth G, Nikhil S, Pathan Aseef Khan	Prof.Vinutha K	Patent Filed: Patent Application Number: 202141000383

- 2 Patents Filed
- 7 Student Funded Projects by KSCST/VTU
- 15.9 Lakhs Worth of Prize Money by our Students

The Projects will be converted to Research Papers either submitted to scopus/Wos indexed Conferences or published in Indexed Journals/ Book Chapters which is shown in Table 2.2.3(j)

Table 2.2.3(j) Student Projects published in International conferences & Journals

Sl.no	Year	Project name	Team members	Faculty coordinator	Quality of Completed Projects
1	2022-23	Adaptive Ambulance Monitoring System	Pranav R D Sumukha S	Prof S. Mahalakshmi	Published paper in Scopus indexed International Journal (Elseiver)
2	2021-22	Heart Disease Prediction System	Anisha P, Anand S	Dr. Veena N	Published paper in Scopus indexed International conference

3.	2019-20	Health monitoring system of Automated Sprinkler System using Feed back Mechanism	Pallavi & Team	Prof.S. Mahalakshmi	Published paper in Scopus indexed International conference
4	2019-20	Exypno steganoraphy	Gaurav sheroff & team	Prof.S. Mahalakshmi	Published in Scopus indexed journal
3	2019-20	IoT Based system for farmers	Nithesh & Team	Prof.Shanthi D L	Published paper in Scopus indexed International conference

2.2.4 Initiatives related to industry interaction (15)

The Department of ISE has a continuous and vast industry involvement in the programme to keep our students updated with the new trends and practices in industry. To fulfill the gap between industry and academia, Department of ISE has taken various initiatives and implementations related to industry interaction such as

- MOUs with industries
- Partial delivery of academic course
- Technical talk presentations from industry practitioners

The details are as shown in the table 2.2.4(a)

Table: 2.2.4(a) Industry Interactions

Sl. NO	Category	Number of Industry Interaction
1	Academic Alliance	4
2	MOU	8
3	Partial Delivery	4
4	Technical/Expert talks	8
5	Industrial visits	7
6	Faculty consultancy	5
7	Student Internships	809
8	Faculty Internships	102

The details are shown in Table 2.2.4(a) to 2.2.4(f)

Table: 2.2.4(b) Industry Interactions Initiatives, Implementation with impact analysis

Sl. NO	Industry Interaction	Impact Analysis								
1	UiPath Academic Alliance program Team: Faculty: Dr. Manjunath, Prof.S. Mahalakshmi, Dr. Veena, Prof.Vinutha. K	<div>This helps faculty to enroll FDP and Certification programs to improve the competency skills. All resource materials are available free of cost. It helps to improve the students and faculty competency skills in Robotic Process Automation.</div> <table><tr><th>Activity</th><th>Count</th></tr><tr><td>Partial Delivery</td><td>1</td></tr><tr><td>SDP</td><td>2</td></tr><tr><td>MOOC</td><td>AY 2022- 65 AY 2023- 67</td></tr></table>	Activity	Count	Partial Delivery	1	SDP	2	MOOC	AY 2022- 65 AY 2023- 67
Activity	Count									
Partial Delivery	1									
SDP	2									
MOOC	AY 2022- 65 AY 2023- 67									
2	Honeywell Youth Empowerment Program Around 12 students of 2018-2022 batch students have been enrolled Faculty: Prof.S. Mahalakshmi Students: Team of 12 members	Students were undergoing certification program on AWS cloud Free of cost								
3	Oracle Academy program BMS Institute of Technology has now member of Oracle Academy program. Faculty:Dr. Manjunath	It provides a platform to our students and faculty to attend workshops, courses conducted by oracle and improves their competency skills. It also provides cloud solutions to the member institutions.								
4	Infosys Springboard BMS Institute of Technology is a member of Infosys Springboard Faculty: Dr. Manjunath	This academic program offers online training, qualifications, certifications and many more resources, completely free of cost. 3rd sem students completed Java courses as part of lab component. 6th sem students completed selenium tool as part of software testing lab.								

Table 2.2.4(c) MoUs with Industries

Year	No. of MOUs	List
2017-18	2	Flutech on 24th April 2018 for 3 yrs ATS Infotech Pvt.ltd, Microsoft –AEP 16th January 2018 for 3 yrs
2018-19	1	Nihon Communication Solutions on 25 th July 2018 for 3 yrs
2019-20	1	Indian Tech Keys from 24th September 2019-22
2021-22	4	Infidata Technologies, Bengaluru, 28 th August. 2021 DigiPix Technologies, 30 th August. 2021 MITRON Technologies, Bengaluru, 30 th August. 2021. Ulpah Academic Alliance, 15th August 2021

Dear Manjunath T N,

We are pleased to welcome **BMS Institute of Technology and Management** to the UiPath Academic Alliance!

Please find attached your **Academic Alliance Partnership certificate** (Partnership ID: **152529**). Use the Partnership ID to invite additional faculty members to join the UiPath Academic Alliance.

Use the link below to access the Learning Alliances Resource Kit using the steps in the Download Instructions attached.

LEARNING ALLIANCES RESOURCE KIT

Being a UiPath Academic Alliance partner lets you access the Learning Alliances Resource Kit containing these resources:

PROMOTION KIT



To help you promote RPA and the courses to generate interest among

EDUCATOR KIT



To learn RPA technology.

COURSE KIT



To help you deliver the course with hands-on practice to students.

For Infosys

Date: 31.01.2022

Place: **Bangalore**

Name: **Mr. Thirumala Arohi**

Title: **Senior Vice President and Head,
Education Training and Assessment**


For Partner

Date: 1/4/2022

Place: **BMSIT&M, Bengaluru-64**

Name: **Dr. Mohan babu G N**

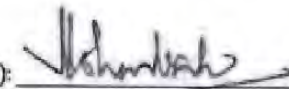
Title: **Principal, BMSIT&M**

Signature (with seal): 

**Head-Education, Training and Assessment
INFOSYS LIMITED**

**Education, Training & Assessment
44, Electronics City, Hosur Road
BANGALORE - 560 100 INDIA**

- Please fill all the required fields in detail.
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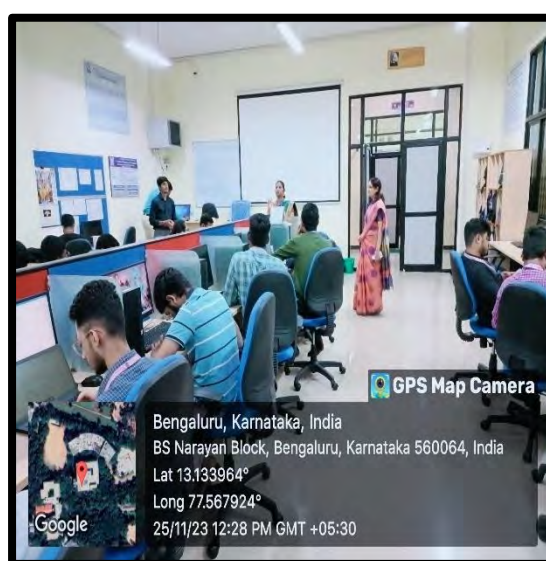
PRINCIPAL

**BMS Inst.of Tech.& Mgmt.
Doddaballapur Main Road
Avalahalli, Yelahanka, B'lore-64**

Table 2.2.4(d) Partial Delivery and Expert talks

Partial Delivery/Expert Talks		
Date	Activity Details	Hours
2023-24		
24.11.23	The Department of Information Science and Engineering conducted a Workshop on 24 th November 2023 focusing on "Recent Trends and Job opportunities of RPA in Automation Industry " Coordinated by the RPA coordinators . The event aimed to educate the need and Job opportunities of RPA among 7 th semester students. Mr. Anuj Srivatsava (Program Manager, UiPath, Bengaluru), addressed students about the career opportunities available in automation industry and created some sample bot's demonstrated to students	2
25.11.23	The Department of Information Science and Engineering conducted a Skill Development Program on 25 th November 2023 focusing on "OCR and Exception handling in RPA " Coordinated by the RPA coordinators . The event aimed to educate the usage of OCR and Exception handling using Uipath among 7 th semester students. Mr. Muktheshwar (Associate Consultant , Oracle Financial Services Software Limited gave hands on session by taking few examples on OCR in RPA. Students got an insight of using OCR in reading the text from the images and Exception handling.	2
2022-23		
22.08.23	On August 22, 2023, the Department of Information Science and Engineering conducted a seminar focusing on "Agile Development Process and Software Testing." Coordinated by the software engineering course coordinators and the Head of Department, the event aimed to enhance the understanding of Agile methodologies and software testing practices among 4thsemester students. The seminar featured a knowledgeable guest speaker, Mr. Sudhir Manjunath, who shared insights and real-world experiences, enriching the students' perspectives on modern software development practices.	10
04.11.2022 05.11.2022	The Department of Information Science and Engineering conducted a seminar On 4 th 5 th November focusing on "Robotic Process Automation Design and Development" Coordinated by the RPA coordinators .The event aimed to enhance the understanding of RPA and real time applications among 7 th semester students. Mr. Gowtham (Senior Associate – RPA & Data Analytics, PwC), who shared insights and real-world experiences, enriching the students' perspectives on RPA.	10

2019-20		
15.05.2019	A partial delivery by Mr. Srivatsa MS, a problem solver at the office of CTO, CISCO India on wireless LAN security and other related topics was held on 15.05.2019.	10
02.03.2019	ATS Learning Solutions conducted Microsoft Certification Exam on Cross Platform Mobile App Development (CPMA) on 27th February and 02.03.2019. Around 77 students participated in the exam and 63 students cleared the exam.	10
2018-19		
09.02.2018	Mr. Mahantesh - Data Scientist has deliver talk on “Real time execution of projects using R and Java” in Five Days Short Term Open Course on “Data Analytics using R Programming on 09.02.2018 at BMSIT & M, Bangalore.	3



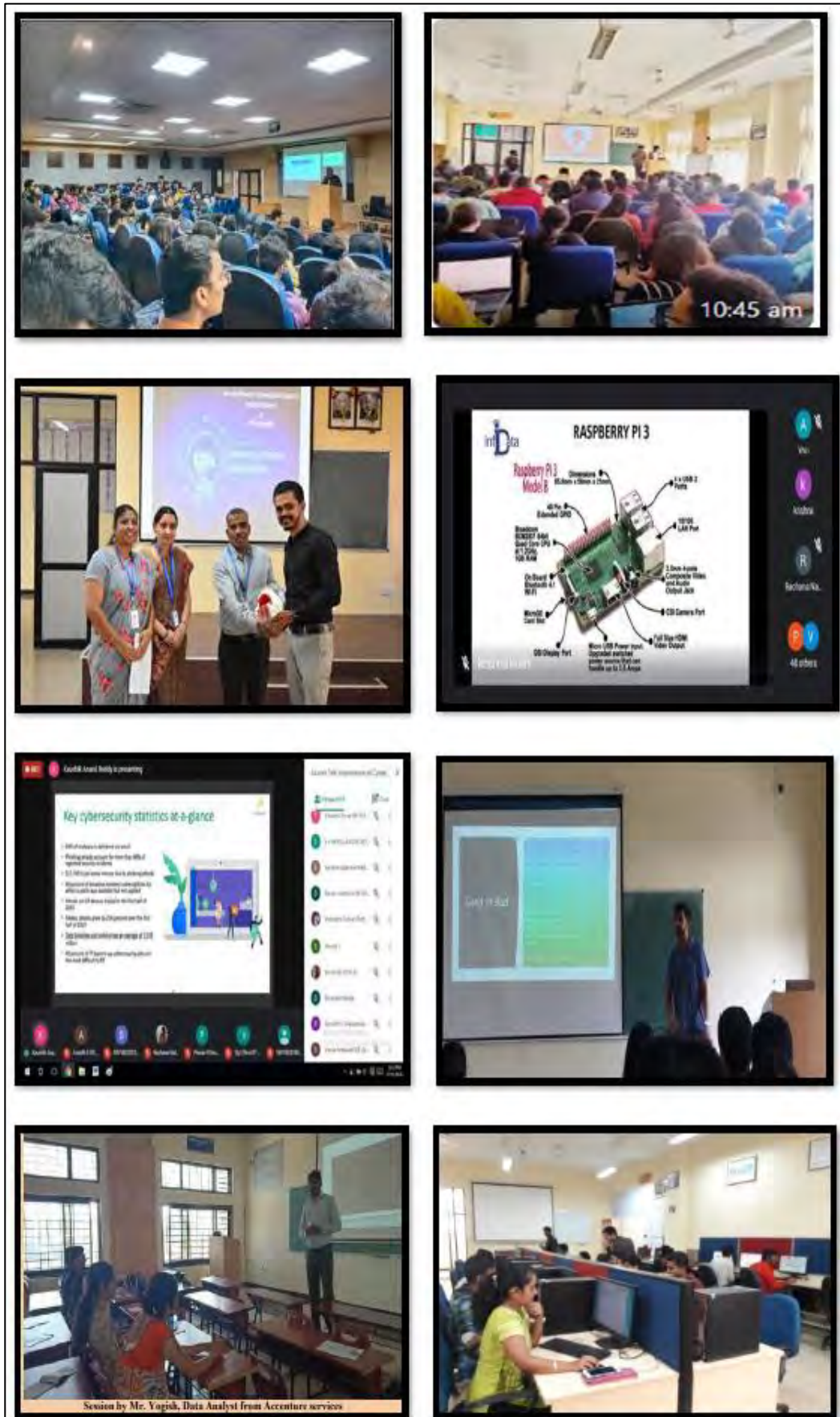


Figure 2.2.4(a) Sample Partial Delivery and Expert Talks

The Industry Institute Interaction through Industrial Visits are listed in Table 2.2.5(d) and Activities are shown in Figure 2.2.4(b)

Table: 2.2.5(e) Industry interactions through Industrial Visits:

Academic Year: 2023-24

Date	Semester	Industry Interacted	Remarks
8.1.24	3 rd sem	ISRO U-R Rao Satellite center, old Airport Road	Our visit to ISRO gives us enlightening experience, providing a comprehensive understanding of the complexities involved in satellite design, development, and mission control.

Academic Year: 2022-23

Date	Semester	Industry Interacted	Remarks
31.08.23	4 th semester	K TECH INNOVATION HUB	Our visit to K-tech Innovations Hub was an eye-opening experience. We witnessed the convergence of technology and innovation in the fields of agriculture and healthcare.
21.06.2023	6 th semester	LTI Mindtree	Students were learned new technologies and current trends in industry

Academic Year: 2021-22

Date	Semester	Industry Interacted	Remarks
02.07.2022	4th semester	Gandhi Krishi Vignan Kendra (GKVK), Bengaluru, Karnataka	Students gained the knowledge on Software's used in agriculture and Research related to agriculture

Academic Year: 2019-20

Date	Semester	Industry Interacted	Remarks
21.10.2019	5 th semester	Cap-Gemini	Students gained the knowledge on Software's used in Mission tracking and understood the impact of tracking in societal and environmental contexts and how they work as team to accomplish the tracking mission
6.11.2019	3 rd semester	Sonarome	Students gained knowledge on methodologies used in project management, data storage methods.

Academic Year: 2018-19

Date	Semester	Industry Interacted	Remarks
19 th Aug 2018	6 th semester	Cognizant, Bangalore	Students gained the knowledge on Artificial intelligence domain and its application in health care, safety



Industrial Visit to ISRO



KTech Innovation Hub



LTI Mind Tree



GKVK Bangalore



Sonarome



Cognizant Bangalore

Figure 2.2.4(b) Industrial visits

Impact analysis for industry-interaction

The impact of Industry Institute interaction is shown in Figure 2.2.4(c)



Figure 2.2.4(c) Industry Institute Interaction

- Students are getting practical knowledge about current trends in the respective discipline
- It helps to develop skills with respect to employability
- It helps to get the internship, industrial training and research collaboration.
- Update knowledge using cutting edge technologies both students and faculty
- Students are trained in modern tools used in real time applications
- Encourage students to become entrepreneurs.
- Faculty Consultancy projects shown in Table 2.2.4(e)

Table 2.2.4 (f) Faculty Consultancy Details

Sl.No	Consultant	Date	Particulars	Client	Amount
1	MR. GIREESH BABU C N Assistant Professor	2 nd -3 rd Jan 2020	Training Program	L &T , Mumbai	Rs-24000/-
2	MR. GIREESH BABU C N Assistant Professor	24 th -26 th Feb 2020	Training Program	L&T , Mumbai	Rs-36000/-
3	MR. GIREESH BABU C N Assistant Professor	11 th -15 th May 2020	ILT Training Program	L&T , Mumbai	Rs-22500/-
4	Dr. Usha B A	29 th Jan 2020	Training Program on AI	L&T , Mumbai	Rs- 12.000/-
5	Dr. Manjunath T N	9th- 30th June 2021	Data Migration Project	Technodysis Pvt Ltd	Rs- 3,00,000/-

2.2.5 Initiatives related to industry internship/summer training (15)

Industry Internships /summer training were encouraged to attain the Program outcomes like

1. Modern Tools Usage (PO5)
2. Responsibilities Relevant To Professional Engineering Practices (PO6)
3. Understand And Demonstrate The Need For Sustainable Development(PO7)
4. To Improve Communication With Real World Community (PO10)
5. Manage Projects (PO11)
6. Work In Team (PO9)
7. Lifelong Learning (PO12).

◆ Initiatives Taken during Summer Training/Industrial Training:

1. On-Line Internship Portal for students.
2. Live Projects/ Group Projects/ Research Projects.
3. Self-Employment Campaign for students.
4. Pre-Placement Training for Successful recruitments/placements.
5. Minor Focus on Class Room Training.

Implementation of Summer Training/Industrial Training

Table 2.2.5(a) shows the list of stipend internship/summer training undergone by students in Companies.

Table 2.2.5(a) Summer Training/Industrial Training

Year	Summer Training/ Internship Taken
2023-24	85*
2022-23	318
2021-22	140
2020-21	110
2019-20	100
2018-19	82

Sample Feedback Questionnaire for student's internships

1) What did you learn from your Internship program

9 responses

C programming in depth.

Better management skills and applying the domain knowledge in real world scenario.

Web design

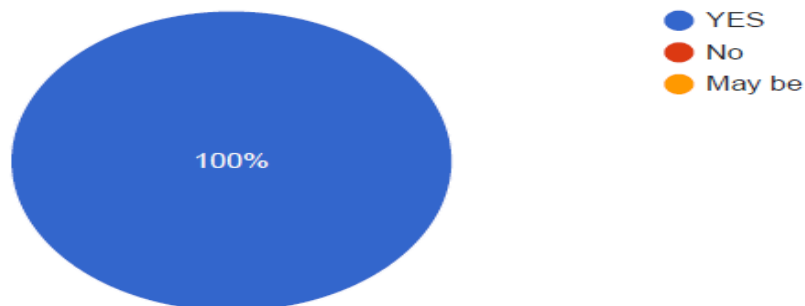
How to establish a connection between a client and server using cat_tp protocol and java application

Punctuality

Software development life cycle

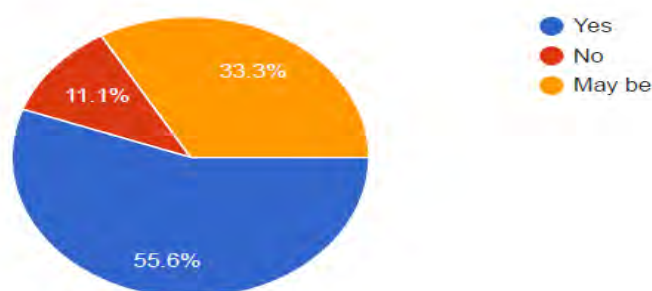
2) Does this internship helped you to learn new skill sets.

9 responses



3) Does this internship helped you to convert your academic knowledge into industry skills

9 responses



◆ Impact Analysis of Industry Internship:

Outcomes of Industry Internship

- The number of stipend internship has increased
- Increase in placement
- Apply theoretical knowledge in industrial application.

- Acquire skills in communication, management and team-work.
- Practice ethical and professional work culture.
- Implement Health Safety Environment (HSE) practices at workplace.
- Gain an edge in the job market
- Transition into a Job (Presented in Table 2.20)
- Identify the Right Career
- Establish Networks
- Develop Confidence

Impact of industrial training is shown in Figure 2.2.5(a) & Fig 2.2.5(b)

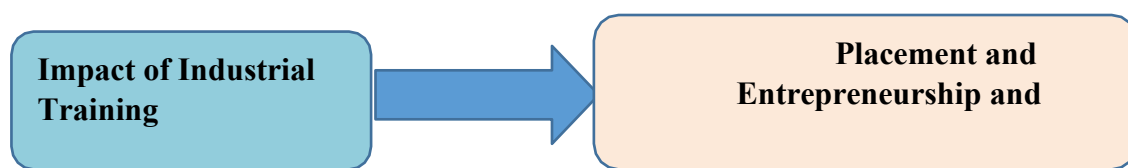


Figure 2.2.5(a): Impact of Industrial training Table

Table 2.2.5(b) & 2.2.5(c) Shows the Outcomes of Industrial Training

Table: 2.2.5(b): Summary- outcomes of Industrial Training

Sl.No	Batch	Admitted to Higher Studies	Entrepreneur	Placement
1.	2017-21	5	1	64
2	2018-22	7	1	121
3.	2019-23	5	0	174

Table: 2.2.5(b): Improvement in Stipend Internship

Year	Summer Training/ Internship Taken	No of Stipend Internship
2023-24	85*	13*
2022-23	318	69
2021-22	140	67
2020-21	110	35
2019-20	100	8
2018-19	82	5

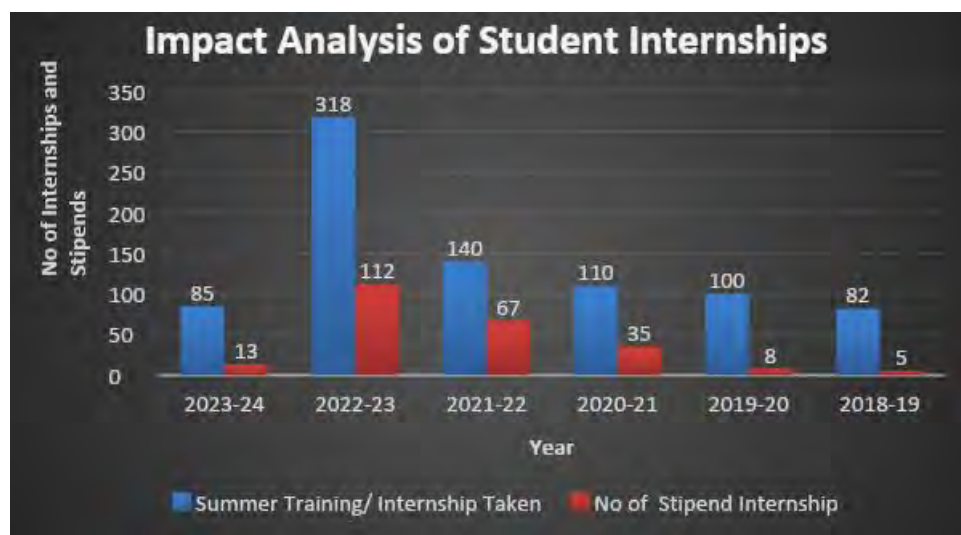


Figure 2.2.5(b) Impact Analysis of Industry Internship by Students

Faculty Internship/ Summer Training

Faculty Internship started with the objective that faculty should gain industry knowledge and apply it Teaching learning process to know the latest tools and technologies used by industry. It will be delivered to students and motivate them to learn the latest tools and technologies need in the real IT Market. The impact analysis of Faculty Internship is shown in Table 2.2.5(c)

Table: 2.2.5(c) Impact Analysis of Industry Internship (Faculty)

Year	Faculty Training/Internship	Impact
2022-23	35	VTU Funded project -2 KSCST Funded project- 1 Helps in Research work and in teaching process
2021-22	28	VTU Funded project -2 KSCST Funded project- 1 Helps in Research work and in teaching process
2020-21	16	VTU Funded project -3 KSCST Funded project- 1 Helps in Research work and in teaching process
2019-20	13	VTU Funded project -2 Helps in Research work and in teaching process
2018-19	10	Funded project -1 Helps in Research work and in teaching process



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Under VTU)

Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CRITERION - 3

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

CRITERION 3	Course Outcomes and Program Outcomes	120
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3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

Course Outcomes:

Course Outcomes are narrower statements that describe ***what students are expected to know, and be able to do at the end of each course.*** These relate to the skills, knowledge, and behaviour that students acquire in their enrolment through the course.

Program outcomes:

Programme Outcomes are narrower statements that describe what students are expected to know and be able to do upon graduation. These relate to the skills, knowledge, and behaviour that students acquire in their admittance through the programme.

Program Specific Outcomes:

PSO-1: Apply the knowledge of information technology to develop software solutions.

PSO-2: Design and Develop hardware systems, manage and monitor resources in the product life cycle.

3.1. Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

Program Outcomes as mentioned in Annexure I and Program Specific Outcomes as defined by the Program

3.1.1. Course Outcomes(COs) (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked)(05)

Table–3.1.1

Course Name/Code: Data Structures And Applications/18CS32		Semester of Study: III
C2 32.1	Acquire the fundamental knowledge on various data structures operations.	
C2 32.2	Apply linear and nonlinear data structures in problem solving.	
C2 32.3	Analyse various linear and nonlinear data structures for different applications.	
C2 32.4	Design algorithms on representation and operations of data structures.	
C2 32.5	Interpret and select suitable data structures for solving problems/real world applications.	

C2 42.1	Understand basic concepts of algorithm to solve problems.
C2 42.2	Apply the basic knowledge of mathematics for finding time complexity of recursive and non-recursive algorithms.
C2 42.3	Analyse various problems and choose appropriate algorithmic technique for solving problems.
C2 42.4	Design algorithms for various real time applications.
C2 42.5	Implement algorithms for various real time applications.

C3 54.1	Acquire fundamental concepts related to the theoretical foundation of Computer Science
C3 54.2	Apply the concepts of theoretical foundations for solving a given problem
C3 54.3	Analyse the relationship of language classes, grammar and automata
C3 54.4	Design grammars for different language classes
C3 54.5	Implement the abstract machines for any given language or grammar

C3 61.1	Acquire the concepts of storage, manipulations, and processing of file using various file operations.
C3 61.2	Apply various data structures to achieve improved file operations.
C3 61.3	Analyse the various file indexing techniques to improve performance of file access.
C3 61.4	Illustrate different file organizations and storage management techniques.
C3 61.5	Design and develop solutions for real time file management problems.

C4 72.1	Understand fundamentals of Big Data analytics.
C4 72.2	Apply the concepts of NoSQL using MongoDB and Cassandra for Big Data.
C4 72.3	Explore Hadoop framework and Hadoop Distributed File system with relevant case studies.
C4 72.4	Demonstrate the MapReduce programming model to process the big data along with Hadoop tools.
C4 72.5	Solve real world problems of big data using Machine Learning techniques.

C4 81.1	Understand the basic fundamentals of IOT.
C4 81.2	Apply the knowledge of smart objects in design /developing IOT projects.
C4 81.3	Analyse the different application protocols for IOT.
C4 81.4	Justify the need for data analytics and security in IOT.
C4 81.5	Demonstration of different IOT projects.

3.1.2. CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 3rd to 8th semester) (05)

Program Articulation Matrix is formed by the strength of correlation of COs with POs and PSOs. The strength of correlation of COs with POs and PSOs is indicated as “3” for substantial (high) correlation, “2” for moderate (medium) correlation and “1” for slight (low) correlation and “-”, if there is no correlation. If the course outcomes are attained, the POs correlated to these course outcomes are also attained.

Table 3.1.2

CO PO Mapping												
Course Name/Code : Data Structures and Applications/18CS32										Semester of Study :III		
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C2 32.1	3	-	-	-	-	-	-	-	-	-	-	-
C2 32.2	3	-	-	-	-	-	-	-	-	-	-	-
C2 32.3	-	3	-	-	-	-	-	-	-	-	-	-
C2 32.4	-	-	3	-	-	-	-	-	-	-	-	-
C2 32.5	-	-	-	2	3	-	-	-	3	3	-	3
C2 32	3	3	3	2	3	-	-	-	3	3	-	3

CO PO Mapping												
Course Name/Code: Design and Analysis of Algorithms/18CS42										Semester of Study: IV		
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C2 42.1	3	-	-	-	-	-	-	-	-	-	-	-
C2 42.2	3	-	-	-	-	-	-	-	-	-	-	-
C2 42.3	-	3	-	-	-	-	-	-	-	-	-	-
C2 42.4	-	-	3	-	-	-	-	-	-	-	-	-
C2 42.5	-	-	-	-	3	-	-	-	-	-	-	3
C2 42	3	3	3	2	3	-	-	-	3	3	-	3

CO PO Mapping												
Course Name/Code: Automata Theory And Computability/18CS54										Semester of Study: V		
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C3 54.1	2	-	-	-	-	-	-	-	-	-	-	-
C3 54.2	3	-	-	-	-	-	-	-	-	-	-	-
C3 54.3	-	3	-	-	-	-	-	-	-	-	-	-
C3 54.4	-	-	3	-	-	-	-	-	-	-	-	-
C3 54.5	-	-	-	-	3	-	-	-	2	2	-	2
C3 54	2.5	3	3	-	3	-	-	-	2	2	-	2

CO PO Mapping												
Course Name/Code: File Structures/18IS61										Semester of Study: VI		
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C3 61.1	2	-	-	-	--	-	-	-	-	-	-	-
C3 61.2	3	-	-	-	-	-	-	-	-	-	-	-
C3 61.3	-	3	-	-	-	-	-	-	-	-	-	-
C3 61.4	-	-	-	3	-	-	-	-	-	-	-	-
C3 61.5	-	-	3	-	3	-	-	-	-	-	-	-
C3 61	2.5	3	3	3	3	-	-	-	-	-	-	-

CO PO Mapping												
Course Name/Code: Big Data Analytics/ 18CS72										Semester of Study: VII		
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C4 72.1	2	-	-	-	-	-	-	-	-	-	-	-
C4 72.2	3	-	-	-	-	-	-	-	-	-	-	-
C4 72.3	-	-	-	3	-	-	-	-	-	-	-	-
C4 72.4	-	3	-	-	-	-	-	-	-	-	-	-
C4 72.5	-	-	3	-	3	2	-	-	3	3	2	2
C4 72	2.5	-	3	3	3	2	-	-	3	3	2	2

CO PO Mapping												
Course Name/Code: Internet of Things/18CS81										Semester of Study: VIII		
COURSE OUTCOMES	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C4 81.1	2	-	-	-	-	-	-	-	-	-	-	-
C4 81.2	3	-	-	-	-	-	-	-	-	-	-	-
C4 81.3	-	3	-	-	-	-	-	-	-	-	-	-
C4 81.4	-	-	3	-	-	-	-	-	-	-	-	-
C4 81.5	-	-	-	-	2	-	-	-	3	3	-	2
C4 81	2.5	3	3	-	2	-	-	-	3	3	-	2

	PSO1	PSO2
C2 32.1	-	-
C2 32.2	-	-
C2 32.3	-	-
C2 32.4	3	-
C2 32.5	3	-
C2 32	3.00	0.00

	PSO1	PSO2
C2 42.1	-	-
C2 42.2	-	-
C2 42.3	-	-
C2 42.4	3	-
C2 42.5	3	-
C2 42	3.00	0.00

	PSO1	PSO2
C3 54.1	-	-
C3 54.2	-	2
C3 54.3	-	-
C3 54.4	-	-
C3 54.5	2	-
C3 54	2	2

	PSO1	PSO2
C3 61.1	-	2
C3 61.2	2	-
C3 61.3	-	-
C3 61.4	2	-
C3 61.5	-	-
C3 61	2	2

	PSO1	PSO2
C4 72.1	2	-
C4 72.2	3	2
C4 72.3	3	2
C4 72.4	3	2
C4 72.5	3	2
C4 72	2.8	2

	PSO1	PSO2
C4 81.1	3	2
C4 81.2	2	2
C4 81.3	2	2
C4 81.4	2	2
C4 81.5	3	2
C4 81	2.4	2

3.1.3. Program level Course-PO matrix of all courses INCLUDING first year courses (10)

2019 Batch Average_Ciii CO_PO mapping Target=65%, L1=50%, L2=55%, L3=60%

Sl. No	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1	C111 M1	3.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	C112CHE	3.00	2.00	1.00	2.00	1.00	0.00	1.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
3	C113CPS	2.00	2.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	C114ELN	3.00	3.00	2.00	0.00	2.00	0.00	0.00	0.00	3.00	2.00	0.00	0.00	0.00	0.00
5	C115ME	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	C116CHEL	3.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	C117CPL	3.00	2.00	2.00	2.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00
8	C11EGH18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	0.00	3.00	0.00	0.00
9	C121MAT	3.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	C122PHY	3.00	3.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	C123ELE	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	C124CIV	3.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
13	C125EGDL	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00
14	C126PHYL	3.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	C127ELEL	0.00	0.00	0.00	3.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	C128ENG2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	0.00	3.00	0.00	0.00

17	C231MAT31	3.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	0.00	0.00
18	C232 DS	3.00	3.00	3.00	2.00	3.00	0.00	0.00	0.00	3.00	3.00	0.00	3.00	3.00	0.00
19	C233 ADE	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	2.50	2.00
20	C234 CO	2.50	3.00	3.00	3.00	0.00	0.00	0.00	0.00	3.00	3.00	0.00	0.00	2.00	2.00
21	C235 SE	3.00	3.00	3.00	0.00	3.00	2.00	0.00	2.50	3.00	3.00	3.00	2.25	3.00	2.00
22	C236 DMS	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	3.00	3.00	0.00	0.00	1.00	0.00
23	C237 ADE Lab	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	3.00	2.00	0.00	3.00	2.60	2.00
24	C238 DS Lab	3.00	0.00	3.00	3.00	3.00	0.00	0.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00
25	C239 CPS	0.00	0.00	0.00	0.00	0.00	2.00	1.33	1.50	0.00	0.00	0.00	0.00	0.00	0.00
26	C241 MAT41	3.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	C242 DAA	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00
28	C243 OS	3.00	3.00	0.00	0.00	0.00	2.00	2.00	0.00	3.00	0.00	0.00	2.50	2.20	2.00
29	C244 MP &MC	2.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.75	2.00
30	C245 OOC	2.50	3.00	3.00	0.00	3.00	0.00	0.00	0.00	3.00	3.00	0.00	2.00	2.80	2.00
31	C246 DC	3.00	3.00	3.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	0.00	0.00	3.00	2.00
32	C247 DAA Lab	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	0.00
33	C248 MP Lab	2.75	3.00	2.00	2.00	2.00	0.00	0.00	2.00	3.00	3.00	3.00	3.00	2.00	1.30
34	C351 ME	3.00	3.00	0.00	0.00	0.00	2.00	0.00	1.00	0.00	0.00	0.00	3.00	1.00	0.00
35	C352 CN	3.00	3.00	3.00	0.00	0.00	0.00	2.00	3.00	3.00	0.00	3.00	3.00	2.80	2.00
36	C353 DBMS	2.50	2.00	3.00	2.50	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.00
37	C354 ATC	2.50	3.00	3.00	0.00	3.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	2.00	2.00

38	C355 ADP (Python)	3.00	3.00	3.00	2.00	3.00	0.00	0.00	0.00	3.00	0.00	0.00	3.00	3.00	0.00
39	C356 USP	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	2.00	3.00	0.00	2.00	2.60	1.00
40	C357 CN Lab	3.00	3.00	3.00	0.00	3.00	0.00	0.00	2.00	0.00	3.00	0.00	0.00	2.75	2.00
41	C358 DBMS Lab	3.00	2.50	3.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.00
42	C359 EVS	2.50	3.00	3.00	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
43	C361 FS	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.00	2.00
44	C362 ST	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	3.00	0.00
45	C363 WTA	2.50	3.00	3.00	2.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	C3641 DMDW	3.00	3.00	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	1.50	2.00	1.40
47	C3643 CCA (Cloud)	3.00	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00
48	C3645 IMS	3.00	0.00	3.00	3.00	3.00	0.00	0.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00
49	C366 ST Lab	3.00	3.00	3.00	3.00	3.00	2.00	2.00	2.00	2.00	3.00	2.00	2.67	2.80	2.00
50	C367 FS Lab	3.00	3.00	3.00	0.00	3.00	2.00	0.00	2.00	3.00	3.00	0.00	3.00	3.00	0.00
51	C368 MAD	3.00	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00
52	C471 AIML	2.50	3.00	3.00	3.00	3.00	2.00	0.00	0.00	3.00	3.00	2.00	2.00	2.80	2.00
53	C472 BDA	2.75	3.00	0.00	0.00	2.00	2.00	0.00	0.00	3.00	0.00	0.00	2.50	2.00	2.00
54	C4734 UID	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.40	1.00
55	C4744 Cryptography	3.00	3.00	0.00	3.00	3.00	0.00	0.00	3.00	3.00	0.00	3.00	3.00	2.60	1.00
56	C4745 RPA	3.00	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	0.00
57	C476 AIML Lab	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
58	C477 CSP (projectPhase1)	2.50	3.00	3.00	0.00	2.00	0.00	0.00	0.00	3.00	3.00	0.00	2.00	2.40	2.00

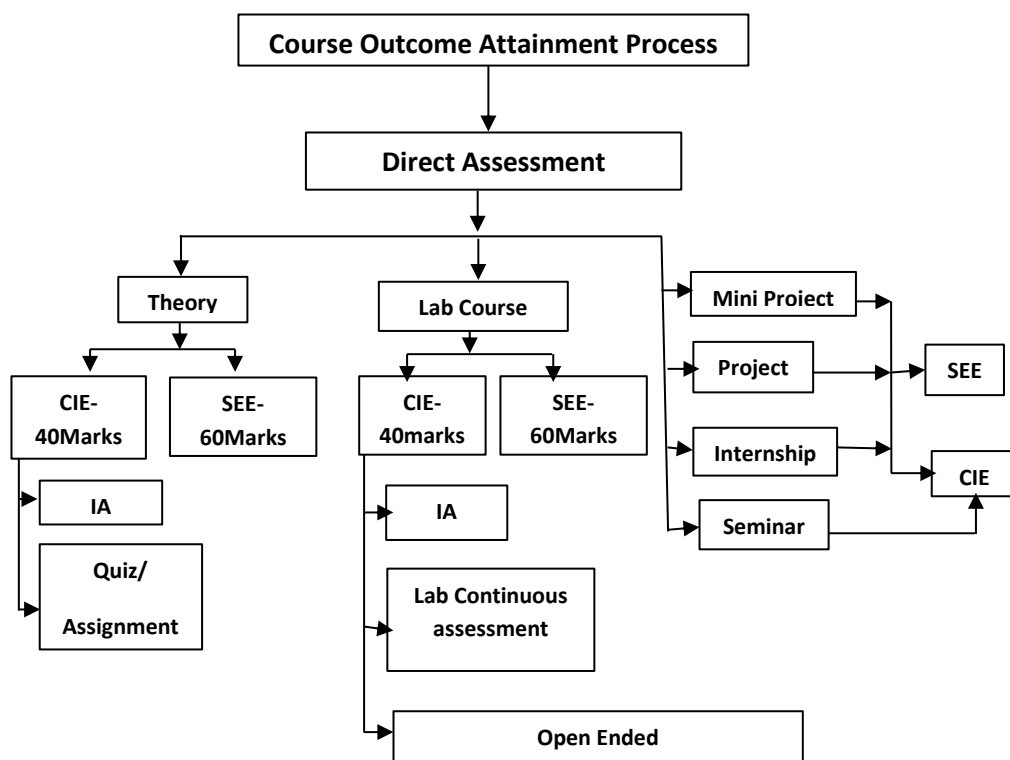
59	C481 IOT	2.50	0.00	0.00	3.00	3.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	2.75	0.00
60	C4823 NOSQL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
61	C4CSP83 Project	3.00	3.00	3.00	2.00	3.00	2.00	2.00	2.00	3.00	3.00	0.00	3.00	3.00	2.00
62	C4CSS84 Seminar	3.00	3.00	3.00	0.00	3.00	3.00	0.00	0.00	3.00	3.00	2.00	3.00	3.00	0.00
63	C4CSI85 (Internship)	3.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Attainment of Course Outcomes (50)

3.2.1. Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

(Examples of data collection processes may include, but are not limited to ,specific Exam/tutorial questions, assignments ,laboratory tests, project evaluation, student Portfolios(A portfolio is a collection of artefacts that demonstrate skills, personal Characteristics and accomplishments created by the student during study period),internally develop assessment exams , project presentations, oral exams etc.)

Continuous evaluation system contributes towards attainment of Course Outcomes. Continuous evaluation systems consist of Theory Internal Assessment, Assignments, Quizzes, lab continuous evaluation, project work, seminars, and semester end examination. Following flowchart depicts details of the process. Continuous internal evaluation contributes 40% and Semester End Examination contributes 60% to the total attainment of a course outcome.



The data required towards attainment of various course outcomes is collected through:

- ❖ Assignments, Theory Internal Assessments, Lab Internal Assessments, and Project work, Semester End Examination, Poster Presentation, Project Based Learning (PBL) and Seminar.
 - Assignments, quizzes, and examinations contribute to assessing student's ability to use fundamental concepts quantitative, numerical, and analytical skills.
 - Laboratory exams, project works contribute to the assessment of practical skills which reflects the ability of students to implement ideas and techniques.
 - Oral presentation, reports, viva voce contribute to the assessment of overall communication skills and dissemination of ideas.

These assessments are carried out periodically and hence allow the faculty members to monitor and provide attention to the students.

Tools used in measuring CO:

1. **Continuous Internal Assessment (CIA):** - The Internal Assessment Marks in a theory subject shall be based on 3 tests generally conducted at the end of 6th, 10th and 12th weeks of each semester. Average of the 3 internal tests shall be the internal assessment marks for the relevant subject.
2. **Semester End Examination (SEE):** - At the end of each semester, Semester End Examination is conducted for all courses. According to the university syllabus the question paper will be set by the external experts.
3. **Assignment:** - The assignment questions are designed to assess students' knowledge of engineering practices and problem solving.
4. **Quizzes:** - During the class hours, students will be given Quiz. Quiz marks are recorded for assessing the attainment of CO's. Quiz questions are prepared for each course to test the knowledge and reasoning power of students.
5. **Lab Continuous Assessment:** - Lab sessions and Lab internal Assessments contribute towards Lab Continuous Assessment process. Every lab sessions is evaluated based on write up, Execution and Viva-voce. Two lab internals are conducted in the semester. Lab Internals are evaluated based on defined rubrics.
6. **Project Work:** - Projects will be selected based on the student's interest. Students will be divided into groups of 3-4 students. Every group will be mentored by a faculty (guide). Project batches are allotted by the project coordinator, based on the area of interest and research work carried by the faculty. Reviews are conducted by a committee consisting of project coordinator, guide and SPARC Members. Phase-I will be evaluated based on Literature Survey and Problem Identification. Phase-II will be evaluated based on the design and implementation. Each phase will be evaluated based on rubrics defined.
7. **Internship:** - Students have to undergo a mandatory internship. The duration of the internship is 4 weeks. On completion of training a project report/completion certificate and student feedback are submitted to the internship coordinator. A presentation is made by every student on his/her internship work before a committee. Evaluation of the internship is done based on rubrics defined.
8. **Mini Projects:** - A team of 3 to 4 students collaborate and demonstrate knowledge gained in the subject by implementing domain related problem statement. Reviews are conducted during the semester. Marks are awarded based on the reviews and the report submission.
9. **Technical Seminar:** - Each student is given an option to select a technical topic in 8th semester. Same project guides will be in-charge to take care of the students' progress from topic selection to till internal evaluation. Intermediate progress will be monitored by a guide and at the end of the semester a presentation will be conducted to assess the content and depth of knowledge acquired.

1. Distribution of marks for theory courses evaluation:

	Type of Assessment Tool		Frequency	Max Marks	Evidence collected
Direct Assessment Methods	C I E	Internal assessment tests	Thrice (Average of all the three tests will be considered)	50 reduced to 30	Blue books
		Assignment/ quiz	Once	10 reduced to 5	Assignment reports/ Quiz answers
	S E E	Semester End Examination covering full syllabus	Once at the End of course	100	Answer scripts
Indirect Assessment Methods	End of course survey (On Course contents, Quality of Delivery and Assessment methods)		Once at the End of course	-	Response through Questionnaire

2. Distribution of marks for Laboratory courses evaluation

	Type of Assessment Tool		Frequency	Evidence collected
Direct Assessment Methods	C I E	Continuous Evaluation	Every lab	Lab Record Book
		Internal assessment tests	Twice (Average of all the two tests will be considered)	Blue books
		Open Ended Experiment	one Lab Session	Lab Record Book
		Mini Project	Every Lab Session	Presentation & Project Reports.
Indirect Assessment Methods	S E E	Semester End Examination covering full syllabus	Once at the End of course	Answer scripts
	End of course survey (On Course contents, Quality of Delivery and Assessment methods)		Once at the End of course	Response through Questionnaire

3.2.2. Record the attainment of Course Outcomes of all courses with respect to set attainment levels (40)

(The attainment levels shall be set considering average performance levels in the university Examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance internal assessments with respect to The Course Outcomes of a course in addition to the performance in the University Examination)

The preliminary level set for attainment of course outcomes is as follows:

Table 3.2.2.1

Attainment Level 3	60% Students Must Score 65% Marks and Above
Attainment Level 2	55% Students Must Score 65% Marks and Above
Attainment Level 1	50% Students Must Score 65% Marks and Above

Target attainment levels are same for the internal and university exams of the assessment years. The set attainment levels will be reviewed based on annual performance of the student. The attainment level targets may be revised for enhanced course outcomes.

The attainment of Course outcome is evaluated under two categories – Continuous Internal Evaluation and Semester End Examination.

Following procedure is followed for calculation of course outcomes attainment using: -

Excel sheets with students' details are used for course outcome (CO) calculations. For each Internal Assessment (IA), questions are mapped to relevant course outcomes. Mapping of questions to course outcomes along with maximum marks per question is entered in the excel sheet. Marks obtained by a student per question are entered in the excel sheet for computation. Summation of marks obtained by a student for each CO is obtained. Percentage of students who have obtained marks above target set is calculated. IA attainment level for each CO is set as per Table 3.2.2.1.

Percentage of students who have obtained marks above target in semester end exam is calculated and external attainment level is set as per Table 3.2.2.1 Final attainment is obtained as per following calculation: **$0.4 * \text{IA attainment} + 0.6 * \text{External attainment}$**

Batch: 2019-2023
COURSE OUTCOME ATTAINMENT
with 65% target and L1:50, L2:55, L3:60
Table 3.2.2.1

CO attainment 2019 batch 65%-50,55,60					
SL No	COURSE NAME	COURSE OUTCOMES	ATTAINMENT Level-IA	ATTAINMENT LEVEL UNIVERSITY	OVERALL ATTAINMENT LEVEL
1	Transform Calculus, Fourier Series And Numerical Techniques (18MAT31)	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	1.20
2	Data Structures and Applications (18CS32)	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	1.20
3	Analog and Digital Electronics (18CS33)	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	1.20
4	Computer Organization (18CS34)	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	1.20
5	Software Engineering (18CS35)	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	1.20
6	Discrete Mathematical Structures (18CS36)	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	1.20
7	Analog and Digital Electronics Laboratory (18CS37)	CO1	3.00	3.00	3.00
		CO2	3.00	3.00	3.00
		CO3	3.00	3.00	3.00
		CO4	3.00	3.00	3.00
		CO5	3.00	3.00	3.00
8	Data Structures Laboratory (18CSL38)	CO1	3.00	2.00	2.40
		CO2	3.00	2.00	2.40
		CO3	3.00	2.00	2.40
		CO4	3.00	2.00	2.40
9	Constitution of India, Professional Ethics and Cyber Law (18CPC39)	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20

10	Mathematics IV Complex Analysis, Probability And Statistical Methods (18MAT41)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
11	Design and Design Analysis (18CS42)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
12	Operating System (18CS43)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
13	Microprocessor Controller and Embedded Systems (18CS44)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
14	Object Oriented Concepts (18CS45)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
15	Data Communications (18CS46)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
16	Design and Analysis of Algorithm Laboratory (18CSL47)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
16	Microcontroller and Embedded Systems Laboratory (18CSL48)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
17	Management and Entrepreneurship for IT Industry (18CS51)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
18	Computer Networks (18CS52)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
19	Database Management System (18CS53)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
20	Automata theory and Computability (18CS54)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
21	Application development using python (18CS55)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
22	Unix Programming (18CS56)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20

		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
23	Computer network laboratory (18CSL57)	C01	3.00	2.00	2.40
		C02	3.00	2.00	2.40
		C03	3.00	2.00	2.40
		C04	3.00	2.00	2.40
24	DBMS Laboratory with mini project (18CSL58)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
25	Environmental Studies (18CIV59)	C01	0.00	0.00	0.00
		C02	3.00	0.00	1.20
		C03	2.00	0.00	0.80
		C04	3.00	0.00	1.20
25	File structures (18IS61)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
26	Software Testing (18IS62)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
27	Web technology and its application (18CS63)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
28	Data mining and data warehouse (18CS641)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
29	Cloud computing and its Application (18CS643)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
30	Software Testing laboratory (18ISL66)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
31	Information Management Systems (18IS645)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
31	File Structure laboratory with mini Project (18ISL67)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
32	Mobile application development (18CSMP68)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
33	Artificial intelligence and machine learning (18CS71)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
34	Big data and analytics	C01	3.00	0.00	1.20

	(18CS72)	C02	2.00	0.00	0.80
		C03	2.00	0.00	0.80
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
35	User interface design (18CS734)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
36	Cryptography (18CS744)	C01	3.00	1.00	1.80
		C02	3.00	1.00	1.80
		C03	3.00	1.00	1.80
		C04	3.00	1.00	1.80
		C05	3.00	1.00	1.80
37	Robotic process Automation Design and development (18CS745)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
38	Artificial intelligence and machine learning laboratory (18CSL76)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
39	Project Work Phase-1 (18CSP77)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
		C06	3.00	3.00	3.00
40	Internet of Things (18CS81)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
41	No SQL Database (18CS823)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
42	Project Work Phase-2 (18CS83X)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
		C06	3.00	3.00	3.00
43	Technical Seminar (18CS84)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
44	Internship (18CSI85)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00

Batch: 2018-2022
COURSE OUTCOME ATTAINMENT
With 60% target and L1:50, L2:55, L3:60

CO attainment 2018 batch 60%-50,55,60					
Sl. No	COURSE NAME	COURSE OUTCOMES	ATTAINMENT Level-IA	ATTAINMENT LEVEL UNIVERSITY	OVERALL ATTAINMENT LEVEL
1	Mathematics-III/18MAT31	CO1	0.00	0.00	0.00
		CO2	1.00	0.00	0.40
		CO3	1.00	0.00	0.40
		CO4	3.00	0.00	1.20
2	Data Structures using C/ 18CS32	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	3.00
3	Analog and Digital Electronics/ 18CS33	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	1.20
4	Computer Organization/18CS34	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	1.20
5	Software Engineering/18CS35	CO1	2.00	0.00	0.80
		CO2	0.00	0.00	0.00
		CO3	2.00	0.00	0.80
		CO4	0.00	0.00	0.00
		CO5	3.00	0.00	1.20
6	DMS/18CS36	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
7	ADE Lab 18CS37	CO1	3.00	3.00	3.00
		CO2	3.00	3.00	3.00
		CO3	3.00	3.00	3.00
		CO4	3.00	3.00	3.00
		CO5	3.00	3.00	3.00
8	Data structure Lab/18CSL38	CO1	3.00	3.00	3.00
		CO2	3.00	3.00	3.00
		CO3	3.00	3.00	3.00
9	Mathematics IV/18MAT41	CO1	3.00	0.00	1.20
		CO2	3.00	0.00	1.20
		CO3	3.00	0.00	1.20
		CO4	3.00	0.00	1.20
		CO5	3.00	0.00	1.20
11	Design and Design Analysis/ 18CS42	CO1	3.00	3.00	3.00
		CO2	3.00	3.00	3.00
		CO3	3.00	3.00	3.00
		CO4	3.00	3.00	3.00
		CO5	3.00	3.00	3.00
		CO6	3.00	3.00	3.00
12	Operating System/18CS43	CO1	3.00	3.00	3.00
		CO2	3.00	3.00	3.00
		CO3	3.00	3.00	3.00
		CO4	3.00	3.00	3.00

		C05	3.00	3.00	3.00
13	Microprocessor Controller and Embedded Systems/ 18CS44	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	0.00	1.20
13	Object Oriented Concepts/ 18CS45	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
14	Data Communications/ 18CS46	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
15	Design and Analysis of Algorithm Laboratory/ 18CSL47	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
16	Microprocessors Laboratory/ 18CSL48	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
17	Management and Entrepreneurship for IT Industry / 18CS51	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	0.00	1.20
18	Computer Networks / 18CS52	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
19	Database Management System/17CS53	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
20	Automata theory and Computability /18CS54	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
21	Application development using python (18CS55)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
22	Unix Programming (18CS56)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
23	Computer network laboratory (18CSL57)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
24	DBMS Laboratory with mini project (18CSL58)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00

		C04	3.00	3.00	3.00
25	File structures (18IS61)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
26	Software Testing (18IS62)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
27	Web technology and its application (18CS63)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
28	Data mining and data warehouse (18CS641)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
29	Cloud computing and its application (18CS643)	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
30	Software Testing laboratory (18ISL66)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
31	File Structure laboratory with mini Project (18ISL67)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
32	Mobile application development (18CSMP68)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
33	Artificial intelligence and machine learning (18CS71)	C01	3.00	1.00	1.80
		C02	3.00	1.00	1.80
		C03	3.00	1.00	1.80
		C04	3.00	1.00	1.80
		C05	3.00	1.00	1.80
34	Big data and analytics (18CS72)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
		C06	3.00	3.00	3.00
35	User interface design (18CS734)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	0.00	1.20
36	Cryptography (18CS744)	C01	3.00	2.00	2.40
		C02	3.00	2.00	2.40
		C03	3.00	2.00	2.40
		C04	3.00	2.00	2.40
		C05	3.00	2.00	2.40
37	Robotic process Automation Design and	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00

	development(18CS745)	C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
38	Artificial intelligence and machine learning laboratory (18CSL76)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
39	Internet of Things (18CS81)	C01	3.00	1.00	1.80
		C02	3.00	1.00	1.80
		C03	3.00	1.00	1.80
		C04	3.00	1.00	1.80
		C05	3.00	1.00	1.80
40	No SQL Database (18CS823)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
41	Project Work Phase-2 (18CS83X)	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
		C06	3.00	3.00	3.00
42	Technical Seminar (18CS84)	C01	3.00	-	3.00
		C02	3.00	-	3.00
		C03	3.00	-	3.00
		C04	3.00	-	3.00
		C05	3.00	-	3.00
43	Internship	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00

Batch: 2017-2021
COURSE OUTCOME ATTAINMENT
With 60% target and L1:50, L2:55, L3:60

CO attainment 2017 batch 60%-50,55,60					
Sl. No	COURSE NAME	COURSE OUTCOMES	ATTAINMENT Level-IA	ATTAINMENT LEVEL UNIVERSITY	OVERALL ATTAINMENT
					LEVEL
1	Mathematics-III/17MAT31	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
2	Analog and Digital Electronics/17CS32	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20

		C03	3.00	0.00	1.20
		C04	2.00	0.00	0.80
		C05	3.00	0.00	1.20
3	Data Structures using C/ 17CSL33	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
4	Computer Organization/17CS34	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	3.00
5	Unix and Shell Programming/ 17CS35	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
6	Discrete Mathematical Structures / 17CS36	C01	3.00	0.00	1.20
		C02	0.00	0.00	0.00
		C03	2.00	0.00	0.80
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
7	Analog and Digital Electronics Lab/ 17CSL37	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00

		C05	3.00	3.00	3.00
8	Data structure Lab/17CSL38	C01	3.00	2.00	2.40
		C02	3.00	2.00	2.40
		C03	3.00	2.00	2.40
		C04	3.00	2.00	2.40
		C05	3.00	2.00	2.40
9	Mathematics IV/17MAT41	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
10	Software Engineering/17CS42	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
11	Design and Design Analysis/17CS43	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
		C06	3.00	0.00	1.20
12	Microprocessor and Microcontroller/ 17CS44	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20

		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
13	Object Oriented Concepts/ 17CS45	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	3.00
14	Data Communications/ 17CS46	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	3.00
15	Design and Analysis of Algorithm Laboratory/17CSL47	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
16	Microprocessors Laboratory/17CSL48	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
17	Management and Entrepreneurship for IT Industry /15CS51	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
	Computer Networks /17CS52	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20

18		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
19	Database Management System/17CS53	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
20	Automata theory and Computability /17CS54	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	0.00	0.00	0.00
		C05	3.00	0.00	1.20
21	Advanced Java and J2EE/17CSxxx	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
22	Computer Network Laboratory/17CSL57	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	0.00	1.20
23	DBMS Laboratory with mini project/17CSL58	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
24	Cryptography and Network Security/17CS61	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20

		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
25	File Structures 17IS62	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
26	Software Testing 17IS63	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	3.00
27	Operating Systems/ 17CS64	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
28	Operational Research/ 17IS65x	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
	Software Testing Lab/ 17ISL67	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00

29		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
30	File Structures Lab/ 17ISL68	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
31	Web Technology and Applications /17CS71	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
32	Software Architecture and Design Patterns/17IS72	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	1.20
33	Machine Learning/17CS73	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	0.00	3.00
34	Information Management Systems/17IMS74x	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
35	Information and Network Security/17INS743	C01	3.00	3.00	3.00

		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	0.00	0.00	0.00
36	Machine Learning Lab/17CSL76	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
37	Web Lab/17CSL77	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
38	Internet Of Things/17CS81	C01	3.00	2.00	2.40
		C02	3.00	2.00	2.40
		C03	3.00	2.00	2.40
		C04	3.00	2.00	2.40
		C05	3.00	0.00	1.20
39	Big Data Analytics/17CS82	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	0.00	3.00

40	User Interface Design/17IS83x	C01	3.00	2.00	2.40
		C02	3.00	2.00	2.40
		C03	3.00	2.00	2.40
		C04	3.00	2.00	2.40
		C05	3.00	2.00	2.40
41	Internship/17IS84	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
42	Project Phase II/17ISP85	C01	3.00	3.00	3.00
		C02	3.00	3.00	3.00
		C03	3.00	3.00	3.00
		C04	3.00	3.00	3.00
		C05	3.00	3.00	3.00
		C06	3.00	3.00	3.00
43	Seminar/17ISS86	C01	3.00	0.00	1.20
		C02	3.00	0.00	1.20
		C03	3.00	0.00	1.20
		C04	3.00	0.00	1.20
		C05	3.00	0.00	3.00

3.3. Attainment of Program Outcomes and Program Specific Outcomes (50)

3.3.1. Describe assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10).

Figure 3.3.1.1 describes the process for Program Outcomes Attainment

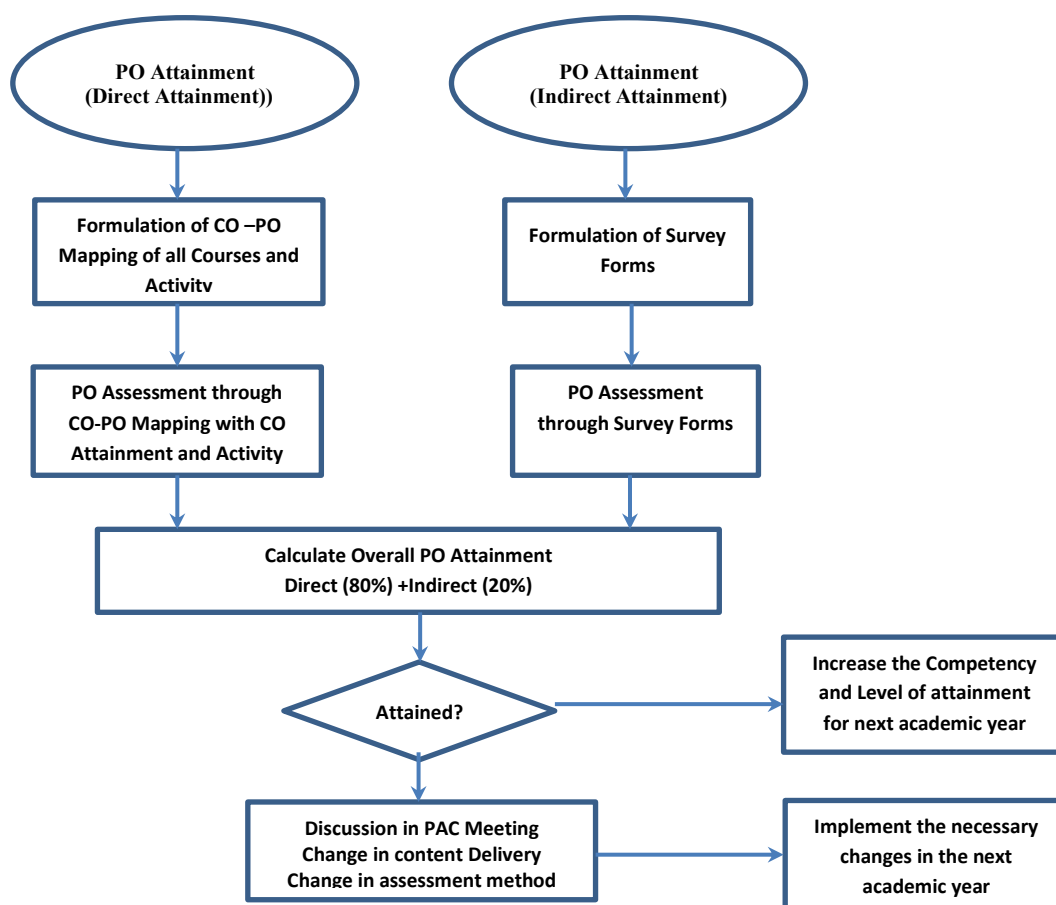


Figure 3.3.1.1 Process Diagram of PO Attainment

1. Direct Method

Internal Assessment:
University Assessment

2. Indirect Method

Course End Survey
Graduate / Exit Survey
Alumni Survey

Typically, each **Program Outcome** and **Program Specific Outcomes** is assessed through direct assessments administered in several courses. The Table shows the direct measures from students and the indirect measurement methods.

Table 3.3.1.1: Evaluation of attainment of Program Outcomes

		Tools	To whom	Documentation	Frequency of assessment
Direct Assessment	C I E	Internal Assessment	Students	Question papers, Blue books	Thrice in every semester
		Lab test		Blue books	Twice in semester
		Projects		Thesis	Final year
		Seminars, VIVA, PPT		Report	During the whole semester
	S E E	University Theory Examinations		Result list (Visvesvaraya Technological university)	Odd Sem: Aug-Nov Even Sem :Feb-May
		University Practical Examinations		Result list (Visvesvaraya Technological university)	Odd Sem: Aug-Nov Even Sem :Feb-May
		University Practical Examinations Projects		Result list (Visvesvaraya Technological university)	Odd Sem: Aug-Nov Even Sem :Feb-May
Indirect Assessment		Course End Survey	Students	Webmaster/ Google Form	End of the Semester for each course
		Graduate Survey		Webmaster/ Google Form	conducted every year for final semester students
		Activity Feedback / assessment		Depending on the activity	Depending on the discussion in the department few courses are suggested with OBE activity. This also includes industrial visit/SDP/Workshops etc.,

Table 3.3.1.2: Direct Method comprises of following tools:

Sl. No.	Assessment Tools	Frequency of Assessment Processes Carried out
1.	Internal Assessment	Three times in every semester
2.	University Assessment	Once in a semester

Indirect Method comprises of following tools:

Sl. No	Assessment Tools	Frequency of Assessment Processes Carried out
1.	Graduate/Exit survey	Once in a Year
2.	Course end Survey	For every course in the semester/semester
3.	Activities conducted for the courses suggested by PAC	For identified courses in the semester

Program Outcomes and Program Specific Outcomes are assessed as follows:-

❖ **Direct Method:**

Process used for calculating CO-PO and PSO mapping in excel sheet (Direct Measures)

- Target is set to 65% after having brainstorming with all the course co-coordinators.
- Level-3: If **60%** of students score more than **65%** then it is full attainment
- Level-2: If **55%** of students score more than **65%** then it is Moderate attainment
- Level-1: If **50%** of students score more than **65%** then it is low attainment
- In overall attainment: 40%, 60% weightages are given to Internal Test and University Examination respectively.

Direct Method to Calculate Program Outcomes and Program Specific Outcomes are assessed in following steps: -

1. Course outcomes mapping to individual PO and PSO's are considered.
2. The Attainment of PO and PSO with internal exams are calculated as follows:

$$\text{PO Attainment(Direct)} = \frac{\text{CO-PO mapping value} * \text{Actual CO attainment value}}{\text{Number of Attainment levels (3)}}$$

3. Step 2 is repeated for PO Attainment of University Assessment as well.
4. Direct PO attainment is calculated by considering Summation of a weighted average of 60% of Step 3 value and 40% of Step 2.
5. Direct PO and PSO attainment is calculated by repeating Step 2, Step 3 and Step 4.

- Final PO attainment for each **PO = Sum(Obtained CO-PO levels)/Number of COs.**
- Each PO attainment is calculated by taking the sum of **PO attainment values of individual courses divided by number of Courses marked for the particular PO.**

❖ **Indirect Method:**

Indirect Method to Calculate Program Outcomes and Program Specific Outcomes are assessed in following steps: -

Graduate Exit survey:

1. Questions are framed keeping PO's as reference.
2. Responses are categorized into: "Strongly agree" as '3'," Agree" as '2' "Satisfactory" as '1'.
3. The calculations are done as shown below:

$$Pos(i) = \frac{\sum_{j=1}^3 W(j)g(j)}{\sum_{j=1}^3 W(j) + N}$$

Where

W(j) = number of respondents who has given jth grade for ith PO

g(j) = grade point for jth grade

N = Maximum Weightage

Course End Survey:

1. Each course coordinator collects course exit survey for their respective courses.
2. Questions are framed by course coordinator with respect to Course Outcomes; in turn it will be mapped to POs.
3. The calculations will be done based on the options provided under each question.
4. Average of all course exit surveys will be taken for final PO attainment.

❖ **FINAL PO and PSO Attainment level:**

Final Program Outcomes and Program Specific Outcomes are assessed in following steps:-

Step 1: Final PO attainment is calculated by considering Summation of a weighted average of 80% to PO attainment in Direct method and 20% to PO attainment in Indirect method.

Step 2: Final PSO attainment is calculated by repeating Step 1 for PSO.

3.3.2. Provide results of evaluation of each PO & PSO (40)

(The attainment levels by direct (student performance) and indirect (surveys) are to be Presented through Program level Course-PO & PSO matrix as indicated).

Batch: -2019-2023

PO & PSO Attainment with 65% target and L1:50, L2:55, L3:60

SL NO	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1	C231MAT31	1.20	0.80	0.40	0.00	0.00	0.00	0.00	0.00	1.20	1.20	1.20	1.20	0.00	0.00
2	C232 DS	1.20	1.20	1.20	0.80	1.20	0.00	0.00	0.00	1.20	1.20	0.00	1.20	1.20	0.00
3	C233 ADE	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	1.20	1.20	1.20	1.20	1.00	0.80
4	C234 CO	1.00	1.20	1.20	1.20	0.00	0.00	0.00	0.00	1.20	0.00	0.00	0.00	0.80	0.80
5	C235 SE	1.20	1.20	1.20	0.00	1.20	0.80	0.00	1.00	1.20	1.20	1.20	0.90	1.20	0.8
6	C236 DMS	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	1.20	1.20	0.00	0.00	1.20	0.00
7	C237 ADE Lab	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	3.00	2.00	0.00	3.00	2.60	2.0
8	C238 DS Lab	2.40	0.00	2.40	2.40	2.40	0.00	0.00	2.40	2.40	2.40	0.00	2.40	2.40	0.00
9	C239 CPS	0.00	0.00	0.00	0.00	0.00	0.80	0.50	0.60	0.00	0.00	0.00	0.00	0.00	0.00
10	C241 MAT41	1.00	0.60	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	C242 DAA	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2.	0.00
12	C243 OS	1.20	1.20	0.00	0.00	0.00	0.80	0.80	0.00	1.20	0.00	0.00	1.00	0.88	1.0
13	C244 MP &MC	0.80	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	1.20	1.10	1.0
14	C245 OOC	1.00	1.20	1.20	0.00	1.20	0.00	0.00	0.00	1.20	1.20	0.00	0.80	1.12	1.0

15	C246 DC	1.20	1.20	1.20	0.00	0.00	0.00	0.00	0.00	1.20	1.20	0.00	0.00	1.20	1.0
16	C247 DAA Lab	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	1.20	1.20	0.00
17	C248 MP Lab	1.10	1.20	0.80	0.80	1.00	0.00	0.00	0.80	1.20	1.20	1.20	1.20	0.8	1.0
18	C351 ME	1.20	1.20	0.00	0.00	0.00	0.80	0.00	0.40	0.00	0.00	0.00	1.20	0.40	0.00
19	C352 CN	1.20	1.20	1.20	1.20	0.00	0.00	0.00	0.80	1.20	1.20	0.00	1.20	1.12	0.80
20	C353 DBMS	1.00	0.80	1.20	1.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.80
21	C354 ATC	1.00	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.80	0.80	0.00	0.80	0.00	0.80
22	C355 ADP (Python)	1.20	1.20	1.20	0.80	1.20	0.00	0.00	0.00	1.20	0.00	0.00	1.20	0.90	0.00
23	C356 USP	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.80	1.20	0.00	0.80	1.04	0.40
24	C357 CN Lab	2.40	2.40	2.40	0.00	2.00	0.00	0.00	1.60	0.00	2.40	0.00	0.00	2.20	1.60
25	C358 DBMS Lab	3.00	2.50	3.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.00
26	C361 FS	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	1.20	0.00	0.00	0.80	0.80
27	C362 ST	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	1.20	1.20	1.20	1.20	1.20	0.80
28	C363 WTA	1.00	1.20	1.20	0.80	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.00
29	C3641 DMDW	1.20	1.20	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00
30	C3643 CCA (Cloud)	1.20	1.20	1.20	1.20	0.00	1.20	1.20	1.20	1.20	1.20	0.00	1.20	0.80	0.56
31	C3645 IMS	3.00	0.00	3.00	3.00	3.00	0.00	0.00	3.00	3.00	3.00	0.00	3.00	1.20	0.00
32	C366 ST Lab	3.00	3.00	3.00	3.00	3.00	2.00	2.00	2.00	2.00	3.00	2.00	2.70	3.00	0.00
33	C367 FS Lab	3.00	3.00	3.00	0.00	3.00	2.00	0.00	2.00	3.00	3.00	0.00	3.00	2.80	2.00

34	C368 MAD	1.20	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00
35	C471 AIML	1.00	1.20	1.20	1.20	1.20	0.80	0.00	0.00	1.20	1.20	0.80	0.80	1.20	0.00
36	C472 BDA	2.75	3.00	0.00	0.00	2.00	2.00	0.00	0.00	3.00	0.00	0.00	2.50	1.12	0.80
37	C4734 UID	1.80	1.80	1.80	0.00	1.80	0.00	0.00	0.00	0.00	1.20	0.00	0.00	2.00	2.00
38	C4744 Cryptography	3.00	3.00	0.00	3.00	3.00	0.00	0.00	3.00	3.00	0.00	3.00	3.00	1.44	0.60
39	C4745 RPA	3.00	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.6	1.00
40	C476 AIML Lab	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.0	0.00
41	C477 CSP(projectPhase1)	1.00	1.20	1.20	0.00	0.80	0.00	0.00	0.00	1.20	1.20	0.00	0.80	3.00	3.00
42	C481 IOT	2.50	0.00	0.00	3.00	3.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	0.96	0.80
43	C4823 NOSQL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.75	0.00
44	C4CSP83 Project	3.00	3.00	3.00	2.00	3.00	2.00	2.00	2.00	3.00	3.00	0.00	3.00	3.00	3.00
45	C4CSS84 Seminar	3.00	3.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00	3.00	2.33	3.00	3.00	2.00
46	C4CSI85 (Internship)	1.20	0.80	0.40	0.00	0.00	0.00	0.00	0.00	1.20	1.20	1.20	1.20	3.00	0.00
Sum (Direct)		76.15	70.10	66.50	37.60	62.00	22.20	12.50	29.80	52.20	51.60	23.13	56.70	68.83	31.86
Count(Direct)		44	42	40	20	34	13	7	16	29	29	12	31	41	27
Attainment (Direct)		1.73	1.67	1.66	1.88	1.82	1.71	1.79	1.86	1.80	1.78	1.93	1.83	1.68	1.18
80% of attainment (Direct)		1.38	1.34	1.33	1.50	1.46	1.37	1.43	1.49	1.44	1.42	1.54	1.46	1.34	0.94
Indi rect Ass ess me nt	Skill Development Program “ Hands on Cloud Computing with AWS”	1.00	3.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00	0.00
	Cryptography: Group seminar	0.00	0.00	0.00	0.00	0.00	3.00	0.00	3.00	3.00	0.00	3.00	3.00	0.00	0.00
	Expert Talk: Application Development using Python	3.00	3.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AICTE Points	0.00	0.00	3.00	0.00	0.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
	Course end Survey	3.00	3.00	3.00	0.00	2.00	3.00	0.00	3.00	3.00	2.50	2.50	2.67	2.47	2.14

Graduate Exit Survey	2.65	2.65	2.66	2.61	2.59	2.75	2.75	2.75	2.74	2.71	2.72	2.69	2.65	2.60
Sum (indirect) Activity	6.65	11.65	11.66	2.61	7.59	11.75	5.75	10.75	11.74	7.21	8.22	10.36	5.12	4.74
count(indirect)activity	3	4	4	1	3	4	2	4	4	3	3	4	2	2
Average(indirect)activity	2.41	2.91	2.91	2.61	2.53	2.94	2.88	2.69	2.94	2.40	2.74	2.59	2.56	2.37
Sum(Indirect)(20%)	0.48	0.58	0.58	0.52	0.51	0.59	0.58	0.54	0.59	0.48	0.55	0.52	0.51	0.47
Overall PO Attainment	1.86	1.92	1.91	2.03	1.96	1.95	2.00	2.03	2.03	1.90	2.09	1.98	1.85	1.42

Batch: -2018-2022

PO & PSO Attainment with 60% target and L1:50, L2:55, L3:60

SL NO	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
1	C231MAT31	0.50	0.33	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	C232 DS	1.20	1.20	3.00	0.80	3.00	0.00	0.00	0.00	3.00	3.00	0.00	3.00	1.80	1.20
3	C233 ADE	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.80	0.00	0.00	1.00	1.00
4	C234 CO	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.80	0.00	0.00	1.00	1.00
5	C235 SE	1.20	1.20	0.80	0.00	0.80	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.80	0.80
6	C236 DMS	1.20	1.20	0.00	0.00	1.20	0.00	0.00	0.00	1.20	1.20	0.00	0.00	1.20	0.80
7	C237 ADE Lab	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	3.00	2.00	0.00	3.00	2.60	2.00
8	C238 DS Lab	3.00	0.00	3.00	3.00	3.00	0.00	0.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00
9	C241 MAT41	1.20	0.80	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	C242 DAA	2.00	2.40	2.40	0.00	1.60	1.60	0.00	0.00	1.60	1.60	0.00	0.00	2.27	1.60
11	C243 OS	2.75	3.00	0.00	0.00	0.00	2.00	2.00	0.00	3.00	0.00	0.00	2.00	2.00	3.00
12	C244 MP &MC	3.00	2.50	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	2.80	2.75
13	C245 OOC	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	1.20	1.20	0.80	0.80	1.12	0.64
14	C246 DC	2.00	3.00	3.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.00
15	C247 DAA Lab	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	0.00
16	C248 MP Lab	3.00	2.50	3.00	3.00	3.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	2.80	2.75
17	C251 ME	0.00	2.00	3.00	0.00	0.00	0.00	0.00	3.00	2.25	2.00	2.00	1.67	0.00	0.00

18	C252 CN	1.20	1.20	1.20	1.20	0.00	0.00	0.00	0.80	1.20	1.20	0.00	1.20	1.10	0.80
19	C253 DBMS	1.20	1.20	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.80
20	C254 ATC	1.00	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.00
21	C255 ADP (Python)	1.00	1.20	1.20	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	C256 USP	0.80	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.40
23	C257 CN Lab	3.00	3.00	3.00	0.00	3.00	0.00	0.00	2.00	0.00	3.00	0.00	0.00	2.80	2.00
24	C258 DBMS Lab	2.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	2.00	0.00
25	C361 FS	3.00	3.00	3.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
26	C362 ST	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80	0.80
27	C363 WTA	3.00	3.00	3.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00
28	C3641 DMDW	0.80	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	0.00
29	C3643 CCA (Cloud)	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.80	0.00	0.00	1.00	1.00
30	C366 ST Lab	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	3.00	3.00	2.00	3.00	3.00	2.00
31	C367 FS Lab	2.00	2.00	3.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	0.00	3.00	3.00	2.00
32	C368 MAD	3.00	3.00	3.00	0.00	3.00	0.00	0.00	2.00	0.00	3.00	0.00	3.00	3.00	0.00
33	C471 AIML	1.80	1.80	1.80	0.00	1.80	0.00	0.00	0.00	0.00	1.20	0.00	0.00	1.50	1.50
34	C472 BDA	2.50	3.00	3.00	3.00	2.50	2.00	0.00	0.00	3.00	3.00	2.00	2.00	2.83	2.00
35	C4734 UID	2.75	3.00	0.00	0.00	2.00	2.00	0.00	0.00	3.00	0.00	0.00	2.50	2.00	2.00
36	C4744 Crypto	2.40	2.40	2.40	0.00	2.40	0.00	0.00	0.00	0.00	1.60	0.00	0.00	2.00	2.00
37	C4745 RPA	3.00	3.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60	1.00
38	C476 AIML Lab	3.00	3.00	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00
39	C481 IOT	1.80	1.80	0.00	0.00	1.20	1.20	0.00	0.00	1.80	1.80	0.00	1.20	1.44	1.20
40	C4823 NOSQL	2.50	0.00	0.00	3.00	3.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	2.75	0.00
41	C4CSP83 Project	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
42	C4CSS84 Seminar	3.00	3.00	3.00	2.00	3.00	2.00	2.00	2.00	3.00	3.00	3.00	3.00	2.00	0.00
43	C4CSI85 (Internship)	3.00	3.00	3.00	2.00	3.00	2.00	0.00	3.00	3.00	3.00	2.33	3.00	0.00	0.00
Sum (Direct)		86.80	83.33	81.17	37.20	66.17	15.80	13.00	27.80	45.25	52.73	21.13	50.37	78.25	47.04
Count		42	40	37	14	31	8	5	11	18	25	9	20	38	29
Attainment (Direct)		2.07	2.08	2.19	2.66	2.13	1.98	2.60	2.53	2.51	2.11	2.35	2.52	2.06	1.62
80% of attainment (Direct)		1.65	1.67	1.75	2.13	1.71	1.58	2.08	2.02	2.01	1.69	1.88	2.01	1.65	1.30
Indirect attainment															
Indirect Assessment	Expert Talk(Data Structures)	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	"Hands on Xilinx and Multisim Analog and digital	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	simulation tools"														
	Project Management and Quality Management	3.00	0.00	0.00	0.00	3.00	2.00	0.00	2.00	3.00	3.00	0.00	0.00	3.00	2.00
	Collaborative learning	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
	Hands on Session "Wireshark Packet Tracer"	0.00	3.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Application Development Using Python	0.00	2.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cloud Computing Tools and Services-Expert Talk	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	1.00	0.00
	AICTE	0.00	0.00	3.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
	Course end Survey	2.76	3.00	2.92	2.75	3.00	2.75	2.75	2.80	3.00	3.00	2.80	2.70	2.86	2.35
	Graduate Exit Survey	2.66	2.69	2.63	2.65	2.65	2.68	2.68	2.60	2.66	2.68	2.66	2.65	2.66	2.65
	sum (indirect)	11.42	16.69	8.55	5.40	16.65	10.43	5.43	7.40	14.66	8.68	5.46	8.35	9.52	7.00
	count(indirect)	4	6	3	2	6	4	2	3	5	3	2	3	4	3
	Attainment (Indirect)	2.86	2.78	2.85	2.70	2.78	2.61	2.72	2.47	2.93	2.89	2.73	2.78	2.38	2.33
	20% of attainment (indirect)	0.57	0.56	0.57	0.54	0.56	0.52	0.54	0.49	0.59	0.58	0.55	0.56	0.48	0.47
	Overall PO Attainment	2.22	2.22	2.32	2.67	2.26	2.10	2.62	2.52	2.60	2.27	2.42	2.57	2.12	1.76

Batch:-2017-2021

PO & PSO Attainment with 60% target and L1:50, L2:55, L3:60

Direct Attainment															
SL NO	Course	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010	P011	P012	PS01	PS02
1	C231MAT31	1.20	0.80	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	C232 ADE	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.80	0.00	0.00	1.00	1.00
3	C233 DS	0.60	1.00	1.00	0.80	0.80	0.00	0.00	0.00	0.80	0.80	0.00	0.00	0.72	0.40
4	C234 CO	1.00	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	1.20
5	C235 USP	1.20	1.20	0.00	0.80	0.40	0.00	1.20	0.00	0.00	0.00	0.00	0.80	1.20	1.20
6	C236 DMS	0.60	0.80	1.20	1.20	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.59
7	C237 ADE Lab	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	3.00	2.00	0.00	3.00	2.60	2.00
8	C238 DS Lab	2.40	2.40	2.40	2.40	2.40	0.00	0.00	1.60	1.60	1.60	1.60	1.60	1.90	1.40
9	C241 MAT41	3.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

10	C242 SE	1.20	1.20	1.20	1.20	1.20	0.00	0.00	0.80	0.80	0.80	0.80	0.80	1.00	0.70
11	C243 DAA	1.20	1.20	1.20	0.80	0.80	0.80	0.00	0.00	0.00	1.20	0.00	1.20	1.12	0.80
12	C244 MP	1.20	1.20	1.20	0.00	1.20	0.00	1.20	1.20	1.20	1.20	0.00	1.20	1.20	1.20
13	C245 OOC	1.00	1.20	1.20	0.00	1.60	0.00	0.00	0.00	1.20	1.20	0.80	0.80	1.12	0.80
14	C246 DC	1.20	1.20	0.80	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.00	0.00	1.12	0.88
15	C247 DAA Lab	3.00	3.00	3.00	3.00	3.00	0.00	0.00	2.00	2.00	2.00	2.00	2.00	2.40	1.80
16	C248 MP Lab	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	3.00	3.00	0.00	3.00	2.60	2.40
17	C251 ME	0.00	0.80	1.20	0.00	0.00	0.00	0.00	1.20	0.90	1.00	0.80	0.80	0.67	0.00
18	C252 CN	1.00	1.20	0.00	1.20	0.00	0.00	0.00	0.00	0.00	1.20	0.00	1.20	1.00	0.70
19	C253DBMS	1.20	1.20	0.80	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.00	0.00	1.12	0.88
20	C254ATC	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.00	0.00	0.88	0.72
21	C255 AJJ	1.00	1.20	1.20	0.00	1.20	0.00	0.00	0.00	1.20	1.20	0.00	0.80	1.12	0.80
22	C256 DBMS lab	2.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	2.00	0.00
23	C257 CN Lab	3.00	0.00	3.00	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	2.40
24	C361 CNC	1.20	1.00	1.20	0.00	0.00	0.40	0.00	0.80	0.00	0.00	0.00	0.80	1.00	0.80
25	C362 FS	1.20	1.20	1.20	0.00	0.00	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.80	0.80
26	C363 ST	1.20	1.20	0.80	0.00	0.00	0.00	0.00	0.00	0.00	1.20	0.00	0.00	1.12	0.88
27	C364 OS	2.80	3.00	0.00	0.00	0.00	2.00	2.00	0.00	3.00	0.00	0.00	2.00	2.00	3.00
28	C367 ST Lab	1.20	1.20	1.20	0.00	1.20	0.00	0.00	0.00	1.20	1.20	0.80	1.20	1.20	0.80
29	C368 FS Lab	0.80	0.80	1.20	0.00	0.00	0.00	0.00	1.20	1.20	1.20	0.00	1.20	1.20	0.80
30	C3661 OR	3.00	3.00	3.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.80	2.00
31	C371 WTA	1.00	1.20	1.20	1.20	1.20	0.00	1.20	0.00	1.20	1.20	0.00	0.80	1.00	0.00
32	C372 SADP	1.20	1.20	1.20	0.80	0.40	0.00	0.00	0.00	0.80	0.80	0.40	0.00	0.70	0.00
33	C373 ML	3.00	3.00	3.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	1.80	2.00
34	C374 IMS	3.00	3.00	0.00	0.00	0.00	3.00	3.00	0.00	2.00	2.00	1.00	0.00	3.00	2.00
35	C3743 INS	3.00	3.00	3.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00	2.00	2.00	2.00
36	C376 ML Lab	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	3.00	2.00	0.00	2.00	1.80	2.00
37	C377 WEB Lab	2.80	3.00	0.00	0.00	0.00	2.00	2.00	0.00	3.00	0.00	0.00	2.00	2.00	3.00
38	C481 IOT	2.55	3.00	0.00	0.00	0.80	0.00	0.00	0.00	1.20	1.20	0.00	0.80	2.04	1.76
39	C482 BDA	2.64	2.55	2.10	1.40	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	1.67	2.00
40	C483x UID	2.40	2.40	2.40	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.20	1.60

41	C4IS84 Internship	1.20	1.20	1.20	0.80	1.20	0.80	0.80	0.00	0.00	0.00	0.00	0.00	1.20	0.80
42	C485 Project	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.67
43	C486 Seminar	3.00	3.00	3.00	2.00	3.00	2.00	2.00	2.00	3.00	3.00	3.00	3.00	3.00	2.00
Sum (Direct)		78.59	78.15	63.90	32.20	40.60	16.00	17.60	15.80	43.30	45.40	17.20	41.00	78.59	78.15
		42	42	36	19	24	9	10	10	23	29	11	25	42	42
Attainment (Direct)		1.87	1.86	1.78	1.69	1.69	1.78	1.76	1.58	1.88	1.57	1.56	1.64	1.87	1.86
80% of attainment (Direct)		1.50	1.49	1.42	1.36	1.35	1.42	1.41	1.26	1.51	1.25	1.25	1.31	1.50	1.49
Indirect Attainment															
Indirect Assessment	SDP “ Website development using Xampp with DBMS”	2.00	2.00	2.00	2.00	3.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00
	Collaborative Learning for the subject Design and Analysis of Algorithms	0.00	0.00	3.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	0.00	3.00	3.00	0.00
	Partial Delivery for the subject Design and Analysis of Algorithms	0.00	0.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Blended Learning on “How the Packets transferred on TCP/IP” for Data Communication	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.00
	QUIZ on CRYPTOGRAPHY, NETWORK SECURITY AND CYBER LAW	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Partial Delivery on “Wireless and Mobile Networks”	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.00
	Course end Survey	2.75	2.62	2.5	2.31	2.53	2.43	2.36	2.22	2.57	2.05	2.1	2.15	2.51	1.97
	Graduate Exit Survey	2.66	2.69	2.63	2.65	2.65	2.68	2.68	2.6	2.66	2.68	2.66	2.65	2.66	2.65
Sum		10.41	16.31	13.13	9.96	11.18	8.11	5.04	7.82	10.23	9.73	6.76	9.80	16.17	9.62
		4	6	5	4	4	3	2	3	4	4	3	4	6	4
Attainment		2.60	2.72	2.63	2.49	2.80	2.70	2.52	2.61	2.56	2.43	2.25	2.45	2.695	2.405
20% of indirect attainment		0.52	0.544	0.53	0.50	0.56	0.54	0.50	0.52	0.51	0.49	0.45	0.49	0.539	0.481
Overall PO Attainment		2.02	2.03	1.95	1.85	1.91	1.96	1.91	1.79	2.02	1.74	1.70	1.80	1.80	1.62

ANNEXURE I

(A) PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

1.Engineering knowledge: Apply the knowledge of Mathematics, Science, Engineering fundamentals and an engineering specialization to the solution of complex engineering problems
2.Problem analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, Natural sciences and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the Information to provide valid conclusions.
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern Engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for Sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
10. Communication: Communicate effectively on complex engineering activities with the engineering Community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11.Project management and finance: Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and Leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



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(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Under VTU)

Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CRITERION - 4

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

CRITERION-4	Students Performance	150
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Table 4.1: Students Admission Details

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2023 - 2024 (CAY)	2022- 2023 (CAY m1)	2021- 2022 (CAYm2)	2020 - 2021 (CAY M3)	2019- 2020 (LYG)	2018- 2019 (LYGm1)	2017- 2018 (LYG m2)
Sanctioned intake of the program (N)	240	180	180	180	180	120	60
Total number of students admitted in first year <i>minus</i> number of students migrated to other programs/institutions plus no. of students migrated to this program (N1)	251	196	199	199	198	145	74
Number of students admitted in 2nd year in the same batch via lateral entry (N2)		18	18	18	23	12	7
Separate division students, if applicable (N3)		-----	-----	-----	-----	-----	-----
Total number of students admitted in the Program (N1 + N2 + N3)	251	214	217	217	221	157	81

Table 4.2: Number of students who have successfully graduated without backlogs

Year of entry	Total No of Students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year
2023-2024(CAY)	251				
2022-2023(CAYm1)	214	167			
2021-2022(CAYm2)	217	188	188(170+8+10)		
2020-2021(CAYm3)	217	178	152(135+8+9)	145(130+8+7)	
2019-2020(LYG)	221	156	129(126+2+1)	127(125+2+0)	125(123+2+0)
2018-2019(LYGm1)	157	103	100(98+2+0)	93(92+1+0)	93(92+1+0)
2017-2018(LYGm2)	81	52	50(48+2+0)	48(47+1+0)	48(47+1+0)

Table 4.3: Number of students who have successfully graduated with backlogs

Year of entry	Total No of Students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated with backlogs in any semester/year of study (With Backlog means failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year
2023-2024(CAY)	251				
2022-2023 (CAYm1)	214	196			
2021-2022 (CAYm2)	217	199	217(191+8+18)		
2020-2021 (CAYm3)	217	197	214(187+10+17)	209(183+10+16)	
2019-2020 (LYG)	221	197	216(190+3+23)	215(189+3+23)	213(187+3+23)
2018-2019 (LYGm1)	157	132	144(130+2+12)	143(130+2+11)	142(130+2+10)
2017-2018 (LYGm2)	81	66	72(64+3+5)	72(64+3+5)	71(63+3+5)

4.1 Enrolment Ratio (20)

Batch	N	N1	ER=(N1/N)*100
2023-2024(CAY)	240	251*	104.59%
2022-2023(CAYm1)	180	196	109.00%
2021-2022(CAYm2)	180	199	110.00%

Average [(ER1+ER2+ER3)/3]: 108%

Assessment: 20.00

4.2. Success Rate in the stipulated period of the program (40)

4.2.1. Success rate without backlogs in any semester/year of study (25)

$SI = (\text{Number of students who have graduated from the program without backlog}) / (\text{Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry and separate division, if applicable})$

Average SI = Mean of Success Index (SI) for past three batches Success rate without backlogs in any year of study = 25 Average SI

ITEM	Latest Year of Graduation, LYG (2019-2020)	Latest Year of Graduation, LYGm1 (2018-2019)	Latest Year of Graduation, LYGm2 (2017-2018)
Number of students admitted in the corresponding First Year +admitted in 2nd year via lateral entry and separate division, if applicable	221	157	81
Number of students who have graduated without backlogs in the stipulated period	125	93	48
Success Index (SI)	0.57	0.59	0.59
Average SI	0.58		

Success rate without backlogs in any year of study = $25 \times \text{Average SI}$
= **$25 \times 0.58 = 14.5$**

4.2.2. Success rate with backlogs in stipulated period (15)

$SI = (\text{Number of students who graduated from the program in the stipulated period of course duration}) / (\text{Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry and separate division, if applicable})$

Average SI = mean of Success Index (SI) for past three batches Success rate = 15 Average SI

ITEM	Latest Year of Graduation, LYG (2019-2020)	Latest Year of Graduation, LYG (2018-2019)	Latest Year of Graduation, LYG m1 (2017-2018)
Number of students admitted in the corresponding First Year +admitted in 2nd year via lateral entry and separate division, if applicable	221	157	81
Number of students who have graduated in the stipulated period	213	142	71
Success Index (SI)	0.96	0.90	0.88
Average SI	0.91		

Success rate = $15 \times 0.91 = 13.70$

4.3. Academic Performance in Third Year (15)

*Academic Performance = 1.5 * Average API (Academic Performance Index)*

API = ((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 Third Year/10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the Final year:

Academic Performance	2020-2021	2019-2020	2018-2019
Mean of CGPA or Mean Percentage of all successful Students (X)	7.2	7.02	7.5
Total no. of Successful Students(Y)	209	217	143
Total no. of Students appeared in the examination (Z)	210	217	143
API=X*(Y/Z)	7.17	7.02	7.5
Average API	7.23		

Average Performance=1.5*Average API=1.5*7.24=10.86

4.4. Academic Performance in Second Year (15)

*Academic Performance Level = 1.5 * Average API (Academic Performance Index)*

API = ((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 Second Year/10)) x (number of successful students/number of students appeared in the examination)

Academic Performance	2021-2022	2020-2021	2019-2020
Mean of CGPA or Mean Percentage of all successful Students (X)	8.1	6.74	6.94
Total no. of Successful Students(Y)	218	209	217
Total no. of Students appeared in the examination (Z)	218	214	220
API=X*(Y/Z)	8.1	6.58	6.85
Average API	7.18		

Academic Performance=1.5* 7.2 =10.8

4.5. Placement, Higher Studies and Entrepreneurship (40)

ITEM	2019-2020 (LYG)	2018-2019 (LYG)	2017-2018 (LYGm1)
Total No. of Final Year Students (N)	215	143	72
No. of students placed in companies or Government Sector (x)	181	122=117+5	63=52+11
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	5	7	5=4+1
No. of students turned entrepreneur in engineering/technology(z)	-	1(Rhydam Mittal)	1(Rohan Garg and Mohamad Khan)
$x + y + z =$	186	130	69
Placement Index : $(x + y + z)/N$	P1=0.86	P2=0.91	P3=0.96
Average placement= $(P1 + P2 + P3)/3$	0.91		

Assessment Points=40*Average Placement=40 x 0.91=36.4

4.6. Professional Activities (20)

4.6.1. Professional societies/chapters and organizing engineering events(5)

Relevant details Professional Society/Chapters (3) No. and Quality of Engineering events organized at the Institute (2)

(The Department shall provide relevant details)

Different events at Department and College level:

UTSAHA:

Utsaha a proud techno-culture fest is a yearly inter-college fest organized by students of BMSIT&M. Starting off as a bud in the year 2004, this fest has only grown and become a larger endeavour with the passing of each year. It was initially an interdepartmental fest but is now a platform where various colleges from all over the state come together and take part in various events, upholding the spirit of the fest. Also due to the popularity of Utsaha, we have performers from all over the country whose performance is a treat to watch.

Utsaha, is a joint effort of students and faculty members working towards the successful commencement of the events, which also gives a chance to the students to bring out the best of their management and organizing skills. This fest is results of months of hard work where in students

themselves with their creativity creates banners and decorate the entire campus to bring out festive mood. We also imbibe several various marketing techniques to publicize our event like flash mobs put together by students themselves to spread the essence of the fest across the campus. With the fest, we provide a platform to showcase the various talents and skills of students. Our on-stage events include dance, singing, skits, battle of bands, beat boxing, fashion show, street dance and many more. Participants are also zealous to take part in our off-stage events like coding, gaming, debates, mock stock, rangoli, treasure hunt, and various tech events like circuit debugging, quiz, film making, chess, photography and many more.

TECH-TRANSFORM:

Tech-Transform is the annual techno fest of BMS Institute of technology and Management with a wide variety of events ranging from coding events to technical treasure hunts, BMSIT prides itself in housing one of the best technical fests in the country. Right from its inception, it has consistently striven to provide an excellent platform for the students to showcase their technical skills as well as improving the technical and entrepreneurial culture in colleges across India. Alongside those events, Tech-Transform provides a wide range of opportunities to test and stimulate your intellect. Even for those who are technically handicapped, or lack the knowledge to take part in events, it provides a plethora of activities in the form of interesting, awe-inspiring and motivational talks.

SIGNUM :

Department of ISE has conducted a department fest SIGNUM-2016 under INFINIUM forum on 22nd August 2016. This was a platform for students to showcase their talents in organizing various events. Many technical, cultural and gaming events like FIFA, Counter-Strike, Code Wars, Poke hunt, Mini-Militia, Kill house, Soul-o-singing and Mock Placements were conducted in co-ordination with the students and teachers. Students from various colleges had participated in the organized events. Winners were given cash prize and they were handed over with participation certificate.

Different Chapters at Department and college level:

- **CSI Chapter**
- **IEEE Chapter**

	2022-23	2021-22	2020-21
Chapter	No. of Activity	No. of Activity	No. of Activity
CSI	2	2	5
IEEE	10	3	41

CSI CHAPTER:

Computer Society of India (CSI) has been set-up with the vision of "IT for Masses", thus enabling IT professionals and computer users to work towards making the profession an area of choice amongst all section of the society. From a humble beginning in 1965, CSI has made huge progress with a size of 100, 000 strong members consisting of professionals with varied backgrounds, including software developers, scientists, academicians and more.

CSI recognized BMSIT&M as an Educational Institution member in the year 2014.


Institution Membership No: IO2129

- Events Conducted in Association with CSI Year wise summary

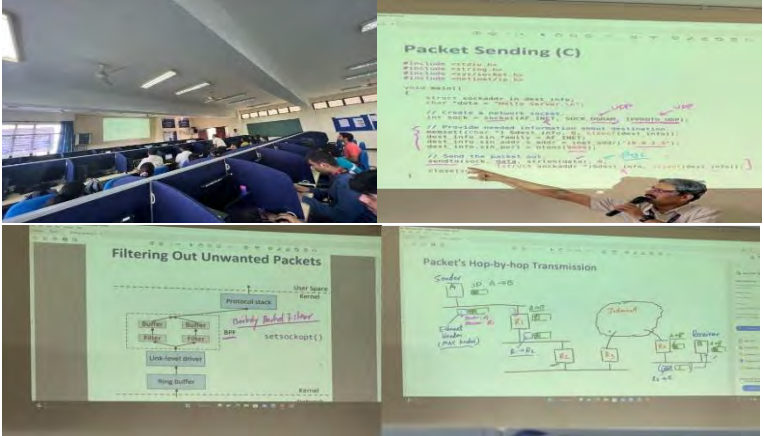
2021-2022

Sl. No	Event	Date
1	Star-Techie	25th November 2022
2	Practical Cyber Security, Forensics & Block chain Technology	14.10.2021
3	ARDUINO FOR BEGINNERS	17.12.2021
4	5G Wireless Technology	on 28th Sept 2021

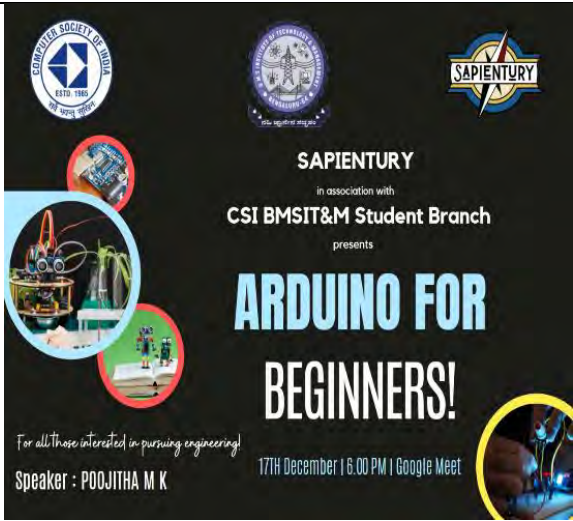
Activity-1:

Sl.No	Summary Sheet	
1	Title of the Event	Star-Techie
2	In association with	CSI
3	Mapping to POs	PO9
4	Resource person	BMSIT Students
5	Hands-on/Skill oriented	Skill oriented
6	Outcomes achieved/ conclusion	<p>OBJECTIVE & AIM</p> <p>To connect and socialise with student's across BMSIT.</p> <p>Outcomes & Impact</p> <ul style="list-style-type: none"> ● The event helped the participants improve their technical skills. ● It also give an idea about rapid fire-coding and code debugging.
7	Photos	


Activity-2:

Sl.No	Summary Sheet	
1	Title of the Event	Practical Cyber Security, Forensics & Block chain Technology
2	In association with	CSI
3	Mapping to POs	PO9,PO10
4	Resource person	Dr. Dinesha H A
5	Hands-on/Skill oriented	Skill oriented
6	Outcomes achieved/ conclusion	<ul style="list-style-type: none"> ● Socket Programming ● UDP Client and Server architecture and programs related to it. ● How to retrieve a copy of the packets on the network (Sniffing) ● Raw Sockets ● Pcap Filters ● Packet Spoofing with theory and programs ● Sniffing the request and response ● Attacks:
7	Photos	

Activity-3:

Sl.No	Summary Sheet	
1	Title of the Event	ARDUINO FOR BEGINNERS
2	In association with	CSI
3	Mapping to POs	PO9
4	Resource person	POOJITHA MK
5	Hands-on/Skill oriented	Skill oriented
6	Outcomes achieved/ conclusion	The Department of CSE in association with CSI BMSIT&M Student Branch and Sapientury has organized an online webinar on " ARDUINO FOR BEGINNERS! " By Ms. POOJITHA MK, Sysops engineer at Sapientury Pvt Ltd on 17.12.2021. Around 30 students attended the event
7	Photos	


Activity-4:

Sl.No	Summary Sheet	
1	Title of the Event	5G wireless technology
2	In association with	CSI
3	Mapping to POs	PO9,PO10,PO12
4	Resource person	Mr. Vikas Shivalingappa
5	Hands-on/Skill oriented	Skill oriented
6	Outcomes achieved/ conclusion	A session was conducted on 5G wireless technology on 28 th Sept 2021. 5G is meant to deliver higher multi-Gbps peak data speeds, ultra low latency, more reliability, massive network capacity, increased availability, and a more uniform user experience to more users. BMSIT 28th September 2021. The event helped the participants improve their technical skills. It also gives an idea of AI,IOT . It also gives information that the growth of the IoT depends on 5G,that is why 5G is a big deal.
7	Photos	


2020-21

Sl. No	Event	Date
1	5G Wireless Technology	28.09.2021
2	5 day FDP on Emerging trends in Data Analytics	10-05-2021
3	Ecode words	23-02-2021
4	Membership Drive	22-04-2021


Activity-1:

Sl.No	Summary Sheet	
1	Title of the Event	5G Wireless Technology (Expert Talk) 28th September 2021
2	In association with	CSI
3	Mapping to POs	PO9,PO10,PO12
4	Resource person	Mr.Vikaas Shilingappa
5	Hands-on/Skill oriented	Skill oriented
6	Outcomes achieved/ conclusion	<ul style="list-style-type: none"> ●The event helped the participants improve their technical skills. ● It also give an idea of AI, IOT ● It also give information that the growth of the IoT depends on 5G, that is why 5G is a big deal.
7	Photos	


Activity-2:

Sl.No	Summary Sheet	
1	Title of the Event	Five Day Faculty Development Program on “Emerging Trends in Data Analytics” 10th May 2021 to 14th May 2021
2	In association with	CSI
3	Mapping to POs	PO1,PO9,PO10,PO12
4	Resource person	Dr. B. Sathiyabhama,Mr. Venkatesh Kumar Mohan, Dr.Anala M R
5	Hands-on/Skill oriented	Skill oriented-FDP
6	Outcomes achieved/ conclusion	Techniques and processes of data analytics have been automated into mechanical processes and algorithms that work over raw data for human consumption. Data analytics help a business to optimize its performance The event helped the participants improve their technical skills.
7	Photo	

Activity-3:

Sl.No	Summary Sheet	
1	Title of the Event	Ecode words 23.2.2021 at 3:30
2	In association with	CSI
3	Mapping to POs	PO9,PO10,PO12
4	Resource person/Coordinator	Mr. Pratham-1st year
5	Hands-on/Skill oriented	Skill oriented-Decode words
6	Outcomes achieved/ conclusion	The event helped the participants improve their technical skills. They Coordinated in a team The students who actively participated in the game called ecode words were given prizes (1st, 2nd and 3rd) from the CSI club
8	Photos	

Activity-4:

Sl.No	Summary Sheet	
1	Title of the Event	Membership Drive 22.4.2021
2	In association with	CSI
3	Mapping to POs	PO9,PO10,PO12
4	Resource person/Coordinator	Ms.Roobini, Ms.Prerana (5 th sem)
5	Hands-on/Skill oriented	Skill oriented
6	Outcomes achieved/ conclusion	<p>Brief information about the benefits of CSI and the activities organized in BMSIT&M. Motivated the students to register under CSI.</p> <p>The Fee structure was informed to the students. Informed the students to join CSI so that more and more activities can be organized in association with CSI and the students can interact with the students of various colleges.</p>
7	Photos	

2019-20

Sl. No	Event	Date
1	Network Analytics & Tools Utilities	29.07.2020
2	Wonder Words	20.07.2020
3	Coding wars	11.07.2020
4	Pen It Down	07.06.2020
5	Battle of Programming Languages	13.05.2020
6	CSI Membership Drive	22.04.2020
7	Industrial Visit-(Interaction)	14.02.2020
8	FDP-Data Analytics – A Practical Approach	27.01.2020 to 31.01.2020

2018-19

Sl. NO	Name of Activity	Department	Date
1.	National Level Five Day FDP on Machine Learning for IoT Applications.	CSE, ISE, TCE	28.01.2019 to 01.02.2019
2.	Project Exhibition for Project Based Learning a Tech Savvy Exhibition	In association with CSE	04.11.2018
3.	Signum Department student fest (ISE)	ISE	06.10.2018

2017-18

Sl. NO	Name of Activity	Department	Date
1.	Hands-on Xilinx and Multisim Analog and digital Simulation tools	ISE	03.10.2017

2.	Hands on Networking Using NS2 And NS3	ISE	12.10.2017 to 13.10.2017
3.	IPR/Cyber Law and Security	MCA	13.10.2017 to 14.10.2017
4.	HANDS ON Computer Network Simulation	MCA	15.10.2017 to 16.10.2017
5.	SDP - Python and its Applications,	CSE	05.02.2018
6.	Data Analytics/ Visualization with Case Studies using modern tools.	MCA	05.02.2018 to 10.02.2018
7.	Data Analytics using R Programming,	ISE	05.02.2018 to 10.02.2018

2016-17

Sl. NO	Name of Activity	Department	Date
1.	National Conference on Advance Computing-2017	CSE, ISE	26.05.2017
2.	Hands-on session on ARM Processor and Keil (ISE)	ISE	20.04.2017
3.	JAVA Frameworks	ISE	31.03.2017 to 01.04.2017
4.	Application Development using JAVA	ISE	13.02.2017 to 16.02.2017
5.	Workshop on ETL and Data Analytics are using Informatica and Python(CSE, ISE)	CSE, ISE	23.01.2017 to 30.01.2017
6.	Project Exhibition.	MCA	16.05.2017
7.	IoT – Hardware & Software Design	CSE, ISE	01.08.2016 to 05.08.2016

Professional societies / Chapters and organizing engineering events (Sample Photots)

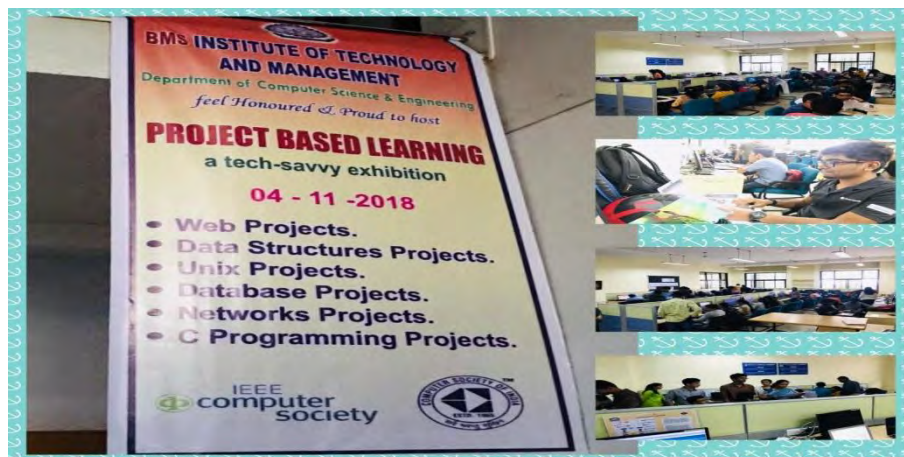


Figure.5: Project Exhibition for Project Based Learning a Tech Savvy Exhibition

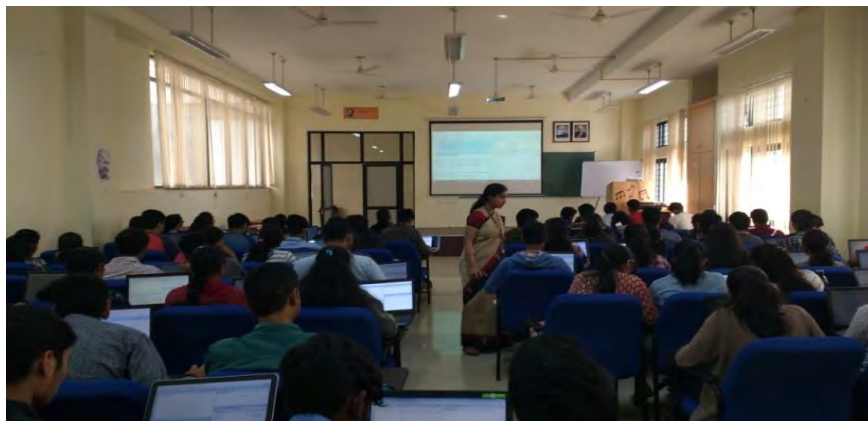


Figure.6: Data Analytics using R Programming, 5th to 10th February, 2018

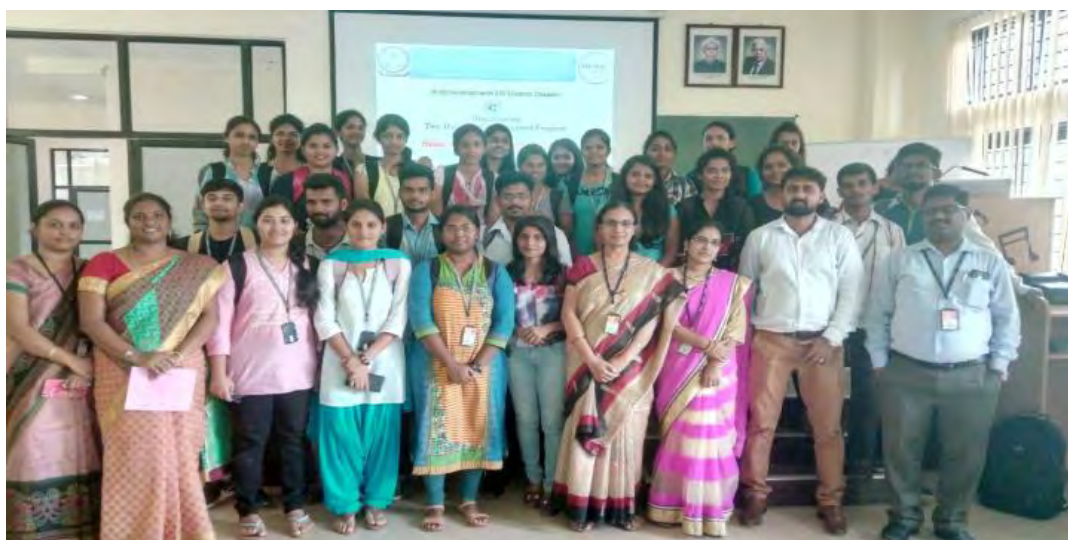


Figure.7: Hands on Networking Using NS2 AND NS3 12th and 13th October 2017



Figure.8: Inaugural Function of 5 days FDP on Data Analytics-A practical Approach



Figure.9: Faculty and Student Participants of 5 Days FDP on Data Analytics – A practical Approach @ Dept. of ISE, BMSIT&M, Bengaluru.

Activities under ISTE:

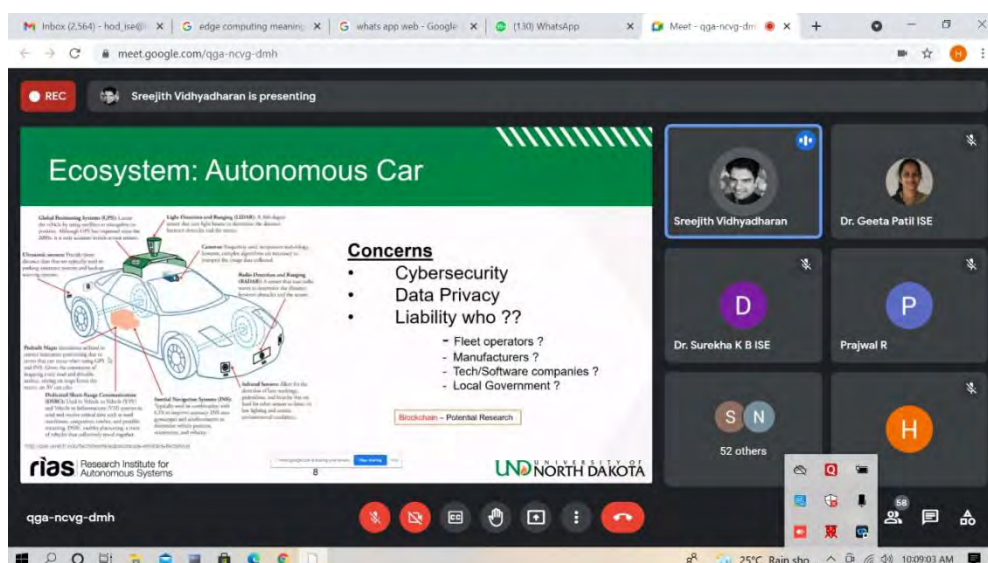
Department of Information Science and Engineering, BMS Institute of Technology and Management organized a webinar on “Edge Analytics for Aerial Unmanned Vehicles” on 24th July 2021 in association with ISTE chapter. The resource person for the webinar was Dr. Sreejith Vidyadharan, Post-Doctoral Research Fellow, North Dakota University, USA.

60 students of Department of IS&E attended the webinar.

Edge analytics is an approach to data collection and analysis in which an automated analytical computation is performed on data at a sensor, network switch or other device instead of waiting for the data to be sent back to a centralized data store. Dr.Sreejith gave an insight on the difference between Edge and cloud with an example, he explained with a live example of how edge computing will provide a solution to threat of data security in cloud.

Dr Sreejith illustrated the work he had completed in his research lab regarding, how a friendly Drone help in detecting the malicious drone in the military Environment. The session was made realistic through the help of videos which were taken from his work place.

The session was concluded by Dr Pushpa S.K, Head of the Department, IS&E thanking the speaker for his valuable time he spent and sharing his work experience to the students.



IEEE CHAPTER

IEEE – Begin the networking for students in their area of interest and future profession. It connects IEEE with local sections and volunteer leadership. Students learn about Scholarships, Grants and Fellowships for IEEE student members.

IEEE recognized BMSIT & M as an Educational Institution member in the year 2018.

Institution Membership No: STB14611

- Events Conducted in Association with IEEE Year wise summary

2020-21

Sl. No	Event	Date
1	API for Beginners	11/01/2021
2	Digital Memory and Storage for AI at Edge	30/04/2021
3	CV Building Session	22/05/2021
4	Edge Computing and Emerging Technologies	23/05/2021
5	Open Course - Cyber Security and Blockchain Technology	01/06/2021 to 05/06/2021
6	Open Course - Object-Oriented Programming with JAVA for Industry	01/06/2021 to 05/06/2021
7	Open Course - ML for Beginners	01/06/2021 to 05/06/2021
8	Tech Fiesta-Carnival Event	17/06/2021
9	Roadmap To 5G and Beyond Communication	04/07/2021
10	Soft Skills	17/07/2021
11	Girl Geeks Session 1	17/07/2021
12	Girl Geeks Session 2	24/07/2021
13	Girl Geeks Session 3	31/07/2021
14	Girl Geeks Session 3	07/08/2021
15	EEG Cognition and Signal Processing	27/08/2021
16	Arduino for Beginners	23/09/2021
17	Solving Real Life Problems using AI and Signal Processing	31/10/2021

2019-20

Sl. No	Event	Date
1	My Mic My Rules	28/02/2020
2	Technical Quiz 01	12/03/2020
3	Technical Quiz 02	09/04/2020
4	AI Robotics and Automation Technolgy	10/04/2020
5	AI Robotics and Automation Technolgy	14/04/2020
6	IEEE Andriod App Contest	11-13/05/2020
7	Django Workshop	15-16/06/2020
8	Cognitive Security	1620/06/2020
9	Web API and JSON Parsing	23/06/2020
10	Technical Quiz 03	09/07/2020
11	What leading Tech Companies Want	27/08/2020
12	Alot for Digital Transformation	12/10/2020
13	Game Development Workshop	26-27/09/2020
14	Aerial Humanoid Robotics	01/10/2020
15	Open Source	09/11/2020
16	RoadMap to NASA	15/12/2020
17	How to master AI-ML with AWS	19/12/2020

2018-19

Sl. No	Event	Date
1	Talk on Finance and Investment	09/02/2019
2	Web development workshop	19/03/2020
3	Talk on radio communication and 5G	27/04/2019
4	Cyber security workshop	15-16/05/2020

2017-18

Sl. No	Event	Date
1	Symphony - Arduino Workshop and Hackathon	27/09/2018
2	Circuit Debugging	06/10/2018
3	Technically Right Quiz	06/10/2018
4	Project Exhibition	04/11/2018

4.6.2. Publication of technical magazines, newsletters, etc. (5)

The Department shall list the publications mentioned earlier along with the names of the editors, publishers, etc Quality and relevance of the contents and print material (3) Participation of students from the program (2)

1. **MANTHANA**, Yearly College Magazine: “MANTHANA”, the college magazine was first released in the year 2004-05. The college magazine is released every year during inauguration of first year classes. It publishes information regarding college events conducted in the previous academic year. It is a platform for both students and faculty to write articles on technical and non-technical contents.

2. **THE EDIFICE**, Biannual Departmental Newsletter: “THE EDIFICE”, ISE departmental newsletter publishes information regarding departmental events conducted every semester.

3. **BMSIT NEWSLETTER**, is a college newsletter released once every three months.

Editors: Dr. Annamma Abraham, Dr. Jojoy Joseph Idicula, Ms. Ambika R. and Ms. Pushpa S.K.

A college newsletter provides monthly regular overview of important information and updates related to a college. The primary purpose of a college newsletter is to inform and engage the college community, including students, faculty, staff, alumni, and other stakeholders. It helps build a sense of community, keeps individuals informed, and promotes the college's image and achievements. In essence, a college newsletter serves as a valuable communication tool for the college community, helping to foster a sense of connection, celebrate achievements, and keep everyone informed about what's happening within the institution. It plays a vital role in maintaining a positive relationship between the college and its stakeholders.

Our college newsletter typically includes the following information:

1. Campus News: The newsletter highlights recent developments and events on campus. This may include announcements about new facilities, renovations, or campus-wide initiatives.
2. Academic Updates: Information about academic programs, faculty achievements, research projects, and any changes or innovations in the curriculum.
3. Student Life: Coverage of student activities, clubs, and organizations, along with profiles of outstanding students. This section often includes details about upcoming campus events and activities.
4. Alumni News: Updates on alumni achievements, alumni association activities, and class reunions. Alumni news helps maintain connections with former students.
5. Faculty and Staff: Profiles of faculty members, staff, and administrators, highlighting their contributions and accomplishments within the college community.
6. Campus Culture: Articles about cultural events, art exhibitions, musical performances, and other cultural activities happening on campus.
7. Placements details:

NSS and NCC details.



Figure.1: Sample Copies of THE EDIFICE, Techsanchalana and TechSangraha

Students Activities in Newsletter

Academic year 2023

Date	Name of the Student	Event type	About the event
July 31, 2023	Mr. Tejas Mutalikdesa	Pre-Incubatee Presentation “SGRT – Medical Expert Career Treatment”	Pre-Incubatee Presentation was held at Board Room, Academic Block on July 31, 2023, in the presence of Principal and the BICEP team. This event is Co-ordinated by Dr. Ravichandra K R BICEP - Incubation centre. This event was supported by of BICEP Co-ordinators.
July 31, 2023	Mr. Lokesh & Team	Pre-Incubatee Presentation “DELOAI”	Pre-Incubatee Presentation was held at Board Room, Academic Block on July 31, 2023, in the presence of Principal and the BICEP team. This event is Co-ordinated by Dr. Ravichandra K R BICEP - Incubation centre. This event was supported by of BICEP Co-ordinators.
July-23	Mr. Suhas Pete, Mr. Lokesh Team	KAVACH 2023 Cyber Security Hackathon	KAVACH 2023 Cyber Security Hackathon is a platform to showcase talent and creativity in the field of cyber security. It is a unique opportunity to work on real-world problems, collaborate with likeminded individuals. KAVACH 2023 will have two phases. The submitted ideas will be evaluated by a group of experts in the field and only the innovative ideas will be selected for the Grand Finale or 2nd round. During the Grand Finale, selected participants are expected to build a solution to demonstrate their concepts and prove to the juries that their ideas are technically feasible and more importantly implementable. The best ideas will be declared winners. During this 36 hours' hackathon, scheduled in the month of July-23, selected youths from educational institutions across the country will participate to offer strong, safe and effective technology solutions using their technical expertise and innovative skills. Total Prize money worth Rs. 20,00,000 is announced for the winning teams. This hackathon has 20 Problem statements related to the cyber security domain against which the innovative minds will be able to submit their ideas and compete against each other

Academic year 2022



Date	Name of the Student	Event type	About the event
5th and 6th December 2022	Mr. Abhinav Bhat	VTU state level tournament	The VTU state level tournament cum VTU team selection trials was held at NMAMIT Nitte, Udupi on 5th and 6th December 2022. Our college Chess Men team secured 3rd place and our college player Mr. Abhinav Bhat of 3rd sem. ISE student 4th in the VTU team selection trials and got selected for the VTU Chess team consecutively for the second year.
August-2022	4 th sem students	Anveshana- Idea competition 2022	<p>"Anveshana- Idea competition 2022" (Internal-Smart India Hackathon 2022) and nominated all the teams to Smart India Hackathon 2022. Three teams among the 26 teams were selected for the grand finale of SIH 2020 at various nodal centers based on the category of innovation.</p> <p>"Code_18" from 4th Sem, ISE have won the first place which was split with the other team, hence been awarded sum of Rs. 50,000 in the category of "Smart Education" for the project "Bringing the power of AI for the aid of teachers in classroom" at Excel engineering college, Erode.</p>
9.7.2022 and 8.7.2022	4 th and 6 th sem Students	open Day	The open Day was conducted on 9.7.2022 and 8.7.2022 by all the course departments. All fourth and sixth-semester students presented their innovative ideas. The projects were from different domains varying from networking, Wireless Sensor Networks, Machine Learning, and Big Data Analytics. . The projects exhibited the student's ability to apply their learning to solve real-world problems. These projects were presented on the open day and evaluated by panel members consisting of external (from industry) and internal members based on various rubrics.


22.04.2022	6 th sem students	Career orientation/guidance Program	had organized a Career orientation/guidance Program for ISE student. The program of was held on 22.04.2022 at 11am for 6th semester students by Mr Prasad Kumar and Team, TIME Education Bangalore Pvt Ltd. They addressed students about the opportunities after their four year of engineering degree.
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4.6.3 Participation in inter-institute events by students of the program of study (10)



The Department shall provide a table indicating those publications, which received awards in the events/conferences organized by other institutes Within the State (2) Outside the State (3) Prized/Awards received (5)

2023-2024

SINo	Student achievement	Remarks
1	Raghav Kumar Jha Krishna Gupta, Krish Gupta, Pratik Sable Won 1st prize in A 24 hour National level web development CTF Hackathon organized by BMSCE IEEE Computer Society on 18-8-2023 at BMS College of Engineering, Bangalore	 A certificate of achievement from BMSCE IEEE Computer Society. It certifies that Raghav Kumar Jha has secured 1st place in Devsprints: A 24-hour national level web development CTF hackathon organized by BMSCE IEEE Computer Society on 18th August 2023 and 19th August 2023. The certificate is signed by Priyanshu Bhassana (Vice Chairperson), Dnyuti B. V. (Chairperson), and Dr. Sandeep Varma N. (Chapter Advisor).
2	K Niteesh, He has secured a silver medal in VTU state level 67 kg category weightlifting(Men) Competition on 1-9-2023 at Vemana Institute of Technology, Bangalore	 A photograph showing a male weightlifter in a blue singlet performing a lift on a stage. A banner in the background mentions 'VEMANA INSTITUTE OF TECHNOLOGY'.

3	<p>K Niteesh He has secured a gold medal in VTU State level Power lifting competition by lifting a weight of 409 kg under 66kg category. On 7-9-2023 at KLS Gogte Institute of Technology Belagavi</p>	
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2022-2023





SINo	Student achievement	Remarks
1	<p>Lokesh and Team, Pranav Aditya, Monish S , Murali , Jitendriyadeep Prerna Shankar Won 1st Prize of 1 Lakh Rupees in "Grand Finale Smart India Hackathon" 2022 at Excel Engineering college Erode. On 25-8-2022 at Erode,Tamilnadu</p>	
2	<p>Raghav Kumar Jha, Krishna Gupta, Krish GuptaPratik Sable, Won 2nd prize in "Securehack" A Cyber security Hackathon organized by BMSCE IEEE Computer Society on 1-7-2023 at BMS College of Engineering, Bangalore</p>	




3	Swetha Jaya Kumar Won 1st place in VTU Bangalore North division Table Tennis competition on 12-7-20203 at SVIT Bangalore	 A group of people, including three women in blue and black sports uniforms, are standing around a large golden trophy. One man in a white shirt is presenting the trophy to them. A banner in the background mentions 'SVIT INSTITUTE OF TECHNOLOGY'.
4	Omkar K Won 2nd place in VTU Bangalore North division Basketball competition on 30-11-2022 NMIT, Bangalore	 A basketball team consisting of ten players in black jerseys with 'BMSIT' on them, posing on a basketball court. They are holding a large golden trophy and a certificate. A basketball hoop is visible in the background.
5	Abhinav Bhat Won 3rd place in VTU State level Chess competition on 5-12-2022 at NMAMIT, Nitte	 A young man, Abhinav Bhat, is standing and holding a large golden trophy in his left hand and a certificate in his right hand. He is wearing a red and black patterned t-shirt and blue pants.

2021-2022



SINo	Student achievement	Remarks
1	Shashwath Aiyappa and Team Secured 3rd Prize in "prathibotsava" VTU Youth festival on 29-7-2022 at BMSCE,Bangalore	
2	Aishwarya Manjunath Secured 3rd position in Trading Simulation Competition in association with StockGro on 11-10-2021 T IIT Bombay	
3	S Kaushik Winner of "Lense of light photography competition" on 10-12-2021 at Rotract club of Yelahanka	
4	Tejaswini K S 2nd prize in Badminton event as part of utsaha vaibhava on 25-6-2022 at BMSSA	
5	Poojashree P 1st prize in Badminton in intra branch women badminton competition on 12-6-2021 at BMSIT	

2020-2021

SINo	Student achievement	Remarks
1	Spandana T S, Secured 1st place in VTU South zone Table Tennis tournament on 2021, RV College of Engineering	
2	Swetha jaya Kumar, Secured 3rd place in VTU Inter zone Table Tennis tournament, on 28-11-2021, R V College of Engineering	
3	Atul Tomar, Secured 2nd Place in the VTU North zone Badminton tournament on 16/11/2021, BMSIT&M Bangalore	
4	Anu Nithya, Won second position in "Code KAZE" and won cash prize of 3000 Rupees on 15/11/2021 (Online platform)	

5	<p>Shashwath Aiyappa, Won second place in "Earth Trivia" organized by Prakruthi-Nature club of BMSCE on 6/6/2021,at BMSCE Bangalore</p>	 <p>The certificate is titled "Certificate of Achievement" and is issued by the "PRAKRUTHI - NATURE CLUB OF B.M.S.C.E.". It states that the certificate is proudly presented to Shashwath Aiyappa for securing Second Place in Earth Trivia organized by PRAKRUTHI for a duration of 3 hours on 06-06-2021. The certificate is signed by Smt. Chaitanya L., Faculty Coordinator, Prakruthi.</p>
6	<p>Lokesh E, Won 1st place in Bangalore Rural District Chess Championship on 2021,Bangalore</p>	 <p>The image shows a certificate from "Achiever's Chess Academy" for the "Bangalore Rural District Chess Championship Tournament - 2021". The certificate is a "Participate and Honour Certificate" issued to Mr/Ms Lokesh E. for winning 1st place in the U-18 category. It is signed by the President and General Secretary. Next to the certificate is a photograph of Lokesh E. holding a trophy, and below it is a close-up of the trophy.</p>
7	<p>Swetha jaya Kumar, Secured 1st place in VTU North zone Table Tennis tournament on 24-11-2021, Sai Vidya Institute of Technology,Bangalore</p>	 <p>The image is a group photograph of the winners and organizers of the VTU North zone Table Tennis tournament. Swetha jaya Kumar is among the winners, holding a trophy. The group is standing on a stage with a backdrop that reads "B.M.S. COLLEGE OF ENGINEERING, BANGALORE" and "VTU NORTH ZONE TABLE TENNIS TOURNAMENT".</p>

8	Aishwarya Manjunath, Secured 3rd position in Game of stocks organized by Avenues -IIT Bombay on 11-10-2021 at IIT Bombay	 <p>CERTIFICATE OF ACHIEVEMENT</p> <p>This certificate is proudly presented to</p> <p>Aishwarya Manjunath</p> <p>for securing 3rd Position in Game of Stocks a Trading Simulation Competition in association with StockGro organized by Avenues - IIT Bombay from 11th Oct'21 to 22nd Oct'21</p> <p><i>(Signature)</i> Ajay Lakhotia Founder, StockGro</p> <p><i>(Logo)</i> VENUES ADAPT AMAZE ACHIEVE 2021</p>
9	Chaitanya M , Completed NCC 'C' Certificate with 'A' grade on 10/08/2021 NCC Unit	 <p>राष्ट्रीय कैडेट कोर NATIONAL CADET CORPS</p> <p>प्रमाण - पत्र 'सी' CERTIFICATE 'C'</p> <p>सं. No. KA 18 SWA 255130 रैंक Rank CSM</p> <p>नाम CHAITANYA M सुपुत्र/सुपुत्री Son/Daughter of MUNIYAPPA V</p> <p>युनिट 39 KAR BN NCC BENGALURU जन्म तिथि Date of Birth 18 DEC 1999</p> <p>राष्ट्रीय कैडेट कोर निदेशालय KARNATAKA & GOA NCC Directorate</p> <p>प्रमाणित किया जाता है कि ऊपरलिखित कैडेट ने रक्षा मंत्रालय, भारत सरकार के प्राधिकार के अधीन सन् 20..... में हुई प्रमाणपत्र 'सी' परीक्षाश्रेणी में पास कर ली है</p> <p>This is to certify that the above mentioned Cadet has passed the Certificate 'C' Examination in Grade held in 20 under the authority of Ministry of Defence, Government of India.</p> <p>क्र. सं. Ser. No. KAR/'C' CERT/ARMY/BB-5351/2021</p> <p>स्थान Bengaluru Place</p> <p>दिनांक 10 AUG 2021 Date</p> <p>अपर महानिदेशक, राष्ट्रीय कैडेट कोर Addl. Director General, National Cadet Corps उप-महानिदेशक, राष्ट्रीय कैडेट कोर Dy. Director General, National Cadet Corps</p> <p><i>(Seal)</i> GRADE A 39 KAR BN NCC</p>

10	Chaitanya M, Secured rank of CSM(Company Sergeant Major) second highest commanding rank during NCC. On 18/01/2021 at BMSIT College	
11	Raghavendra K M, Completed NCC 'C' Certificate with 'A' grade, on 10/08/2021 at NCC Unit	

2019-20

SINo	Student achievement	Remarks
1	Rohit Kumar Ojha, Won Cash prize of 40,000 Rupees at TCS Tech Byte State Finals on 2020	
2	Rohit Kumar Ojha, Won Cash prize of 12,000 Rupees at TCS Tech Byte State Finals on 2020	
3	R K Manohar, Secured 1st place in VTU Inter Collegiate Badminton tournament on 24-08-2019, at NMIT Bangalore	

2018-19

Sl. No	Student achievement	Remarks
1.	Gaurav sarraf of 6th sem has Volunteered Asian Regional Space Settlement Design Competition New Delhi	It is an International Space design competition supported by NASA held on February 10-14, 2019 at the Kennedy Space Center, New Delhi
2	Agneya Koushik won Second place and received a cash prize of 7.5 lakhs at Dream hack International gaming competition held in Mumbai on 23/12/2018	
3	Agneya Koushik won First place and received a cash prize of 5 lakhs at ESL India gaming competition held in Hyderabad on 13/10/2018	
4	Agneya Koushik won First place and received a cash prize of 3.5 lakhs at ESL India premier summer season gaming competition held in Mumbai on 25/06/2018	



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Under VTU)

Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CRITERION - 5

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

CRITERION 5	Faculty Information and Contributions	200
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5. FACULTY INFORMATION AND CONTRIBUTIONS (200)

Faculty Details -2023-24

Sl. No.	Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving (In case Currently Associated is ("No"))	Nature of Association (Regular/ Contract)
		Degree (highest degree)	University	Year of attaining higher qualification							Research Paper Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
1	Dr Manjunath T N	Ph.D	Bharathiar University	2015	Yes	Professor	03-08-2015	03-08-2015	ISE	Data Management	5	Yes	-	Y	Regular
2	Dr. Pushpa S K	Ph.D	Vinayaka Missions University	2017	Yes	Professor & HoD	01-08-2018	02-09-2004	ISE	Wireless Sensor Networks	1	Yes	-	Y	Regular
3	Dr. Sudhamani M V	Ph.D	VTU	2008	Yes	Professor	11-10-2021	11-10-2021	ISE	Image processing, AI&ML, NWs	-	Yes	-	Y	Regular
4	Dr. Usha B A	Ph.D	VTU	2016	Yes	Professor	12-11-2022	12-11-2022	ISE	Information Security	1	Yes		Y	Regular
5	Dr. Anjan Krishnamurthy	Ph.D	VTU	2017	Yes	Professor	12-11-2022	12-11-2022	ISE	Network Security and Forensics	1	Yes	-	Y	Regular
6	Dr. Sheela Kathavate	Ph.D	VTU	2019	Yes	Associate Professor	05-03-2020	05-03-2020	ISE	Parallel computing	-	Yes		Y	Regular
7	Dr. Surekha K B	Ph.D	JNTU	2017	Yes	Associate Professor	19-02-2021	19-02-2021	ISE	Wireless Sensor Networks	-	Yes	-	Y	Regular
8	Dr. Geeta Amol Patil	Ph.D	BITS	2018	Yes	Associate Professor	15-03-2021	15-03-2021	ISE	Computer Architecture	2	No		Y	Regular
9	Dr. Rakesh N	Ph.D	Prist University, Tamilnadu	2013	Yes	Associate Professor	27-05-2022	27-05-2022	ISE	Voice Security, Propagation Channel	-	Yes	-	Y	Regular

										Modeling, Networks					
10	Dr. Veena N	Ph.D	VTU	2020	Yes	Associate Professor	11-10- 2021	07-09- 2015	ISE	Brain Computer Interface	2	Yes		Y	Regular
11	Dr. Shoba M	Ph.D	REVA University	2018	Yes	Associate Professor	11-10- 2021	11-10- 2021	ISE	Wireless Sensor Networks	2	Yes	-	Y	Regular
12	Dr. Prakash GL	Ph.D	UPES	2019	Yes	Associate Professor	11-10- 2021	11-10- 2021	ISE	Cloud Computing	1	Yes	-	Y	Regular
13	Dr. Drakshaveni G	Ph.D	VTU	2022	Yes	Assistant Professor	-	04-07- 2022	ISE	Data Analysis and Image Processing	2	Yes	-	Y	Regular
14	Prof. Mahalakshmi S	ME, (Ph.D)	Anna University	2008	Yes	Assistant Professor	-	13-08- 2012	ISE	Soft Computing	-	No	-	Y	Regular
15	Dr. Shanthi D L	Ph. D	VTU	2022	Yes	Assistant Professor	-	13-08- 2012	ISE	Wireless Networks	1	No		Y	Regular
16	Dr. Chandrashekar K T	Ph.D	VTU	2023	Yes	Assistant Professor	-	16-08- 2012	ISE	Artificial Intelligence	1	No	-	Y	Regular
17	Dr. P Sudarsanam	Ph.D	Anna University	2020	Yes	Assistant Professor	-	27-05- 2022	ISE	Computer Networks, Parallel Computing	-	Yes		Y	Regular
18	Dr. GireeshBabu C N	Ph.D	VTU	2023	Yes	Assistant Professor	-	31-08- 2013	ISE	CSE, Data Science,AI ML	1	No	-	Y	Regular
19	Prof. Ambika R S	M.Tech (Ph.D)	Reva University	2019	Yes	Assistant Professo r	-	07-10- 2013	ISE	Artificial Intelligence	-	No	-	Y	Regular
20	Dr. Swetha M S	Ph.D	VTU	2022	Yes	Assistant Professor	-	02-07- 2014	ISE	Cyber Security,Comput er Network	2	No	-	Y	Regular
21	Dr. Vinutha K	Ph.D	VTU	2023	Yes	Assistant Professor	-	02-07- 2014	ISE	Machine Learning	2	No	Y	Y	Regular
22	Dr. Ravikumar B N	Ph.D	VTU	2023	Yes	Assistant Professor	-	28-05- 2022	ISE	AI ML	2	No	Y	Y	Regular
23	Dr. Narasimhamurthy M S	Ph.D	VTU	2018	Yes	Assistant Professor	-	26-02- 2021	ISE	Software Engineering, Cloud computing , AI & ML	3	Yes	-	Y	Regular
24	Dr. Mohan BA	Ph.D	VTU	2019	Yes	Assistant Professor	-	18-10- 2021	ISE	Internet of Things	1	Yes	-	Y	Regular

25	Dr. Anil Kumar	Ph.D	NITK	2021	Yes	Assistant Professor	-	09-05-2022	ISE	Networks on Chips , Machine Learning	-	No	-	Y	Regular
26	Dr. Savitha S	Ph.D	VTU	2022	Yes	Assistant Professor	-	27-05-2022	ISE	Wireless Sensor Networks	1	No	-	Y	Regular
27	Dr. Basavaraj GN	Ph.D	JNTU	2021	Yes	Assistant Professor	-	06-06-2022	ISE	Wireless Sensor Networks	1	Yes	-	Y	Regular
28	Dr. Karthik SA	Ph.D	VTU	2021	Yes	Assistant Professor	-	06-06-2022	ISE	Machine Learning	3	Yes	-	Y	Regular
29	Dr. Kshama SB	Ph.D.	VTU	2022	Yes	Assistant Professor	-	05-08-2022	ISE	Cloud Computing	2	No	-	Y	Regular
30	Dr. Kantharaju V	Ph.D	VTU	2023	Yes	Assistant Professor	-	01-12-2022	ISE	Wireless sensor networks	2	No	-	Y	Regular
31	Dr. Kalaivani Y S	Ph.D	Anna University	2022	Yes	Assistant Professor	-	10-04-2023	ISE	Cyber Security, Machine Learning	-	No	-	Y	Regular
32	Prof. Chetana. C	M.Tech (Ph.D)	VTU	2010	Yes	Assistant Professor	-	27-07-2023	ISE	Artificial Intelligence	1	No		Y	Regular
33	Dr. Harishkumar	Ph.D	VTU	2022	Yes	Assistant Professor	-	05-05-2023	ISE	Internet of Things, Machine Learning	1	No	-	Y	Regular
34	Dr. Srinivas B V	Ph.D	VTU	2023	Yes	Assistant Professor	-	28-07-2023	ISE	Cloud Computing	-	No	Y	Y	Regular
35	Prof. Bhavya G.	M.Tech (Ph.D)	VTU	2013	Yes	Assistant Professor	-	24-08-2023	ISE	Machine Learning	-	No	-	Y	Regular

Faculty Details -2022-23

Sl. No.	Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving (In case Currently Associated is ("No"))	Nature of Association (Regular/ Contract)
		Degree (highest degree)	University	Year of attaining higher qualification							Research Paper Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
1	Dr Manjunath T N	Ph.D	Bharathiar University	2015	Yes	Professor	03-08-2015	03-08-2015	ISE	Data Management	4	Yes	-	Y	Regular
2	Dr. Pushpa S K	Ph.D	Vinayaka Missions University	2017	Yes	Professor & HoD	01-08-2018	02-09-2004	ISE	Wireless Sensor Networks	-	Yes	-	Y	Regular
3	Dr. Sudhamani MV	Ph.D	VTU	2008	Yes	Professor	11-10-2021	11-10-2021	ISE	Image processing, AI&ML, NWs	-	Yes	-	Y	Regular
4	Dr. Usha B A	Ph.D	VTU	2016	Yes	Professor	12-11-2022	12-11-2022	ISE	Information Security	-	Yes		Y	Regular
5	Dr. Anjan Krishnamurthy	Ph.D	VTU	2017	Yes	Professor	12-11-2022	12-11-2022	ISE	Network Security and Forensics	4	Yes	-	Y	Regular
6	Dr. Sheela Kathavate	Ph.D	VTU	2019	Yes	Associate Professor	05-03-2020	05-03-2020	ISE	Parallel computing	2	Yes		Y	Regular
7	Dr. Surekha K B	Ph.D	JNTU	2017	Yes	Associate Professor	05-03-2020	19-02-2021	ISE	Wireless Sensor Networks	1	Yes	-	Y	Regular
8	Dr. Geeta Amol Patil	Ph.D	BITS	2018	Yes	Associate Professor	15-03-2021	15-03-2021		Computer Architecture	-	No		Y	Regular

9	Dr. Rakesh N	Ph.D	Prist University, Tamilnadu	2013	Yes	Associate Professor	27-05-2022	27-05-2022	ISE	Voice Security, Propagation Channel Modeling, Networks	3	Yes	-	Y	Regular
10	Dr. Veena N	Ph.D	VTU	2020	Yes	Associate Professor	11-10-2021	07-09-2015	ISE	Brain Computer Interface	1	No		Y	Regular
11	Dr. Shoba M	Ph.D	REVA University	2018	Yes	Associate Professor	11-10-2021	11-10-2021	ISE	Wireless Sensor Networks	-	Yes	-	Y	Regular
12	Dr. Prakash GL	Ph.D	UPES	2019	Yes	Associate Professor	11-10-2021	11-10-2021	ISE	Cloud Computing	1	No	-	Y	Regular
13	Dr. Drakshaveni G	Ph.D	VTU	2022	Yes	Assistant Professor	-	04-07-2022	ISE	Data Analysis and Image Processing	1	No	-	Y	Regular
14	Prof. Mahalakshmi S	ME, (Ph.D)	Anna University	2008	Yes	Assistant Professor	-	13-08-2012	ISE	Soft Computing	4	No	-	Y	Regular
15	Dr. Shanthi D L	M.Tech (Ph.D)	VTU	2022	Yes	Assistant Professor	-	13-08-2012		Wireless Networks	1	No	Y	Y	Regular
16	Prof. Chandrashekar K T	M.Tech (Ph.D))	VTU	2008	Yes	Assistant Professor	-	16-08-2012	ISE	Artificial Intelligence	1	No	Y	Y	Regular
17	Dr. P Sudarsanam	Ph.D	Anna University	2020	Yes	Assistant Professor	-	27-05-2022	ISE	Computer Networks, Parallel Computing	3	No		Y	Regular
18	Prof. GireeshBabu C N	(M.Tech) Ph.D	VTU	2012	Yes	Assistant Professor	-	31-08-2013	ISE	CSE, Data Science,AI ML	1	No	Y	Y	Regular
19	Prof. Ambika R S	M.Tech	REVA University	2019	Yes	Assistant Professor	-	07-10-2013	ISE	Artificial Intelligence	1	No	-	Y	Regular
20	Dr. Swetha M S	Ph.D	VTU	2022	Yes	Assistant Professor	-	02-07-2014	ISE	Cyber Security, Computer Network	5	No	Y	Y	Regular
21	Prof. Vinutha K	M.Tech (Ph.D)	VTU	2013	Yes	Assistant Professor	-	02-07-2014		Machine Learning	1	No		Y	Regular
22	Prof. Ravikumar B N	M.Tech (Ph.D)	VTU	2013	Yes	Assistant Professor	-	28-05-2022	ISE	AI ML	1	No	-	Y	Regular
23	Dr. Narasimhamurthy M S	Ph.D	VTU	2018	Yes	Assistant Professor	-	26-02-2021	ISE	Software Engineering, Cloud computing, AI & ML	-	Yes	-	Y	Regular

24	Dr. Mohan BA	Ph.D	VTU	2019	Yes	Assistant Professor	-	18-10-2021	ISE	Internet of Things	2	No	-	Y	Regular
25	Dr. Anil Kumar	Ph.D	NITK	2021	Yes	Assistant Professor	-	09-05-2022	ISE	Networks on Chips , Machine Learning	1	No	-	Y	Regular
26	Dr. Savitha S	Ph.D	VTU	2022	Yes	Assistant Professor	-	27-05-2022	ISE	Wireless Sensor Networks	1	No	Y	Y	Regular
27	Dr. Basavaraj GN	Ph.D	JNTU	2021	Yes	Assistant Professor	-	06-06-2022	ISE	Wireless Sensor Networks	1	No	-	Y	Regular
28	Dr. Karthik SA	Ph.D	VTU	2021	Yes	Assistant Professor	-	06-06-2022	ISE	Machine Learning	2	No	-	Y	Regular
29	Dr. Kshama SB	Ph.D.	VTU	2022	Yes	Assistant Professor	-	05-08-2022	ISE	Cloud Computing	2	No	-	Y	Regular
30	Dr. Kantharaju V	Ph.D	VTU	2023	Yes	Assistant Professor	-	03-12-2022	ISE	Wireless sensor networks	-	No	Y	Y	Regular

Faculty Details -2021-22

Sl. No.	Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving (In case Currently Associated is ("No"))	Nature of Association (Regular/ Contract)
		Degree (highest degree)	University	Year of attaining higher qualification							Research Paper Publications	Ph. D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
1	Dr Manjunath T N	Ph.D	Bharathiar University	2015	Yes	Professor	03-08-2015	03-08-2015	ISE	Data Management	2	Yes	-	Y	Regular
2	Dr. Pushpa S K	Ph.D	Vinayaka Missions University	2017	Yes	Professor & HoD	01-08-2018	02-09-2004	ISE	Wireless Sensor Networks	1	Yes	-	Y	Regular
3	Dr. Sudhamani M V	Ph.D	VTU	2008	Yes	Professor	11-10-2021	11-10-2021	ISE	Image processing, AI&ML, NWs	-	Yes	-	Y	Regular
4	Dr. Sheela Kathavate	Ph.D	VTU	2019	Yes	Associate Professor	05-03-2020	05-03-2020	ISE	Parallel computing	-	Yes		Y	Regular

5	Dr. Surekha K B	Ph.D	JNTU	2017	Yes	Associate Professor	19-02-2021	19-02-2021	ISE	Wireless Sensor Networks	-	Yes	-	Y	Regular
6	Dr. Geeta Amol Patil	Ph.D	BITS	2018	Yes	Associate Professor	15-03-2021	15-03-2021	ISE	Computer Architecture	1	No	-	Y	Regular
7	Dr. Veena N	Ph.D	VTU	2020	Yes	Associate Professor	11-10-2021	07-09-2015	ISE	Brain Computer Interface	1	No	-	Y	Regular
8	Dr. Shoba M	Ph.D	REVA University	2018	Yes	Associate Professor	11-10-2021	11-10-2021	ISE	Wireless Sensor Networks	-	Yes	-	Y	Regular
9	Dr. Prakash GL	Ph.D	UPES	2019	Yes	Associate Professor	11-10-2021	11-10-2021	ISE	Cloud Computing	-	No	-	Y	Regular
10	Prof. Mahalakshmi S	ME, (Ph.D)	Anna University	2008	Yes	Assistant Professor	-	13-08-2012	ISE	Soft Computing	2	No	-	Y	Regular
11	Prof. Shanthi D L	M.Tech , (Ph.D)	VTU	2007	Yes	Assistant Professor	-	13-08-2012	ISE	Wireless Networks	4	No	-	Y	Regular
12	Prof. Chandrashekar K T	M.Tech , (Ph.D)	VTU	2008	Yes	Assistant Professor	-	16-08-2012	ISE	Networks	-	No	-	Y	Regular
13	Prof. GireeshBabu C N	M.Tech , (Ph.D)	VTU	2012	Yes	Assistant Professor	-	31-08-2013	ISE	CSE, Data Science, AIML	2	No	-	Y	Regular
14	Prof. Ambika R S	M.Tech (Ph.D)	Reva University	2019	Yes	Assistant Professor	-	07-10-2013	ISE	Artificial Intelligence	-	No	-	Y	Regular
15	Prof. Swetha MS	M.Tech , (Ph.D)	VTU	2013	Yes	Assistant Professor	-	02-07-2014	ISE	Cyber Security, Computer Network	3	No	-	Y	Regular
16	Prof. Vinutha K	M.Tech , (Ph.D)	VTU	2013	Yes	Assistant Professor	-	02-07-2014	ISE	Machine Learning	2	No	-	Y	Regular
17	Dr. Shridhar Sanshi	Ph.D	NIT	2019	No	Assistant Professor	-	24-02-2021	ISE	Internet of Things	-	No	-	12-05-2022	Regular
18	Dr. Narasimhamurthy MS	Ph.D	VTU	2018	Yes	Assistant Professor	-	26-02-2021	ISE	Software Architecture	-	Yes	-	Y	Regular
19	Dr. Mohan BA	Ph.D	VTU	2018	Yes	Assistant Professor	-	18-10-2021	ISE	Internet of Things	-	No	-	Y	Regular

Note: Please provide details for the faculty of the department, cumulative information for all the shifts for all academic years starting from current year in above format in Annexure - II.

5.1. Student-Faculty Ratio (SFR) (20)

(To be calculated at Department Level)

No. of UG Programs in the Department (n): 1

No. of PG Programs in the Department (m): 1

No. of Students in UG 2nd Year= **u1**

No. of Students in UG 3rd Year= **u2**

No. of Students in UG 4th Year= **u3**

No. of Students in PG 1st Year= **p1**

No. of Students in PG 2nd Year= **p2**

No. of Students = Sanctioned Intake + Actual admitted lateral entry students

(The above data to be provided considering all the UG and PG programs of the department)

S=Number of Students in the Department = UG1 + UG2 +... +UGn + PG1 + ...PGn

F = Total Number of Faculty Members in the Department (excluding first year faculty)

Student Teacher Ratio (STR) = S / F

Table B.5.1

Year	CAY 23-24	CAYm1 22-23	CAYm2 21-22
u1.1	198(180+18)	198(180+18)	198(180+18)
u1.2	198(180+18)	198(180+18)	203(180+23)
u1.3	198(180+18)	203(180+23)	131(120+11)
UG1	u1.1+u1.2+u1.3	u1.1+u1.2+u1.3	u1.1+u1.2+u1.3
Ugn	594	599	532
p1.1	18	18	-
p1.2	18	-	-
PGm	36	18	-
Total No. of Students in the Department (S)	630	617	532
No. of Faculty in the Department (F)	35	30	19
Student Faculty Ration (SFR)	SFR1=S1/F1 18	SFR1=S1/F1 20.57	SFR2= S2/F2 28
Average SFR		SFR=(SFR1+SFR2+SFR3)/3 = 66.56/3 = 22.19 (CAY 23-24)	
No. of Faculty in the Department (F) (Excluding 1 st yr)	32	27	19
Student Faculty Ration (SFR)	SFR1=S1/F1 19.68	SFR1=S1/F1 22.85	SFR2= S2/F2 28
Average SFR		SFR=(SFR1+SFR2+SFR3)/3 = 70.53/3 = 23.51 (CAY 23-24)	

Note: Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between 15:1 to 25:1, and zero for average SFR higher than 25:1. Marks distribution is given as below:

< = 15	-	20 Marks
< = 17	-	18 Marks
< = 19	-	16 Marks
< = 21	-	14 Marks
< = 23	-	12 Marks
< = 25	-	10 Marks
> 25.0	-	0 Marks

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY	35	-
CAYm1	30	-
CAYm2	19	-

Table 5.1.1

5.2. Faculty Cadre Proportion (25)

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)

F1: Number of Professors required = $1/9 \times$ Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

F2: Number of Associate Professors required = $2/9 \times$ Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

F3: Number of Assistant Professors required = $6/9 \times$ Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1

- If AF1 = AF2= 0 then zero marks
- Maximum marks to be limited if it exceeds 25

Example: Intake = 60 (i.e. total no. of students= 180); Required number of Faculty: 9; RF1= 1, RF2=2 and RF3=6

Case 1: AF1/RF1= 1; AF2/RF2 = 1; AF3/RF3 = 1; Cadre proportion marks = $(1+0.6+0.4) \times 12.5 = 25$

Case 2: AF1/RF1= 1; AF2/RF2 = 3/2; AF3/RF3 = 5/6; Cadre proportion marks = $(1+0.9+0.3) \times 12.5 =$ limited to 25

Case 3: AF1/RF1=0; AF2/RF2=1/2; AF3/RF3=8/6; Cadre proportion marks = $(0+0.3+0.53) \times 12.5 = 10.4$

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY [2023-24]	3.5	5	7	7	21	23
CAYm1 [2022-23]	3.4	5	6.8	7	20.5	18
CAYm2 [2021-22]	2.9	2	5.9	4	17.73	13
Average Numbers	3.27	4	6.5	6	19.74	18

Table B.5.2

$$\text{Cadre Ratio Marks} = \left[\frac{\text{AF1}}{\text{RF1}} + \frac{\text{AF2} \times 0.6}{\text{RF2}} + \frac{\text{AF3} \times 0.4}{\text{RF3}} \right] \times 12.5 = 26.65$$

5.3. Faculty Qualification (25)

$FQ = 2.5 \times [(10X + 4Y)/F]$ where x is no. of faculty with Ph.D., Y is no. of faculty with M.Tech. F is no. of faculty required to comply 20:1 Faculty Student ratio (no. of faculty and no. of students required are to be calculated as per 5.1)

Year	X	Y	F	$FQ = 2.5 * [(10X + 4Y)/F]$
CAY [2023-24]	31	4	35	$2.5 * [(10 * 31 + 4 * 4)/35] = 23.28$
CAYm1 [2022-23]	25	5	30	$2.5 * [(10 * 25 + 4 * 5)/30] = 22.5$
CAYm2 [2021-22]	12	7	19	$2.5 * [(10 * 12 + 4 * 7)/19] = 19.47$
Average Assessment				21.75

5.4. Faculty Retention (25)

No. of faculty members in CAYm1=30

CAY= 35

Item	Marks
(% of faculty retained during the period of assessment keeping CAYm2 as base year)	
>=90% of required Faculty members retained during the period of assessment keeping CAYm2 as base year)	2 5
>=75% of required Faculty members retained during the period of assessment keeping CAYm2 as base year)	2 0
>=60% of required Faculty members retained during the period of assessment keeping CAYm2 as base year)	1 5
>=50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year)	1 0
<50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year)	0

Table B.5.4

Item	CAY (2023 -24)	CAYm1 (2022- 23)	CAYm2 (2021-22)
No of Faculty Retained	18	18	19
Total No. of Required Faculty in CAYm2	19		
% of Faculty Retained	95	95	100
Faculty Retained	96.6%		

5.5 Innovations by the Faculty in Teaching and Learning (20)

Innovations by the Faculty in teaching and learning shall be summarized as per the following description.

Contributions to teaching and learning are activities that contribute to the improvement of student learning. These activities may include innovations not limited to, use of ICT, instruction delivery, instructional methods, assessment, evaluation and inclusive class rooms that lead to effective, efficient and engaging instruction. Any contributions to teaching and learning should satisfy the following criteria:

- *The work must be made available on Institute website*
- *The work must be available for peer review and critique*
- *The work must be reproducible and developed further by other scholars*

The department/institution may set up appropriate processes for making the contributions available to the public, getting them reviewed and for rewarding. These may typically include statement of clear goals, adequate preparation, use of appropriate methods, significance of results, effective presentation and reflective critique

We value integrating cutting-edge methods into the teaching and learning process at the Department of Information Science and Engineering. The ISE department's classrooms are each outfitted with a projector, a blackboard, and a white board. When giving video lectures and online expert talks, professors use projectors for their presentations. Smart boards are also present in the majority of classrooms, and teachers use these tools to advance the teaching and learning process. In addition, faculty members encourage students to take part in project-based learning, group discussions, team-based activities, presentations, online courses, MOOCs, Tech Transform, innovative internal assessments that emphasize case studies, the proctoring system, club activities, etc.

Summary of Innovative Teaching techniques in Teaching Learning Process

SL NO	ITEM	DESCRIPTION
1	Project based Learning	<p>As part of their courses in each semester, students will complete a project-based learning and these will be graded using the rubrics. Open Day will be organized at the END of each semester, PROJECT EXHIBITIONS are held to display the project-based learning (PBL) work completed by students. The project demonstrates the students' capacity to put their knowledge of various real-world issues to use in solving them.</p> <p>Numerous initiatives in the burgeoning fields of Artificial Intelligence & Machine Learning, Network Information Security, Network Security and Forensics, Parallel Computing, Computer Architecture, Voice Security, Propagation Channel Modeling, Brain Computer Interface, Cloud Computing, Data Analysis and Image Processing, Soft Computing, Wireless Networks, Parallel Computing, Cyber Security, Computer Network, Software Engineering, Cloud Computing, etc.</p> <p>PBL: https://bmsit.ac.in/dept/pbl/information-science-and-engineering#gsc.tab=0</p>
2	Modern Tools Usage (ICT)	<p>LCD Projectors, Speakers, Systems with Keyboard and mouse, power point presentation, Laser Pointer, Slide changer, writing pads, Wi-Fi enabled classrooms and other student learning environments.</p> <p>Wifi enabled Tools: https://bmsit.ac.in/network-infrastructure#gsc.tab=0</p>
3	Innovative Learning practices	<p>Various cutting-edge techniques, such as activity-based learning and project-based learning, were discussed throughout the lecture sessions. IoT role playing and brainstorming Assignments, Application Development, Poster Presentation, Mooc Course, Presentation, Poster Design, Partial Delivery, and Mini Project Review , Group Seminar, Collaborative Learning</p>
4	Quality course materials	<p>The digital library has expert video subject lectures given by a variety of notable resource people, which makes it easier for professors and students to use NPTEL's E-Tutorials, MOOCs, and other online resources.</p> <p>E-Studio: https://bmsit.ac.in/e-studio#gsc.tab=0 BMSIT-ISE-LEARNING Channel: https://www.youtube.com/@bmsit-ise-learning-channel4122/playlists</p>
5	Industry Visits	<p>Industry Visits will be organized once in a semester for delivering the practical exposure to the students</p> <p>Industry Visit: https://bmsit.ac.in/activities/information-science-and-engineering#gsc.tab=0</p>
6	Internship	<p>Internship will be conducted during the semester end before the start of next semester .student will be trained on the industry-oriented skills some of the students will be sent to the industry/company/organization for conduction the internships</p> <p>Internship: https://bmsit.ac.in/dept/internship/information-science-and-engineering#gsc.tab=0</p>
7	E-Studio	<p>E-studio facility which faculty members can use to take TLP process to a higher level to make task of studying simpler and to achieve better results.</p> <p>E-studio:</p>

		https://bmsit.ac.in/e-studio#gsc.tab=0
8	Online platform	Faculty members use Google Drive, Google class rooms, Google forms and other platforms such as YOUTUBE: (https://www.youtube.com/@bmsit-ise-learning-channel4122) Gnums: https://bmsitm.gnums.in/Login.aspx
9	Open/Industry Courses/Skill/Enhancement Courses	These activity are provided by the ISE department for a set time during the academic year. Here, the student's proficiency with tools and software used in industry was improved. Open courses https://bmsit.ac.in/dept/opencourse/information-science-and-engineering#gsc.tab=0

5.6 Faculty as participants in Faculty development/training activities/STTPs (15)

- A Faculty scores maximum five points for participation
- Participation in 2 to 5 days Faculty development program: 3 Points
- Participation >5 days Faculty development program: 5 points

Max. 5 per faculty					
Sl no	Name of the Faculty	CAY (2023-24)*	CAYm1 (2022-23)	CAYm2 (2021-22)	CAYm3 (2020-21)
1	Dr. Manjunath T N		5	5	5
2	Dr. Pushpa S K		5	5	5
3	Dr. Sudhamani M V		5	5	
4	Dr. Usha B A		5		
5	Dr. Anjan Krishnamurthy		5		
6	Dr. Sheela K		5	5	5
7	Dr. Surekha K B		5	5	
8	Dr. Geeta Amol Patil		5	5	
9	Dr. Rakesh N		5	5	
10	Dr. Veena N	5	5	5	5
11	Dr. Shoba M	5	5	5	
12	Dr. Prakash GL		5	5	
13	Dr. Drakshaveni G	5	5	5	5
14	Prof. Chethana C	5	5	5	5

15	Prof. Mahalakshmi S	5	5	5	5
16	Dr. Shanthi D L		5	5	5
17	Dr. Chandrashekar K T		5	5	5
18	Dr. P Sudarsanam		5	5	5
19	Dr. GireeshBabu C N	5	5	5	5
20	Prof. Ambika R S		5	5	5
21	Dr. Swetha M S		5	5	5
22	Prof. Vinutha K		5	5	5
23	Mr. Ravikumar B N		5	5	5
24	Dr. Narasimhamurthy M S		5	5	
25	Dr. Mohan B A	5	5	5	
26	Dr. Anil Kumar		5		
27	Dr. Savitha S	5	5		
28	Dr. Basavaraj G N	5	5		
29	Dr. Karthik S A		5		
30	Dr. Kshama S B		5		
31	Dr. Kantharaju V	5	5		
32	Ms. Bhavya G.				5
33	Dr. Rudresh				5
34	Dr. Shridhar Sanshi			5	
35	Dr. Srinivas				
	Sum	50	155	130	90
	RF (Number of faculty required to comply with 20:1 Student Faculty Ratio as per 5.1)	31,5	31.50	30.85	26.60
	Assessment = 3 × Sum/0.5RF	4.7*	29.52	25.28	20.30
	Average assessment		25.28		

*: CAY 2023-24 still in progress

Faculty Development Programs have a great impact on all the faculty members. As they acquire and enhance their skill by learning new tools, new technology, process of delivery tools and get enriched with new technologies.

Faculty attending FDP inculcate innovative teaching practices to attain the mission of being committed to excellence in use of contemporary participant-centric pedagogies, teaching methods and establishing a

presence in emerging segments of technical education.

In this endeavor BMSIT is committed to provide research and teaching skill enhancement programs for faculty to bridge the gap in quality research and teaching skills that are required in contemporary technical education.

5.7. Research and Development (30)

5.7.1. Academic Research (10)

Academic research includes research paper publications, Ph.D. guidance, and faculty receiving Ph.D. during the assessment period.

- Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc. (6)

Table 5.7.1 Publications Count
QUALITY PUBLICATIONS

		QUALITY PUBLICATIONS						
Sl. No .	Year	Scopus Indexed Journal	Scopus Indexed Book Chapter	Scopus Indexed Conference	WoS Indexed Paper	Total	Citations	Books
1	2023	11	7	19	4	41	221	2
2	2022	14	1	28	4	47	237	1
3	2021	6	-	11	2	19	138	-
4	2020	2	-	-	1	3	110	-
Total		33	8	58	11	110	706	3

The college made a policy to provide financial assistance to faculty members, who are presenting research work in SCI Indexed Journals. Quality publication in reputed journals will be rewarded with Rs. 10,000/-.

Table 5.7.1 (A) Publications in International Journals

2023					
FACULTY RESEARCH PUBLICATIONS (INTERNATIONAL JOURNALS)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	Publication Year
1	Dr. Manjunath T.N , S. Prof. Mahalakshmi	Smart question answering system using vectorization approach and statistical scoring method	Science Direct – Materials Today Proceedings	SCOPUS	2023
2	Dr. Manjunath T N	Hybrid Cloud-Based Privacy Preserving Clustering as Service for Enterprise Big Data	International Journal on Recent and Innovation Trends in Computing and Communication		
3	Dr. Shoba M	Epileptic Seizure Classification and Feature Optimization Technique Using Grey Wolf Algorithm on Dynamic Datasets	SN Computer Science		
4	Dr. Drakshaveni G	Comparative Analysis of Medical Imaging Techniques used for the Detection of Thyroid Gland with an Emphasis on Thermo gram	Electrical Engineering		
5	Dr. Shanthi D L	Genetic Algorithm based Hyper-Parameter Tuning to improve the Performance of Machine Learning Models	SN Computer Science		
6	Prof. Vinutha K	Cluster based Approach of Student's Employment Prediction using PSO & EP	International Journal of Intelligent Systems and Applications in Engineering		
7	Prof. Ravikumar B N	Software Development Effort Estimation Using Relational Database and Optimized Learning Mechanism	Journal of Computer Science		
8	Dr. Basavaraj G.N , Dr. Karthik S.A	Recent Study on Energy Efficient Cluster Based Algorithms for Wireless Sensor Network	Acta Scientific Computer Science		
9	Dr. Narasimha Murthy M S	A Comparative Study of the CNN Based Models Used for Remote Sensing Image Classification	International Journal of Electrical & Electronics Research (IJEER)		
10	Dr. Narasimha Murthy M S	Artificial Intelligence in Agriculture and Healthcare: A Comprehensive Study	European Chemical Bulletin		
11	Dr. Kantharaju V, Dr. Harish Kumar N	Balancing of Web Applications Workload Using Hybrid Computing (CPU–GPU) Architecture	SN Computer Science		

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Table 5.7.1 (B) Book Chapters

2023					
FACULTY RESEARCH PUBLICATIONS (BOOK CHAPTERS)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	Publication Year
1	Dr. Manjunath, T.N., Dr. Pushpa S.K.	A Study on Big Data Engineering Using Cloud Data Warehouse	Data Engineering and Data Science: Concepts and Applications	SCOPUS	2023
2	Prof. Chethana C	Analysis of Credit Card Fraud Data Using Various Machine Learning Methods	Big Data, Cloud Computing and IoT: Tools and Applications,		
3	Dr. Drakshaveni G	A Smart Healthcare Cognitive Radio System for Future Wireless Commutation application with Test methodology	EAI/Springer Innovations in Communication and Computing		
4	Dr. Swetha M.S	Reduce the Privacy and Security Concerns of Current Social Media Platforms Using Blockchain Technology	Network Technology		
5	Dr. Swetha M.S	6G Wireless Communication Systems and Its Applications	Computational Intelligence		
6	Dr. Anjan Krishnamurthy	Early recognition of Alzheimer's disease using machine learning	Artificial Intelligence, Blockchain, Computing and Security		
7	Dr. Karthik S A	Study on healthcare security system-integrated Internet of Things (IoT)	Perspectives and Considerations on the Evolution of Smart Systems		

Table 5.7.1 (C) Publications in International Conferences

2023					
FACULTY RESEARCH PUBLICATIONS (SCOPUS INDEXED INTERNATIONAL CONFERENCE)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL CONFERENCE	INDEXING	PUBLICATION YEAR
1	Dr. Manjunath T.N.	Adaptive Voting Mechanism with Artificial Butterfly Algorithm based Feature Selection for IDS in MANET	IEEE International Conference on Integrated Circuits and Communication Systems (ICICACS)	SCOPUS	2023
2	Dr. Manjunath T.N.	Secure Data Education: Leveraging Big Data for Enhanced Academic Performance and Student Success in Educational Institutions	International Conference on ICT for Sustainable Development		
3	Dr. Pushpa S K, Prof. Ambika R	A survey of use of block chain for storing medical health records	AIP Conference Proceedings		
4	Dr. Usha B A	A Survey on Big Data in Cyber Security	IEEE International Conference on in Technology & Management		
5	Dr. Geeta Patil	CLAMP: Criticality Aware Coherency Protocol for Locked Multi-level Caches in Multi-core Processors	Lecture Notes in Networks and Systems		
6	Dr. Veena N, Prof. Mahalakshmi S.	Human Trap Detection using Convolution Neural Networks	7th International Conference on Computing Methodologies and Communication		
7	Dr. Shoba M	Genetic Algorithm with Bacterial Conjugation based Cluster Head selection for Dynamic WSN	International Conference on Network, Multimedia and Information Technology (NMITCON) 2023		
8	Prof. Vinutha K	A Machine Learning based Facial Expression and Emotion Recognition for Human Computer Interaction through Fuzzy Logic System	Proceedings- 6th International Conference on Inventive Computation Technologies		
9	Prof. Ravi Kumar B.N	Software Effort Estimation using ANN (Back Propagation)	IEE International Conference		
10	Dr. Narasimha Murthy MS	Deep Learning and MRI Improve Carotid Arterial Tree Reconstruction	International Conference on Data Science and Network Security		
11	Dr. Mohan B A	The AgroCart Android Application to Manage Agriculture System	Lecture Notes in Electrical Engineering		

12	Dr. Karthik S.A	An Efficient Machine Learning Approach for Apple Leaf Disease Detection	International Conference, Smart Innovation, Systems and Technologies	SCOPUS	2023
13	Dr. Kanthraju V, Dr. Harish Kumar N, Dr. Karthik S A	AIRFACTOR- Bangalore Based Air Pollution Monitoring and Prediction Application Using Machine Learning	International Conference on Network, Multimedia and Information Technology (NMITCON)		
14	Dr. Karthik S A, Dr. Basavaraj G N, Dr. Harish Kumar N	Hybrid Approach for Retail Store Auditing Using CRNN	International Conference on Network, Multimedia and Information Technology (NMITCON)		
15	Dr. Harish Kumar N	A Comprehensive Survey on Weed Identification in Agriculture using Machine Learning	International Conference on Artificial Intelligence and Applications, ICAIA 2023		
16	Dr. Prakash G L	A Design of High-Secured Map Chaotic Encryption Scheme for VANET Communication	International e-conference on advances in Computer Engineering & Communication Systems – ICACECS-2023		
17	Dr. Savitha S	Optimizing Task Distribution Systems: A Comparative Study of Micro-Task Job Replication, Accuracy, and Budget Constraints	International Conference on Network, Multimedia and Information Technology, NMITCON		
18	Dr. Kshama S B	Simplifying Structure and Pattern in Complex Social Networks Using Graph Isomorphism	International Conference on Computing Communication and Networking Technologies, ICCCNT		
19	Dr. Kshama S B	An Ameliorated Methodology for Water Supply and Management Using Binary Trees	International Conference on Computing Communication and Networking Technologies, ICCCNT		

Table 5.7.1 (D) Publications in WOS Indexed Journals

FACULTY RESEARCH PUBLICATIONS (WoS INDEXED)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	Publication Year
1	Dr. Veena, N.	Evaluation of the Quality of Practical Teaching of Agricultural Higher Vocational Courses Based on BP Neural Network	Applied Sciences	WEB OF SCIENCE	2023
2	Dr. Geeta Patil	CAMP: a hierarchical cache architecture for multi-core mixed criticality processors	International Journal of Parallel, Emergent and Distributed Systems		
3	Dr. K. T. Chandrashekhar, Dr. C. N. Gireesh Babu	Recommendation Engine for Retail Domain Using Machine Learning Techniques	Published Sep 2023 Data Engineering and Data Science		
4	Dr. C. N. Gireesh Babu, Dr. T. N. Manjunath	Conditional Generative Adversarial Networks for Image Transformation	Intelligent and Fuzzy Techniques for Emerging Conditions and Digital Transformation		

Table 5.7.1 (E) Publications in International Journals

2022 FACULTY RESEARCH PUBLICATIONS (INTERNATIONAL JOURNALS)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	PUBLICATION YEAR
1	Dr. Anjan Krishnamurthy	A typical analysis of hybrid covert channel using constructive entropy analytics	International Journal of Electrical and Computer Engineering	Scopus	2022
2	Dr. Drakshaveni G	Improved convolutional auto encoder for thyroid nodule image enhancement and segmentation	Indonesian Journal of Electrical Engineering and Computer Science		
3	Dr. Swetha M S, Dr. Pushpa S K, Dr.	Design and development of	International Journal of Electrical and		

	Manjunath T N	anonymous location based routing for mobile ad-hoc network	Computer Engineering (IJECE)		
4	Prof. Mahalakshmi S, Dr. Veena N	Adaptive ambulance monitoring system using IOT	Measurement Sensor		
5	Dr. Shanthi D L	Maximization of Disjoint K-cover Using Computation Intelligence to improve WSN Lifetime	Computer Networks and Systems		
6	Prof. Vinutha K	Undergraduate engineering students employment prediction using hybrid approach in machine learning	International Journal of Electrical and Computer Engineering		
7	Prof. Ravi Kumar B N	Effective ANN Model based on Neuro-Evolution Mechanism for Realistic Software Estimates in the Early Phase of Software Development	International Journal of Advanced Computer Science and Applications		
8	Dr. Chandrashekar K.T	Pneumonia Detection using Novel Deep learning Techniques	Journal of Pharmaceutical negative Results		
9	Dr. Gireesh Babu C.N	Effective Communications Between Differently Abled and Normal People Using Speech To sign Translation System	Journal of Pharmaceutical Negative Results		
10	Dr. Kshama S.B.	Load balancing algorithms with cluster in cloud environment	International Journal of Communication Networks and Distributed Systems		

11	Prof. S. Mahalakshmi	Statistical Analysis of Fruit and Vegetables Quality Detection and Disease Classification for Smart Farming	Journal of Algebraic Statistics		
12	Dr. G.N. Basavaraj	Reliability-driven time series data analysis in multiple-level deep Learning methods utilizing soft computing methods	Measurement: Sensors is a companion journal to Measurement: Journal of the International Measurement Confederation (IMEKO).		
13	Dr. Prakash G L	Hybrid Deep Learning Model based on Intelligent Microbat Routing (IMR) and Popularity Content Caching (PCC) for an effective caching and routing in Vehicular Edge Networks	Computers and Electrical Engineering – Science Direct		
14	Dr. Veena N	Framework to Predict Epileptic Seizure Using EEG Signals.	International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies,		

Table 5.7.1 (F) Book Chapters

2022 FACULTY RESEARCH PUBLICATIONS (BOOK CHAPTERS)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	PUBLICATION YEAR
1	Dr. Anjan Krishnamurthy	Machine Learning-Based Security Authentication for Wireless Multimedia Network	Lecture Notes in Networks and Systems	Scopus	2022

Table 5.7.1 (G) Publications in International Conferences

2022					
FACULTY RESEARCH PUBLICATIONS (SCOPUS INDEXED INTERNATIONAL CONFERENCE)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL CONFERENCE	INDEXING	PUBLICATION YEAR
1	Dr. Manjunath T.N, Dr. Pushpa Sothenahalli Krishnaraju	A Survey on Machine Learning Techniques Using Quantum Computing	IEE International Conference on Emerging Research in Electronics, Computer Science and Technology,	SCOPUS	2022
2	Dr. N Rakesh	A Proposed Academic Chatbot System using NLP Techniques	2022 6th International Conference on Trends in Electronics and Informatics (ICOEI)		
3	Dr. Manjunath T N	Enhanced Efficient and Security in Big Data Using TDES And Machine Learning Technique	EEE International Conference on Distributed Computing and Electrical Circuits and Electronics, ICDCECE 2022		
4	Dr. Manjunath T N	Development of Security Performance and Comparative Analyses Process for Big Data in Cloud	Lecture Notes in Electrical Engineering		
5	Dr. Anjan Krishnamurthy	Water Animosity Detection and Tainting Emulsion Remover for Lakes	4th International Conference on Cognitive Computing and Information Processing, CCIP 2022		
6	Dr. Anjan Krishnamurthy	Characteristic Overview of Digital Image Forensics Tools	Lecture Notes in Networks and Systems		
7	Dr. Surekha K B Dr. Geeta Patil, Dr. Mohan B.A, Dr. Anil Kumar	Arbitrage: Stock Comparative Analysis	4th International Conference on Circuits, Control, Communication and Computing		
8	Dr. Veena N, Prof. S. Mahalakshmi, , Prof. Ambika Rani Subash & Prof. K. Vinutha	Heart Disease Prediction Using Soft Computing Methods	Intelligent Systems and Networks		
9	Dr. Swetha M S, Dr.	Classification of	Lecture Notes in Networks		

	Manjunath T N	Malicious Websites Using Feature Based Machine Learning Techniques	and Systems	SCOPUS	2022
10	Dr. Swetha M S	Developing Virtual Police Station to Receive FIR through Digital Signature	Proceedings - 2022 6th International Conference on Intelligent Computing and Control Systems, ICICCS 2022		
11	Dr. Swetha M S, Dr. Pushpa S K, Dr. Manjunath T N	IOT-Based Smart Street Light Control Application for Smart Cities	Lecture Notes in Networks and Systems		
12	Dr. Swetha M S	Emergency Medical Services Using Drone Operations in Natural Disaster and Pandemics	Lecture Notes in Networks and Systems		
13	Prof. S. Mahalakshmi, Dr. Veena N	Condition Monitoring of a Sprinkler System Using Feedback Mechanism	Lecture Notes in Networks and Systems		
14	Dr. Anil Kumar Dr. Mohan B.A , Dr. Geeta Patil, Dr. Surekha K B	Machine Learning based framework to predict the Network Usage in Smart Parking Applications	4th International Conference on Circuits, Control, Communication and Computing		
15	Dr. Savitha S	A Study on Accident Detection Systems Using Machine Learning	Innovations in Computer Science and Engineering: Proceedings of the Tenth ICICSE		
16	Dr. Karthik S.A	An Efficient Approach to Retrieve Information for Desktop Search Engine	Smart Innovation, Systems and Technologies		
17	Dr. Sudarsanam P	IOT based manhole cover Management	International Conference, AIP conference proceedings		
18	Dr. Mohan B.A	The AgroCart Android Application to	International Conference, Lecture Notes in Electrical Engineering		

		Manage Agriculture System			
19	Dr. Mohan B.A	LoRa Based Water Quality Monitoring System	International Conference, on Neuro Quantology		
20	Prof. Ambika R S	Quantitative Analysis of Sustainable Energy Based Charging Systems	ICDCS 2022 - 2022 6th International Conference on Devices, Circuits and Systems		
21	Dr. Kshama S B	Load Balancing in Cloud Computing Environment	2022 IEEE International Conference for Women in Innovation, Technology and Entrepreneurship, ICWITE 2022 - Proceedings		
22	Dr. N Rakesh	Covid-19 Social Distancing Detector using Internet of Things	2022 6th International Conference on Trends in Electronics and Informatics (ICOEI)		
23	Dr. Sheela Kathavate	Diabetic Retinopathy Detection using MobileNetV2 Architecture	1st IEEE International Conference on Smart Technologies and Systems for Next Generation Computing, ICSTSN 2022		
24	Dr. Sheela Kathavate	An Overview on Mobile Edge Cloud System	Smart Innovation, Systems and Technologies		
25	Prof. S Mahalakshmi, Dr. Veena N, Prof. Vinutha K,	Automated Identification of Car Parking Slot and Bill Generation System	International Conference on Electronics and Renewable Systems (ICEARS)		
26	Dr. Rakesh N	A Novel Approach in Credit Card Fraud Detection System Using Machine Learning Techniques	International Conference on Forensics, Analytics, Big Data, Security (FABS)		
27	Dr. Sudarsanam P	Fault-Tolerant Cluster Head Selection Using Game Theory Approach in Wireless Sensor Network	Lecture Notes in Networks and Systems		
28	Dr. Sudarsanam P	Learning of Advanced Telecommunicatio	Lecture Notes in Networks and Systems		

		n Computing Architecture (ATCA)-Based Femto Gateway Framework			
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Table 5.7.1 (H) Publications in WoS Indexed Journals

FACULTY RESEARCH PUBLICATIONS (WoS INDEXED)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	Publication Year
1	Prof. Gireesh Babu C N	Effective Communication Between Differently Abled And Normal People Using Speech To Sign Translation System	Journal of Pharmaceutical Negative Results	WEB OF SCIENCE	2022
2	Dr. Anil Kumar	LBF-NoC: Learning-Based Framework to Predict Performance, Power and Area for Network-On-Chip Architectures	Journal of Circuits, Systems and Computers		
3	Dr. Anil Kumar	LBF Grid: Toward Future Energy Transformation	Advances in Intelligent Systems and Computing		
4	Dr. Karthik, S. A	Prior detection of Alzheimer's disease with the aid of MRI images and Deep Neural Networks	Malaysian Journal of Computer Science		

Table 5.7.1 (I) Publications in International Journals

2021 FACULTY RESEARCH PUBLICATIONS (INTERNATIONAL JOURNALS)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	PUBLICATION YEAR
1	Prof. Swetha M S, Dr. Pushpa S K & Dr. Manjunath T N,	Strong Secure Anonymous Location Based Routing (S2ALBR) method for MANET	Turkish Journal of Computer and Mathematics Education	Scopus	2021
2	Dr. Manjunath T N	An efficient hybrid reconfigurable wind gas turbine power	International Journal of Power Electronics and Drive Systems		

		management system using mppt algorithm			
3	Prof. S. Mahalakshmi	The Internet Of Things On Neural Networks Provides Intelligent Healthcare Management For Diabetic Patients	International Journal of Aquatic Science		
4	Prof. Shanthi D.L.	Optimized artificial neural network assisted trade-off between transmission and delay in LTE networks	Materials Today		
5	Prof. S. Mahalakshmi	Analyzing The Performance of Marketing Life Cycle Process using Software Architecture Model	International Journal of aquatic science		
6	Prof. Gireesh Babu C N	A Semantic Health Observation System Development Based on The Iot Sensors	Turkish Journal of Physiotherapy and Rehabilitation		

Table 5.7.1 (J) Publications in International Conferences

2021					
Faculty Research Publications (International Conference)					
SL N O	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL CONFERENCE	INDEXING	PUBLICATION YEAR
1	Prof. M. S Swetha, S K Pushpa, M S & T N Manjunath	Blockchain enabled secure healthcare Systems	2020 IEEE International Conference on Machine Learning and Applied Network Technologies (ICMLANT)		
2	Dr. Pushpa S K	Evolving Technological Advancements and Its Effectivity Study	Lecture Notes in Networks and Systems		

		in Intelligent Traffic System		SCOPUS	2021
3	Prof. G Bhavya & Swetha M S	Soft Computing Technique for Block Chain Enabled Secure Healthcare System	5th International Conference on Intelligent Computing and Control Systems (ICICCS)		
4	Dr. Manjunath T N	A Study on Edge Computing through Machine Learning for IoT Devices	International Conference on Forensics, Analytics, Big Data, Security, FABS 2021		
5	Prof. Vinutha K	Prediction of employability of engineering graduates using machine learning techniques	Proceedings of the 2021 8th International Conference on Computing for Sustainable Global Development, INDIACom 2021		
6	Prof. Vinutha K	Job Role Prediction System	International Conference on Forensics, Analytics, Big Data, Security, FABS 2021		
7	Dr. Swetha M S	Advanced wireless techniques to avoid accidents on roads through wearing smart helmet	Proceedings - 5th International Conference on Intelligent Computing and Control Systems, ICICCS 2021		
8	Dr. Shanthi D L	FM radio wave based early earthquake detection	Proceedings of the 2021 8th International Conference on Computing for Sustainable Global Development, INDIACom 2021		
9	Dr. Shanthi D L	Autonomous Temperature scan system using IoT to detect COVID-19 symptom	International Conference on Forensics, Analytics, Big Data, Security, FABS 2021		
10	Dr. Shanthi D L	Traffic Prediction System using IoT in Smart City Perspective	IEEE International Conference on Mobile Networks and Wireless Communications, ICMNWC 2021		
11	Prof. Veena N. Prof. Mahalakshmi S	Heart Disease Prediction System	International Conference on Forensics, Analytics, BigData, Security, FABS 2021		

Table 5.7.1 (K) Publications in WoS Indexed Journals

FACULTY RESEARCH PUBLICATIONS (WoS INDEXED)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	Publication Year
1	Prof. Gireesh babu, C.N., Prof. Chandrashekhar, K.T.	Real time alert system to prevent Car Accident	International Conference on Forensics, Analytics, Big Data, Security (FABS)	WEB OF SCIENCE	2021
2	Dr. Geeta Patil	MOESIL: A Cache Coherency Protocol for Locked Mixed Criticality L1 Data Cache	IEEE/ACM 16th international symposium on distributed simulation and real time applications		

Table 5.7.1 (L) Publications in International Journals

2020 FACULTY RESEARCH PUBLICATIONS (INTERNATIONAL JOURNALS)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	PUBLICATION YEAR
1	Prof. M. S. Swetha	Intrusion prediction and detection with deep sequence modeling	International Symposium on Security in Computing and Communication	Scopus	2020
2	Prof. Veena N	A review of non-invasive BCI devices	International Journal of Biomedical Engineering and Technology		

Table 5.7.1 (M) Publications in WoS Indexed Journals

FACULTY RESEARCH PUBLICATIONS (WoS INDEXED)					
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PAPER	INTERNATIONAL JOURNAL	INDEXING	Publication Year
1	Dr. Pushpa S. K, Dr. Manjunath T N, Prof. Bhavya G, Prof. Vinutha K	Prediction of Onset of Diabetes using Adaptive Boosting	International Journal of Recent Technology	WEB OF SCIENCE	2020

Table 5.7.1 (N) Books Published

BOOKS PUBLISHED				
Sl. No.	Author Name	Book Title	Publisher	Year
1	Dr. M V Sudhamani	Getting Started with Internet of Things	Notion Press Publisher, ISBN 979-8398974799, June 2023	2023
2	Dr. Usha B A	Big Data Analytics in Cybersecurity	Lambert Academic Publishing 2023	
3	Dr. Shoba M	Big Data Analytics using Python	Scientific International Publishing House, ISBN 978-93-5625-195-3, August 2022	2022

Table 5.7.1 (O) Scopus Citations Count

SL.No	Name of the Faculty	Citations 2023	Citations 2022	Citations 2021
1	Dr Manjunatha T N	48	42	29
2	Dr Pushpa S. K	13	11	5
3	Dr Sudhamani M V	9	13	10
4	Dr Usha B A	11	10	7
5	Dr Anjan Krishnamurthy	5	9	8
6	Dr Sheela Kathavate	6	1	1
7	Dr Surekha K B	1	1	1
8	Dr Geeta Amol Patil	5	5	6
9	Dr Rakesh N	18	31	5
10	Dr Veena N	12	7	1
11	Dr Shoba M	1	1	3
12	Dr Prakash G L	2	9	4
13	Dr Drakshaveni G	1	1	1
14	Prof. Chethana C	15	21	2
15	Prof. Mahalakshmi S	2	5	1
16	Dr. Shanthi D L	4	10	3
17	Dr Chandrashekhara K T	7	1	2
18	Dr P. Sudarsanam	2	3	2
19	Dr Gireesh Babu C N	7	1	2
20	Prof. Ambika Rani Subhash	1	1	1
21	Dr Swetha M S	19	12	18
22	Prof. Vinutha K	2	3	1
23	Prof. Ravi Kumar B N	2	1	1
24	Dr. Narasimha Murthy M S	1	1	1
25	Dr. Mohan B.A	7	8	2
26	Dr. Anil Kumar	1	1	1
27	Dr. Savitha S	3	1	4
28	Dr. Basavaraj G N	1	6	1
29	Dr. Karthik S A	2	6	3
30	Dr. Kshama S B	1	2	1
31	Dr. Kantharaju V	4	3	1
32	Dr. Kalaivani Yenamandram Sathyanarayana	2	3	2
33	Dr. Harish Kumar N	3	6	7
34	Prof. Srinivas B V	1	1	1
35	Prof. Bhavya G	1	1	1
	Total	221	237	138

Ph.D. guided /Ph.D. awarded during the assessment period while working in the institute (4)

The ISE Program has a Research Centre recognized by VTU, Belagavi to carry out the research work. Faculty members are identified as Research Supervisors by the University through a notification for the same yearly once. A minimum of 2 research scholars can be taken up by the Research Supervisor every year. The list of Research Supervisors and Research Scholars are provided below:

Table 5.7.1 (P) Research Supervisors & Research Scholars

Sl. No.	Guide	Student-1	Student-2	Student-3	Student-4	Total no of Scholars
1	Dr. Manjunath T N	Prof. Bhavya G	Prof. Amogh Pramod Kulkarni	Prof. Puneeth Kumar T P	Prof. S Manjunatha	4
2	Dr. S K Pushpa	Prof. Durga Devi G Y	Prof. Mari Kirthima	Prof. Muneshwara M S	Prof. V Prithvi Ram	4
3	Dr. M V Sudhamani	Prof. Mala B A	Prof. Ramesh S C			2
4	Dr. Usha B A	Prof. Chandini M S	Prof. Muralidhara	Prof. Sowmya Somnath		3
5	Dr. Anjan Krishnamurthy	Prof. Pruthvi Kumar K R	Prof. Vishwas H N	Prof. Salma Itagi	Prof. P Jagadish	4
6	Dr. Surekha K B	Prof. Deeksha Hegde B	Prof. Shiva Kumar C R	Prof. Girisha M N		3
7	Dr. Sheela Kathavate	Prof. Mayuri K P	Prof. Suguna M K			2
8	Dr. Narasimha Murthy M S	Prof. Supritha N	Prof. Vidya H A	Prof. Shruthi B S	Prof. Anoop N Prasad	4
9	Dr. Shoba M	Prof. Thanuja K				1
10	Dr. Prakash G L					
11	Dr. Mohan B A					
12	Dr. Veena					
13	Dr. Rakesh N					
14	Dr. Basavaraj G N					
15	Dr. Karthik S A	Prof. Srujana				1
16	Dr. Sudarsanam P					
17	Dr. Drakshaveni G					
						28

Award of Ph.D Scholars

Table 5.7.1 (Q) Award of Research Scholars

Sl. No.	REG Year	Name	Type	M/ F	FT / PT	Research Centre	Guide	Date of Ph.D awarded (As per PDC/ Convocation/ Viva - Voce)	Awarded Year
1	2015-16	Prof. Deepa Yogish	Internal	F	PT	ISE	Dr. Manjunath T N	03.04.2021	2020-21
2	2015-16	Prof. Chandrashekhara K T	Internal	M	PT	CSE	Dr. Thungamani M	30.05.2023	2022-23
3	2015-16	Prof. Shanthi D L	External	F	PT	CSE	Dr. Keshava Prasanna	19.09.2022	2022-23
4	2015-16	Prof. Savita S	External	F	PT	CSE	Dr. S C Lingareddy	30.07.2022	2022-23
5	2015-16	Prof. Kanthraju V	External	M	PT	CSE	Dr. S C Lingareddy	15.05.2023	2022-23
6	2015-16	Prof. Srinivas B V	External	M	PT	CSE	Dr. Indrajith Mandal	06.11.2023	2023-24
7	2016-17	Prof. Swetha M S	Internal	F	PT	ISE	Dr. Thungamani M & Dr. Pushpa S K	24.02.2023	2022-23
8	2016-17	Prof. Gireesh Babu C N	Internal	M	PT	CSE	Dr. Thungamani M	30.05.2023	2022-23
9	2017-18	Prof. Srihari M R	Internal	M	PT	ISE	Dr. Manjunath T N	15.05.2023	2022-23
10	2017-18	Prof. Ravikumar	External	M	PT	CSE	Dr. Yeresime Suresh	07.10.2023	2023-24
11	2017-18	Prof. Vinutha K	External	F	PT	CSE	Dr. Yogish H K	04.11.2023	2023-24

- All relevant details shall be mentioned. (Heading)

5.7.2. Sponsored Research (5)

- Funded research:

(Provide a list with Project Title, Funding Agency, Amount and Duration)

Funding amount (Cumulative during CAYm1, CAYm2 and CAYm3):

Amount > 20 Lakh – 5 Marks

Amount >= 16 Lakh and <= 20 Lakh – 4 Marks

Amount >= 12 Lakh and < 16 Lakh – 3 Marks

Amount >= 8 Lakh and < 12 Lakh – 2 Marks

Amount >= 4 Lakh and < 8 Lakh – 1 Mark

Amount < 4 Lakh – 0 Mark

The Department has made efforts in obtaining sponsored research by applying for various funding agencies such as KSCST, TEQIP, VGST and DST.

Table 5.7.2 (A) Funds received from KSCST and VTU

Sl.no	Name of the Faculty	Designation	Title of the Proposal	Amount	Year
KSCST					
1	Dr. Shanthi D L	Asst. Professor	Soil analysis and crop suggestion using IoT and Machine learning	Rs.4000/-	2022-2023
2	Dr. Rudresh Shirwaikar	Asst. Professor	Intelligent Waste Bot using IoT and Deep Learning for a Smart City	Rs.5000/-	2020-2021
VTU SPONSORED PROJECT					
1	Dr. Pushpa S K	Professor	SvayaKT: An e-Agriculture ecosystem	Rs.5000/-	2021-2022
2	Prof. Mahalakshmi S	Asst. Professor	Adaptive Ambulance System	Rs.5000/-	2021-2022
3	Dr. Veena N	Asst. Professor	Real Time Object Detection and Recognition System using CNN and RNN	Rs.5000/-	2020-2021
4	Dr. Shridhar Sanshi	Asst. Professor	IoT based Smart Traffic Signal Monitoring System	Rs.5000/-	2020-2021
Total				Rs. 0.29 Lakh	

5.7.3. Development activities (10)

Provide details:

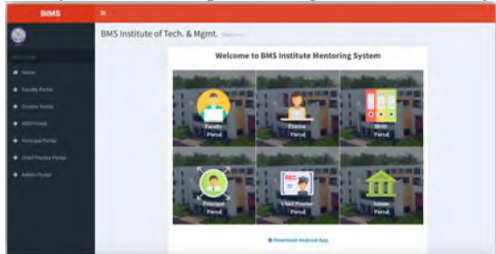

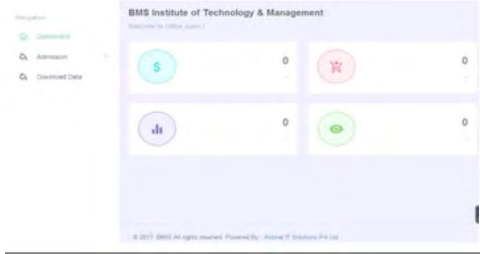

- Product Development

Table 5.7.3 (A) Patent Filed

PRODUCT DEVELOPMENT THROUGH FILING OF PATENT				
SL. NO	NAME OF THE AUTHORS	TITLE OF THE PATENT	APPLICATION NO	DATE OF APPLICATION / PUBLICATION
1	Dr. Veena N & Prof. S. Mahalakshmi	Security Technique In Energy Harvesting IoT Devices Using Slotted Aloha With Noma	2021100913	14-04-2021 GRANTED
2	Prof. S. Mahalakshmi	Smart Artificial Intelligence Based Fleet Analytic System	2021106612	24-11-2021 GRANTED

3	Dr. Pushpa S K	A Blockchain based approach to secure the Human Ethical Data from Diagnostic Centers	202241007014	25-02-2022
4	Dr. Swetha M S	Predicting the user preferences on Ecommerce Sites using Machine Learning Approach	202241003961	04-02-2022
5	Prof. Girish Babu C N & Prof. Chandrashekhar K T	Novel Hybrid Lightweight Framework Logical Security Devices For Internet Of Things	202141027418	02-07-2021
6	Prof. Swetha M S	Indian Crop And Fertilizer Recommendation System Using Ai And Machine Learning Techniques	202141032290	23-07-2021
7	Prof. Vinutha K	Mobile Railway Track Fault Detection System With Internet Of Thing And Machine Learning	202141000383	05-01-2021
8	Dr. Manjunath TN	An Alert System For Railway Track Breakage	201941044720	08-09-2020

Table 5.7.3 (B) List of Products Developed

SL. NO	NAME OF THE PRODUCT	DESCRIPTION
1	BMS Institute Mentoring System (BIMS)	<p>The system is equipped with the management of all the student and faculty data right from the time they join college. The marks and daily attendance of students can be fed into the system and reports be generated at any point of time.</p> 
2	Accounts Software	<p>The Accounts Software was developed to make the entire process of fee submission and other account related work more efficient, Including Challan generation.</p> 
3	Admission Data Entry System	<p>The Admission Data Entry system was developed with the motive to simplify admission process by reducing the queue of students and to maintain a single master database by capturing all the information of the students right from the time they join college.</p> 
4	Techsaransh	<p>Techsaransh is an online project depository focused on automatizing the process of consolidating and printing the collection of all final year projects along with its abstracts.</p> 

- In house project development team has developed applications required for the institution such as BIMS, Staff Recruitment, Admission, Challan Management System and Moodle setup. The developed projects are deployed in AWS cloud.
- Lab manuals and instructional material related to a particular subject, prepared by course coordinator sent to students via e-mail, ICT tools like google classroom.
- Under the guidance of faculty members all Students should carry out at least two mini projects in a semester. During BMSIT open day, students demonstrated their working models of mini projects.
- Project Based Learning (PBL) is introduced from second year itself where students are guided in developing projects in a team. <https://bmsit.ac.in/dept/pbl/information-science-and-engineering#gsc.tab=0>

- **Research laboratories**

SR NO	FACILITY NAME	DETAILS	REASON(S) FOR CREATING FACILITY	AREAS IN WHICH STUDENTS ARE EXPECTED TO HAVE ENHANCED LEARNING	RELEVANCE TO POS/PSOS
1	IOT Kits	Helps students and faculty to develop IoT applications	Students carry out projects	IoT Projects	PO5, PS01, PS02
2	E-Studio	Helps Faculties to Record their Lectures which helps students access from anywhere anytime	Facilitates an online platform to access the material	Online access to material	PO5, PO10
3	Arohan Lab/BICEP	Helps Students and researchers to develop applications	Resource Sharing (All hardware Components are available)	Resource sharing (Hardware Kits)	PO5, PO9, PO10, PS01, PS02
4	Ui Path Studio	Helps Students and Faculty to develop automation projects	Provides a platform for developing automation Projects	Automation Projects	PO5, PS01
5	Drone	Students can create Drone projects	Provides a platform to work on drone projects	Drone Projects	PS01.PS02
6	Hadoop Cluster	Students and researchers do projects on Big data	To Provide a platform for students and researchers to work on Big data	Big Data Projects	PO5, PS01
7	MATLAB R2022b	Help Students and faculties to develop programs	To provide a platform for students and researchers to work on programs	Image Processing Projects	PO5, PS01

8	E-Yantra	Help Students and faculties to develop projects	To provide a platform for students and researchers to work on programs	Multidisciplinary Projects	PO5, PS01, PS02
8	Selenium and Jira	Helps students and researchers to do testing and divide the work based on the tasks	To provide an online platform for students and researchers to work on automated testing environment	Automated testing environment	PO5, PS01
9	Maria DB on cloud	Helps students and researchers to work on SQL Queries'	To provide an online platform to students	Online platform	PO5, PS01, PS02
10	Oracle Academy	Help Students and faculties to execute SQL Queries	To provide a platform to execute SQL queries	Database Projects	PO5, PS01
11	Automation Anywhere	Helps Students and Faculty to develop automation projects	Provides a platform for developing automation Projects	Automation projects	PO5, PS01
12	CUDA Jetson Kit	Students and researchers do projects in parallel programming, Machine Learning	To provide a platform to students/ Researchers with latest tools and technologies	Parallel Processing Projects	PO5, PS01, PS02

- **Instructional materials**

The Department has its own library having **144** Titles and **157** volumes. BMSIT&M Library is a resource center for teaching, learning & research. Library is spread over two floors with 605 seating capacity, state of art digital library, E-Learning Centre, Video Conference Room, Online class room with recording facility, Students Discussion rooms, Faculty discussion room, and Books & Stationery shop are available in the Ground Floor while Stack Area, Reference Section, Circulation Counter, OPAC Search, Journals/Magazines and Newspaper Section are made available in Lower Level of the library building.

Library holds a hybrid collection of printed as well as electronic resources which include books, journals, databases, audio -visuals, CDs/DVDs, e-books, e-journals, reports, course materials, previous years question papers, Bound Volumes, Project Reports, case studies, conference proceedings, training manuals, etc. As the e-journals access is IP based, the stakeholders can take benefit of this facility from anywhere in the campus at any time. Some of them include:

Currently the library has 8908 titles, 44193 volumes, 73 print journals, provides access to Electronic Resources, newspapers and business magazines, and 4000 multimedia resources. Library holds over 1272 titles, 7122 volumes exclusively for the Computer Science and Engineering department. Also the Institution has membership of ISTE, CSI, IEEE. Digital Library comprises 50 computers with Internet facility. Free Book Bank facility for SC/ST students and book bank facility for other category of students at the nominal price is also provided to fulfill their academic needs.

Reprography and printing facilities are available in the college premises. Books are arranged subject wise and department wise and personal attention is given for fulfilling their library related needs.

Open access facility is available. Library Staff motivate the students for open access to inform them about the latest arrivals. Separate Reference, Periodical, Circulation, Digital Library section and reading room facility is available in the Library. In addition to the central Library, each department has its own Departmental Library to facilitate easy access to the faculty, students and research scholars. Video courses are available online which includes:

NPTEL, Link: <http://nptel.ac.in/course.php?disciplineId=112>

MIT Open course, Link: <https://ocw.mit.edu/index.htm>

Sl. No.	Database Name	Website
1	IEEE Xplore Digital Library	http://ieeexplore.ieee.org/ (http://ieeexplore.ieee.org/)
2	Springer (E-Journals & E-Books)	http://link.springer.com/ (http://link.springer.com/)

- **Working models/charts/monograms etc.**

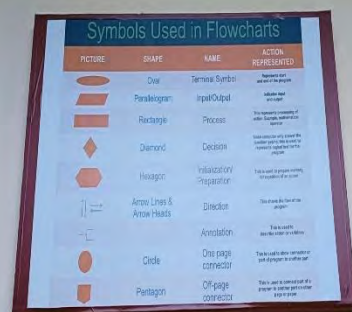
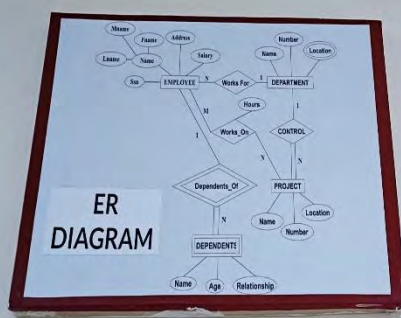
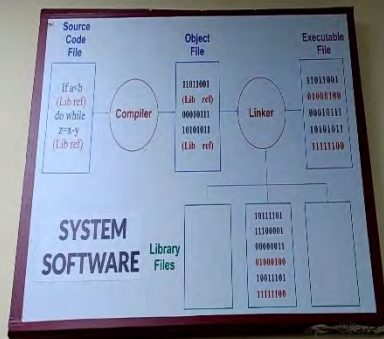
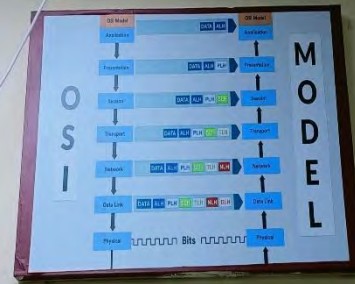
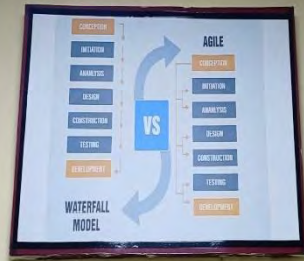
As part of their courses in each semester, students will complete a project-based learning and these will be graded using the rubrics. Open Day will be organized at the END of each semester, PROJECT EXHIBITIONS are held to display the project-based learning (PBL) work completed by students. The project demonstrates the students' capacity to put their knowledge of various real-world issues to use in solving them. Numerous initiatives in the burgeoning fields of Artificial Intelligence & Machine Learning, Network Information Security, Network Security and Forensics, Parallel Computing, Computer Architecture, Voice Security, Propagation Channel Modeling, Brain Computer Interface, Cloud Computing, Data Analysis and Image Processing, Soft Computing, Wireless Networks, Parallel Computing, Cyber Security, Computer Network, Software Engineering, Cloud Computing, etc. A few working models are available in the link provided below:

PBL: <https://bmsit.ac.in/dept/pbl/information-science-and-engineering#gsc.tab=0>

Charts of various technologies related to experiments and subjects are used for study and explanation purpose.

List of Charts

Sl.No.	Name of Charts
1	OSI Layer
2	SDLC
3	Network Protocols
4	Water Fall Model
5	Flow Chart Symbols
6	ER diagrams
7	OS functionalities
8	Compiler Phases
9	UML diagram



5.7.4. Consultancy (from Industry) (5)

(Provide a list with Project Title, Funding Agency, Amount and Duration)

Funding amount (Cumulative during CAY_{m1}, CAY_{m2} and CAY_{m3}):

Amount > 10 Lakh	- 5 Marks
Amount >= 8 Lakh and <= 10 Lakh	- 4 Marks
Amount >= 6 Lakh and < 8 Lakh	- 3 Marks
Amount >= 4 Lakh and < 6 Lakh	- 2 Marks
Amount >= 2 Lakh and < 4 Lakh	- 1 Mark
Amount < 2 Lakh	- 0 Mark

Table 5.7.4(A) Consultancy Details

SL. NO.	NAME OF FACULTY	YEAR	TYPE / TITLE	COMPANY NAME	DURATION	AMOUNT (RS)
1	Dr. Usha B A	2022-2023	Consultancy	Indian Techkeys	1 Month	Rs 20,000/-
2	Dr. Manjunath T N	2021 - 2022	POC Creation for data migration	Technodysis Pvt. Ltd.	3 Months	Rs. 3,00,000/-
3	Dr. Usha B A	2019 – 2020	EDP –AI	L&T Infotech	1 day	Rs. 12,000/-
4	Prof. Gireesh Babu C N		Mathematics for Data Science	L&T Infotech	10 days	Rs. 82,500/-
Total						Rs. 4,14,500/-

5.8 Faculty Performance Appraisal and Development System (FPADS) (30)

Faculty members of Higher Educational Institutions today have to perform a variety of tasks pertaining to diverse roles. In addition to instruction, Faculty members need to innovate and conduct research for their self-renewal, keep abreast with changes in technology, and develop expertise for effective implementation of curricula. They are also expected to provide services to the industry and community for understanding and contributing to the solution of real life problems in industry. Another role relates to the shouldering of administrative responsibilities and co- operation with other Faculty, Heads-of-Departments and the Head of Institute. An effective performance appraisal system for Faculty is vital for optimizing the contribution of individual Faculty to institutional performance.

The assessment is based on:

- A well-defined system for faculty appraisal for all the assessment years (10)

An effective implementation of Performance Based Appraisal System (PBAS) through online submission is implemented: **APPENDIX_5.8**. The Institution has implemented self-performance appraisal system where, faculty members provide data pertaining to feedback, pass percentage, research work, Department and instructional responsibility. The Performance Based Appraisal System (PBAS) through online submission is implemented and available in the college website. PBAS forms are designed for various

cadre with defined weightages in Course Results and Feedback, Research & Development and Consultancy, Innovation in Teaching, Attitude and Commitment Institutional responsibilities.

Table 5.8 (A) Weightage of Marks in PBAS

Cadre	Section 3 Result and Feedback	Section 4		Section 5 Contribution to the Department	Section 6 Contribution to the Institution	Total Mark s	Min Marks
		Research Publicati on	Conferenc e Attended				
Assistant Professor	30/40	05/45	05/35	15/20	5/10	150	60/150
Associate Professor	22/30	05/45	05/35	15/20	13/20		
Professor	22/30	05/45	05/35	15/20	13/20		
HOD	15/20	05/45	05/35	-	35/50		
Dean / VP	15/10	05/45	05/35	-	35/50		

Its implementation and effectiveness (20)

HOD identifies faculty with less than 65 marks in PBAS. Principal, AO and HOD counsel the concerned faculty for justification and give necessary suggestions for improvement in the performance. Motivate the faculty members to attend more and more Faculty Development Programs and workshops. If any faculty gets students feedback less than 60 percent (six times continuously), his/her service is terminated as per the college policy.

Career Advancement Scheme

Table 5.8 (B) Faculty Appraisal under CAS

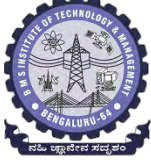
Sl. No.	Faculty Name	Year	CAS	Existing AGP	Revised AGP
1	Prof. Mahalakshmi S	2023	S1 – S3	Rs. 6,000/-	Rs. 8,000/-
2	Prof. Vinutha K	2023	S1 – S2		Rs. 7,000/-
3	Prof. Swetha M S	2022	S1 – S2		Rs. 7,000/-
4	Prof. Shanthi D L	2021	S1 – S2		Rs. 7,000/-
5	Prof. Gireesh Babu C N	2021	S1 – S2		Rs. 7,000/-

5.9 Visiting/Adjunct/Emeritus Faculty etc. (10)

Adjunct faculty also includes Industry experts. Provide details of participation and contributions in teaching and learning and /or research by visiting/adjunct/Emeritus faculty etc. for all the assessment years:

- Provision of inviting/having visiting/adjunct/emmeritus faculty (1)
- Minimum 50 hours per year interaction with adjunct faculty from industry/retired professors etc. (Minimum 50 hours interaction in a year will result in 3 marks for that year; 3 marks x 3 years = 9 marks)

Visiting Faculty members or industry experts were called for giving expert talks and for partial delivery for identified subjects.



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Under VTU)

Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CRITERION - 6

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

CRITERION 6	Facilities and Technical Support	80
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6.1. Adequate and well-equipped laboratories, and technical manpower (30)

Number of Laboratories = 05

Number of Technical Staff = 06

Table B.6.1

Sr. no	Name of the laboratory	No. of students per setup (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.	Linus Torvalds Lab	1 computer system per Student 39 Students per batch.	Computers with i7/I 5 Processor 1 TB/500 GB hard Disk 8/16/32 GB RAM 256/512 GB SSD 11th Generation LAN Switch :48 port switch (Manageable), Make: Extreme Printer : HP laserjet M1136 Projector : Optoma Projector	Utilized (36 Hours)	Mr Liju C	Asst. Instructor	Diploma in CSE
2.	Tim Berners Lee Lab	1 computer system per Student 38 Students per batch	Computers with i7 Processor 1 TB hard Disk 8/16/32 GB RAM 512GB SSD 6th Generation LAN Switch :48 port switch (Manageable), Make: Extreme Printer : HP MFP M1005 printer laserjet. Projector : Optoma Projector	Utilized (30 Hours)	Mr.Raju T Mr Harish S	Asst. Instructor Asst. Instructor	BE in CSE BE in ISE

3	Guido van Rossum Lab	1 computer system per Student 39 Students per batch	Computers with i 7 Processor 1 TB hard Disk 16/32 GB RAM 512GB SSD 10th Generation/12th Generation LAN Switch :48 port switch (Manageable), Make: Extreme Printer: HP MFP M1005 printer laserjet. Projector: Optoma Projector.	Utilized (36 Hours)	Mr. Ashok Kumar P	Asst. Instructor	Diploma in CSE
4	Dennis Ritchie Lab	1 computer system per Student 35 Students per batch	Computers with i 7 Processor 1 TB SATA HDD hard Disk 32 GB DDR5 RAM 512GB SSD 12th Generation LAN Switch :48 port switch (Manageable), Make: Extreme Projector: Epson Projector.	Utilized (35 Hours)	Mr. Sharath Kumar K	Asst. Instructor	Diploma in CSE
5	Edgar F Codd		Computers with i 7 Processor 1 TB SATA HDD hard Disk 32 GB DDR5 RAM 512GB SSD 12th Generation LAN Switch :48 port switch (Manageable), Make: Extreme Projector: Optoma Projector.		Mr Radhakrishna G K	Asst. Instructor	BE in CSE

- The following tables provides the detailed configuration of the systems in various Labs:

Linus Torvalds lab: Computers Specifications (22)

SI No	Equipment	Specification
1	Company Name	HP
2	CPU Model	Prodesk 400 G2
3	Processor	Intel Core i7
4	Speed	3.60 GHz
5	RAM	8 GB DDR3
6	Hard Disk	1 TB + 256 SSD
7	Monitor	21.5 inches

Linus Torvalds Lab: Computers Specifications (16)

SI No	Equipment	Specification
1	Company Name	HP
2	CPU Model	Elit Tower VPro
3	Processor	Intel Core i7
4	Speed	2.60 GHz
5	RAM	32 GB DDR4
6	Hard Disk	1TB + 512 SSD
7	HP Monitor	22 inches

Linus Torvalds Lab: Computers Specifications (01)

Sl No	Equipment	Specification
1	Company Name	HP
2	CPU Model	Prodesk 400 G2
3	Processor	Intel Core i5
4	Speed	2.60 GHz
5	RAM	8 GB DDR3
6	Hard Disk	500 GB HDD + 512 SSD
7	HP Monitor	21.5 inches

Tim Berners Lee Lab: Computer Specification (01 Server)

Sl No	Equipment	Specification
1	Company Name	HP
2	CPU Model	HP 280 G2
3	Processor	Intel Core i7
4	Speed	3.4 GHz
5	RAM	16 GB DDR4
6	Hard Disk	1TB
7	Monitor	21.5 inches

Tim Berners Lee Lab: Computer Specification (33)

Sl No	Equipment	Specification
1	Company Name	HP
2	CPU Model	HP 280 G2
3	Processor	Intel Core i7
4	Speed	3.4 GHz
5	RAM	16 GB DDR4
6	Hard Disk	1TB
7	Monitor	21.5 inches

Tim Berners Lee Lab: Computer Specification (02)

Sl No	Equipment	Specification
1	Company Name	HP
2	CPU Model	HP 280 G2
3	Processor	Intel Core i7
4	Speed	3.4 GHz
5	RAM	4 GB DDR4
6	Hard Disk	1TB
7	Monitor	21.5 inches

Tim Berners Lee Lab: Computer Specification (02)

Sl No	Equipment	Specification
1	Company Name	HP
2	CPU Model	HP 280 G2
3	Processor	Intel Core i7
4	Speed	3.4 GHz
5	RAM	32 GB DDR5
6	Hard Disk	1TB
7	Monitor	21.5 inches

Guido van Rossum Lab: Computer Specification (37)

SI No	Equipment	Specification
1	Company Name	HP
2	CPU Model	ProDesk 4000 G7
3	Processor	Intel Core i7
4	Speed	2.90 GHz
5	RAM	16 GB RAM
6	Hard Disk	1TB
7	Monitor	22 inches

Guido van Rossum Lab: Computer Specification (02)

Sl No	Equipment	Specification
1	Company Name	HP
2	CPU Model	ProDesk 4000 G7
3	Processor	Intel Core i7
4	Speed	2.90 GHz
5	RAM	32 GB RAM
6	Hard Disk	1TB
7	Monitor	22 inches

Dennies Ritche (35 Systems)

SI No	Equipment	Specification
1	Company Name	HP
2	CPU Model	Prodesk 800 G9
3	Processor	Intel Core i7
4	Speed	3.60 GHz
5	RAM	32 GB DDR3
6	Hard Disk	1 TB HDD 512 SSD
7	Monitor	22 inches

Edgar F Codd (35 Systems)

Sl No	Equipment	Specification
1	Company Name	HP
2	CPU Model	Prodesk 800 G9
3	Processor	Intel Core i7
4	Speed	3.60 GHz
5	RAM	32 GB DDR3
6	Hard Disk	1 TB HDD 512 SSD
7	Monitor	22 inches, LED

The Department has 4 Desktop and 1 Laptop (Intel core i5 CPU@1.60GHz, 8GB RAM, 1 TB HD) used by Faculties

Desktop (SDA)

Sl No	Equipment	Specification
1	Company Name	HP
2	CPU Model	ProDesk 4000 G7
3	Processor	Intel Core i7, 10 gen
4	Speed	2.90 GHz
5	RAM	16 GB RAM
6	Hard Disk	1TB
7	Monitor	22 inches, LED

Desktop (HOD)

Sl No	Equipment	Specification
1	Company Name	HP
2	CPU Model	Elite Tower Model
3	Processor	Intel Core i7, 12th gen
4	Speed	2.90 GHz
5	RAM	32 GB RAM
6	Hard Disk	1.5 TB
7	Monitor	22 inches









Desktop (Prof. Vinutha K)










Sl No	Equipment	Specification
1	Company Name	HP Compaq
2	CPU Model	6200 Pro
3	Processor	Intel Core i5, 2nd gen
4	Speed	3.30 GHz
5	RAM	4 GB RAM
6	Hard Disk	500 TB
7	Monitor	22 inches

Desktop (Dr. Usha)

Sl No	Equipment	Specification
1	Company Name	HP Pro Desk
2	CPU Model	280G2
3	Processor	Intel Core i7, 6th gen
4	Speed	3.40 GHz
5	RAM	16 GB RAM
6	Hard Disk	1 TB
7	Monitor	22 inches

Software Used

Sl No	Software / OS used	Open source /Licensed Software's	
1	Windows 10/11	CASA Agreement	
2	Matlab2022b	Licensed	
3	Office 365	CASA Licensed	
5	Oracle	Licensed	
6	Ubuntu	Open source	
7	Fedora 10	Open source	
8	Network Simulator	Open source	
9	JDK 1.8	Open source	

10	Java Eclipse Neon	Open source	
11	Python	Open source	
12	LAMP	Open source	
13	XAMPP	Open source	
14	VMware	Open source	
15	Ui Path Studio	Open source (Partnered ship with Academic Alliance)	
16	MariaDB	Open source	
17	Xylink	Open Source	
18	hadoop	Open Source	

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25)

Tabel B 6.2 provides the information created to improve the learning Experience in the Laboratories

Table B.6.2

Sr No	Facility name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	IOT Kits	Helps students and faculty to develop IoT applications	Students do projects	Utilized	IoT projects	PO5, PS01, PS02
2	E-Studio	Helps Faculties to Record their Lectures which helps students access from anywhere anytime	Provides an online platform to access the material	Utilized	online access to material	PO5, PO10
3	Ui Path Studio	Helps Students and Faculty to develop automation projects	Provides a platform for developing automation Projects	Utilized	automation projects	PO5, PS01

4	Drone	Students can create Drone projects	Provides a platform to work on drone projects	As per their convenience	Drone projects	PSO1.PSO2
5	Hadoop Cluster	Students and researchers do projects on Big data	To Provide a platform for students and researchers to work on Big data	According to their convenience	Big data	PO5, PSO1
6	MATLAB R2022b	Help Students and faculties to develop programs	To provide a platform for students and researchers to work on programs	Utilized	Image processing.	PO5, PSO1
7	E-Yantra	Help Students and faculties to develop projects	To provide a platform for students and researchers to work on programs	Utilized	Multidisciplinary Projects	PO5, PSO1, PSO2
8	Selenium and Jira	Helps students and researchers to do testing and divide the work based on the tasks	To provide an online platform for students and researchers to work on automated testing environment	As per their convenience	Automated testing environment	PO5, PSO1

9	Maria DB on cloud	Helps students and researchers to work on SQL Queries'	To provide an online platform to students	According to their convenience	Online platform	PO5, PS01, PS02
10	Automation Anywhere	Helps Students and Faculty to develop automation projects	Provides a platform for developing automation Projects	Utilized	Automation projects	PO5, PS01
11	CUDA Jetson Kit	Students and researchers do projects in parallel programming, Machine Learning	To provide a platform to students/ Researchers with latest tools and technologies	According to their convenience	Parallel Processing	PO5, PS01, PS02

6.3 Laboratories Maintenance and overall ambiance (10)

The Department is equipped with sophisticated laboratories and state of art electronic equipment to satisfy the curriculum. Salient features regarding maintenance and ambiance of laboratory facilities are as follows

Laboratory Maintenance:

1. Informative notice boards containing safety, Do's & Don'ts are maintained.
2. Well trained technical staff are available for maintenance of computers and softwares.
3. Adequate Internet facility is available for students and Faculty usage (700 Mbps).
4. Department has a UPS of 40 KVA.
5. As per the requirements minor repairs are carried out by the technical staff.
6. Chart assisted learning to demonstrate the process is available.
7. Major repairs are outsourced as per the institutional policy.
8. Student's login is maintained in all laboratories.
9. Department maintains a stock register of equipment purchased.
10. Teaching faculty and two technical staff are in-charge of the overall functioning / maintaining of each lab.
11. All the computers are protected with antivirus software.
12. First aid kits are available in all laboratories.
13. Fire extinguishers are available on all floors.
14. All the systems are connected through LAN.

Overall Ambience

1. Department has full-fledged State of Art Labs to cater UG courses as per curriculum requirements.
2. All Labs have good Ventilation.
3. Racks are available in each Lab for students to place their belongings
4. Each Lab is equipped with white/black board, computer, Internet, and such other amenities.
5. Each Lab is equipped with Projectors and Printers to aid the teaching process.
6. Lab manuals are prepared and are available in soft and hardcopy.
7. All Labs are well furnished.
8. Lab assessments are done as per the lab rubrics.
9. Vision, Mission and Program Outcome are very well displayed in the Lab.
10. Drinking water facility is available in each floor
11. The Department Library are used to cater the needs of the students

Sample Photos:



Corridor space





Dept of ISE ambiance



Hod cabin







First-Year-classroom







Edgar F Codd

6.4. Project Laboratory (5)

Project Lab of 64 sqmts is dedicated to carry out projects of students and faculty members. It has Wi-Fi access points to facilitate internet.

Sr. no	Name of the laboratory	No. of students per setup (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	Edgar F Codd	35 students per batch	Computers with i 7 Processor 1 TB SATA HDD hard Disk 32 GB DDR5 RAM 512GB SSD 12th Generation LAN Switch :48 port switch (Manageable), Make: Extreme Projector: Optoma Projector.	Utilized	Mr. Sharath Kumar K	Asst. Instructor	Diploma in CSE

6.5. Safety Measures in the Laboratory (10)

Safety Measures are maintained as per the table B.6.5

Sr. No	Name of the Laboratory	Safety measures
1	Linus Torvalds	1.Do's and Don'ts Chart is displayed in all the Labs. 2. First aid box is available. 3.Fire extinguisher is fixed on each floor. 4. CCTV cameras are installed in all labs. 5. Permission denied for pen drives. 6. Computers should be turned off properly before leaving the lab. 7. Students must remove their foot wears before entering the lab. 8. All Systems have LED display screens. 9. MCBs are available to control power fluctuations
2	Tim Berners Lee	
3	Guido van Rossum	
4	Dennis Ritche	
5	Edgar F Codd	

Table B.6.5



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

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CRITERION VII	Continuous Improvement	50
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7. Continuous Improvement (50)

7.1. Actions taken based on the results of evaluation of each of the COs,POs & PSOs (20)

Identify the areas of weaknesses in the program based on the analysis of evaluation of COs, POs & PSOs attainment levels.

Measures identified and implemented to improve POs& PSOs attainment levels for the assessment year including curriculum intervention, pedagogical initiatives, support system improvements, etc.

The Department's Programme Assessment Committee (PAC) reviews the attainment levels of POs and PSOs and analyses the discrepancies between target and actual attainment levels. The numerous steps that should be performed to raise the achieved attainment levels and get them closer to the target levels are suggested as well as listed.

2017-21			
60% of the target level with L1 =60%, L2=55% & L3=50% is considered as attained.			
	Target Level	Attainment Level	Observations
PO1	1.6	2.02	Target attained. The strong foundation of theoretical and applied understanding of physics and mathematics required by Information Science and Engineering curriculum is something that students learn throughout their entire degree.
	Engineering Knowledge: Apply the knowledge of Mathematics, Science, Engineering fundamentals and an engineering specialization to the solution of complex engineering problems		
Action1	Students are encouraged to solve problems based on numerical concepts.		
Action2	Internal questions contain case study and innovative to enhance their cognitive level are solved by applying basic engineering knowledge		
Action 3	Students are motivated to take-up tutorial classes where numerals are solved and practiced in more number.		
PO2	1.68	2.03	Target attained. The ability to solve problems and analyze data acquired in first and second-year courses helped students understand engineering science and apply the ideas in practical implementations.
	Problem Analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, Natural sciences and engineering sciences.		
Action1	Case studies & innovative questions have been incorporated in the question paper to trigger students' analytical ability.		
Action 2	Informed students on current research topics to help them grasp current business trends.		
Action 3	Encouraged students to practice analytical thoughts through mini and major projects.		
PO3	1.53	1.95	Target attained. Students have taken up social relevant and environmental concerned projects.
	Design/ development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal and environmental considerations.		
Action1	Promoting mini / major projects which are social relevant and address environmental issues.		
Action2	Adopt software engineering process for project implementation.		
Action 3	Open courses are offered in emerging areas to understand the process of designing and solving real world software problems.		

PO4	1.35	1.85	Target attained. Project Based Learning (PBL) has made mandatory for all the students. Further, number of students' publications and research articles need to be improved.
	Conduct investigation of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the Information to provide valid conclusions.		
Action1	Motivate students to go through numerous journals, conference papers to know current research domains and to identify unsolved problems.		
Action2	Encourage students to solve the current research problems and sustainable development goals.		
PO5	1.57	1.91	Target attained. Students are exposed to various modern tools like Android Studio, Jupiter, NS2, UiPath etc.
	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern Engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.		
Action1	Students are encouraged to use modern tools in executing PBL, mini and major projects.		
Action2	Students are encouraged to complete courses like MOOC related modern tool usage.		
Action 3	Students are taught with modern ICT teaching aids.		
PO6	0.93	1.96	Target attained. The application of information science is closely associated with societal wellbeing, health & safety, cultural and legal issues, which helps in their betterment.
	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.		
Action1	More projects are encouraged based on societal and environmental issues		
Action2	Participation in various contest for designing varied solutions for societal and environmental issues are promoted		
Action 3	Students are encouraged to participate in social clubs like NSS, NCC, and eco-club OIKOS club.		
PO7	1.53	1.91	Target attained. Students are educated on the significant environmental and sustainable problems. Digital communications are practiced in the department.
	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts demonstrate the knowledge of, and for sustainable development.		
Action1	More projects are encouraged based on societal and environmental issues		
Action 2	Students are encouraged to participate in more environmental awareness programs to have a sense of responsibility among themselves.		
PO8	1.35	1.79	Target attained. Students' performance in developing their technical knowledge along with ethical and moral importance.
	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice		
Action1	Mitigation of requisite ethics standards through various training sessions		
Action 2	Plagiarism report made mandatory for project and seminar reports.		
PO9	1.54	2.02	Target attained. Students are ready to work individually and in a team.
	Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings		
Action1	More students are encouraged to participate in organizing various events like Departmental fest and college fest		
Action 2	Individual and team work was observed during lab sessions, individual & group assignments, PBL, mini and major project works/multi-disciplinary projects.		
PO10	1.53	1.74	Target attained.

			Soft skill trainings are imparted to the students to enhance the communication through group discussions and presentations.
	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.		
Action1	Soft skills trainings are provided from 3 rd semester onwards which helps students to communicate effectively.		
Action2	During project and seminar presentations, the presentation skills are monitored by the faculties and necessary improvements conveyed.		
Action 3	Students are encouraged to prepare quality project reports under the guidance of faculties.		
PO11	1.25	1.70	Target attained. There are courses in the curriculum that teach students how to apply managerial concepts to their work, including financial considerations.
	Project management and finance: Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and Leader in a team, to manage projects and in multidisciplinary environments.		
Action1	Managerial skills are emphasized through their final year projects and software engineering projects.		
Action 2	Students are encouraged to prepare project proposals with the guidance of faculties for various funding agencies.		
PO12	1.41	1.80	Target attained. More focus to be given on lifelong learning
	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.		
Action1	Students are encouraged to take-up societal related activities individually which gives them lifelong learning experience.		
Action2	Students are assessed through flip classes, collaborative learning, cooperative learning etc.		
Action 3	More open ended experiments, PBL, projects, seminars provide them lifelong learning experience.		
Action 4	Students are motivated to register for competitive examinations and hackathons.		

PSOs	Target Level	Attainment Level	Observations
PSO 1: Apply the Knowledge of Information technology to develop software solutions.			
PSO 1	1.52	1.80	Target attained. During their degree program, students build a strong understanding of software development practices.
Action Plan:	Action 1: Student are encouraged to inculcate software engineering concepts in their projects. Action 2: Expert talks/ seminars/ partial deliveries from industry experts are organized.		
PSO 2: Design and develop hardware systems, manage and monitor resources in the product life cycle.			
PSO 2	1.34	1.62	Target attained. Students need more exposure to hardware systems.
Action Plan:	Action 1: Students should be trained to handle real life complex problems related to hardware and manage & monitor resources in the product life cycle. Action 2: Students are encouraged to take-up hardware related projects in PBL/minor/major projects.		

2018-22

	Target Level	Attainment Level	Observations
PO1	1.55	2.22	Target attained. Throughout their entire degree, students acquire a robust knowledge of theoretical and practical aspects of physics and mathematics, forming a solid foundation for the Information Science and Engineering curriculum.

	Engineering knowledge: Apply the knowledge of Mathematics, Science, Engineering fundamentals and an engineering specialization to the solution of complex engineering problems		
Action1	Theory classes, tutorial and laboratory classes were conducted to introduce and enable to understand the concepts of basic science and engineering subjects and its applications were deliberated.		
Action2	Laboratory Problems with added complexity are given for practice. Higher level cognitive assignments with problems were given for practice theory.		
PO2	1.64	2.22	Target attained. The proficiency in problem-solving and data analysis gained from their initial and second-year courses enabled students to grasp engineering science concepts and effectively apply them in practical real-world scenarios.
	Problem analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, Natural sciences and engineering sciences.		
Action1	Concepts taught in the theory are realized in the practical by means of analyzing the given problem, writing programs, evaluating the concept and arriving at conclusions which reinforce their class room understanding.		
Action 2	Case studies & innovative questions have been incorporated in the question paper.		
PO3	1.57	2.32	Target attained. Students have taken up social relevant and environmental concerned projects.
	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.		
Action1	Motivated students to identify issues in some theoretical areas or modern domains, provide new recommendations based on literature reviews. Encouraged them to create and write unique algorithms for unique issues or new contexts, and make sure that non-domain concerns are taken into account.		
Action 2	Students are encouraged to organize and take part in hackathons, technical competitions, and project-exhibition (open day) events to develop understanding of the design of several iterations of solutions.		
PO4	1.44	2.67	Target attained. It is observed that student have taken up the projects with research oriented approach.
	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the Information to provide valid conclusions.		
Action1	Student workshops and hands on sessions are conducted to improve problem solving ability.		
Action2	Emphasized more on real-time projects.		
PO5	1.7	2.26	Target attained. Students are exposed to various modern tools like Android Studio, Jupiter, NS2, UiPath etc.
	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern Engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.		
Action1	Encouraged students to use the latest tools for modeling, analyzing project work, documentation and report writing such as UMLet, Latex etc.		
Action2	Encouraged to automate various complex engineering problems and to participate in events like project proposal contests such as “Anveshana”, hackathons, E-Yantra.		
PO6	1.11	2.10	Target attained. The practical use of information science has a strong connection to the betterment of society, encompassing aspects like well-being, health and safety, cultural factors, and legal considerations.
	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.		
Action1	More projects are encouraged based on societal, health & safety and legal concerns along with engineering professional practices in their PBL/Internship/Project/ seminar. Societal concerned with interdisciplinary projects are identified and submitted to KSCST/ KSTA for recognition and funding.		

Action2	Students are encouraged to showcase their projects in project- exhibition (open day). These projects are adjudicated by industry experts and academicians. Entrepreneurs/ start up meets inspires the potential ones to get motivated to take societal concerned projects.		
Action 3	Institution has established E-Yantra club under which students can analyze the functionalities of the various components of the robots. They can design a robot using electronic design automation (EDA) tools and programming techniques to do a specific task. Students take part in various competitions held under robotics club in and outside the institute.		
Action 4	Students are encouraged to participate in social clubs like NSS, NCC, and eco-club OIKOS club.		
PO7	1.5	2.62	Target attained. Students are educated about critical environmental and sustainability challenges, and they also engage in digital communication practices.
	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for Sustainable development.		
Action 1	Student projects which have some potential in solving environment issues are identified and mentored. Such projects are encouraged and submitted to KSCST for recognizing and funding.		
Action 2	The Institution has increased the involvement of students in several environment-related activities with the active participation of students through the outreach programs through Eco-club and AICTE activities.		
Action 3	Best Practices like Rain water harvesting, Sewage treatment plants, proper waste management procedure are employed in the college.		
Action 4	The students observe that the BMSIT&M campus is totally eco-friendly. The green campus motivates them to go with ecofriendly practices.		
PO8	1.47	2.52	Target attained. The students shows proficiency in technical advances acumen in conjunction with their commitment to ethical and moral principles.
	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.		
Action1	Students are encouraged to adopt the best software engineering practices and ethics in the laboratory, PBL, Projects, Assignments and Report writing and Delivering the technical/research Seminars including examination that is mitigation of requisite ethics standards through various learning/training sessions.		
Action 2	Awareness about professional ethics is created by organizing talks, interactions and counselling. Plagiarism checking software tools is made available for all departments' students and faculty members for checking integrity maintained in their communication. It also made plagiarism check mandatory for project reports.		
PO9	1.62	2.60	Target level has been achieved. Students are ready to work individually and in a team.
	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.		
Action 1	Students work in team as a member and leader including focus on Interdisciplinary projects.		
Action 2	More students are encouraged to participate in organizing various events like departmental fest and college fest		
PO10	1.56	2.27	Target attained. Students are provided with soft skills training to boost their communication abilities through activities like group discussions and presentations.
	Communication: Communicate effectively on complex engineering activities with the engineering Community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.		
Action1	Students are motivated to present their technical or research work, create well-organized reports, and engage with their community by sharing project details through outlets like online portals, conference papers, and journals. Faculty members offer mentorship to enhance the students' skill development in these areas.		
PO11	1.5	2.42	Target attained. The curriculum includes courses that instruct students on the application of managerial concepts to their work, including financial aspects.

	Project management and finance: Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and Leader in a team, to manage projects and in multidisciplinary environments.		
Action1	Managerial skills are emphasized through their final year projects.		
Action 2	Students are encouraged to prepare project proposals with the guidance of faculties for various funding agencies.		
PO12	1.5	2.57	Target Level has been achieved. More focus to be given on lifelong learning.
	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.		
Action1	Students are encouraged to take-up societal related activities individually which gives them lifelong learning experience.		
Action2	Students are assessed through flip classes, collaborative learning, cooperative learning etc.		
Action 3	More open ended experiments, PBL, projects, seminars provide them lifelong learning experience.		
Action 4	Students are motivated to register for competitive examinations		

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Design and develop hardware systems, manage and monitor resources in the product life cycle.			
PSO 1	1.61	2.12	Target attained. Throughout their academic journey, students develop a solid grasp of software development methodologies
Action Plan:	Action 1: Students are motivated to integrate software engineering principles into their projects. Action 2: Expert talks/ seminars/ partial deliveries from industry experts are organized.		
PSO 2: Design and develop hardware systems, manage and monitor resources in the product life cycle.			
PSO 2	1.34	1.76	Target attained. Students need more exposure to hardware systems.
Action Plan:	Action 1: Students ought to be educated in managing real-world, intricate hardware-related issues and effectively overseeing and monitoring resources throughout the product life cycle. Action 2: Students are encouraged to take-up hardware related projects in PBL/minor/major projects.		

2019-23 with target 65%

	Target Level	Attainment Level	Observations
PO1	1.86	1.82	Computer engineering curriculum requires the strong foundation of theoretical and practical knowledge of science and mathematics, which the students study during their entire programme in the subjects, but improvement in correlating the theoretical concepts with applications is required
	Engineering knowledge: Apply the knowledge of Mathematics, Science, Engineering fundamentals and an engineering specialization to the solution of complex engineering problems		
Action1	MATLAB course has been introduced for first year students.		
Action 2	Laboratory Problems with added complexity are given for practice. Higher level cognitive assignments with problems are given.		
Action 3	Students are inspired to participate in technical events, and other cocurricular events.		
PO2	1.89	1.89	The ability to solve problems and analyze data acquired will make the students understand engineering science and apply the ideas in practical implementation.
	Problem analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, Natural sciences and engineering sciences.		

Action 1	Case studies & innovative questions have been incorporated in the CIE (Continuous Internal Evaluation) paper		
Action 2	PBL (Project Based Learning) is encouraged so that students are able to solve real world problems.		
PO3	1.85	1.91	Students are encouraged to take up the social relevant and environmental concerned projects as part of their PBL and final year projects.
	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.		
Action 1	Students are encouraged to take up real world problems through final year and PBL projects.		
Action 2	Workshops with hand-on sessions and Open Courses are organized.		
Action 3	Students are encouraged to attend hackathons and technical competitions to design and develop different solutions.		
PO4	1.73	2.03	Efforts are be made to encourage students to use research-based knowledge to formalize the problem statement of projects.
	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the Information to provide valid conclusions.		
Action1	Students are made to work on research based projects where they analyze the data, implement and interpret the results.		
Action2	Students are encouraged to conferences, seminars, workshops to carry out projects in latest research area.		
PO5	1.85	1.96	Students are exposed to various modern tools like Android Studio, Jupiter, NS2, UiPath etc.
	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern Engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.		
Action1	Students are motivated to do MOOC courses related to modern tools.		
Action2	Encouraged students to use the latest tools for modeling, analyzing project work, documentation and report writing such as Latex etc.		
Action 3	Encouraged to automate various complex engineering problems and to participate in events like project proposal contests such as "Anveshana", hackathons, E-Yantra.		
PO6	1.49	1.96	The practical application of information science is closely tied to societal improvement, addressing areas such as welfare, healthcare, safety, cultural influences, and legal implications.
	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.		
Action1	Students are encouraged to identify the issues in the field of health, safety, legal, social and cultural, and are motivated to consider those issues in their mini and major projects. The students' projects are also evaluated by considering these issues as one of the criteria.		
Action2	These projects are exhibited in project exhibition (Open Day) to understand the different solutions for these issues and are adjudicated by industry experts and academicians.		
Action 3	Students are encouraged to participate in social clubs like NSS, NCC, and eco-club OIKOS club, so that students can understand the societal issues and try to provide the solution for the same.		
Action 4	Students are encouraged to participate in social clubs like NSS, NCC, and eco-club OIKOS club.		
PO7	1.49	2.01	Students are educated about critical environmental and sustainability challenges, and they also engage in digital communication practices.
	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for Sustainable development.		
Action 1	Environmental sustainability projects are encouraged. Such projects are identified and are submitted to KSCST for recognition and funding.		

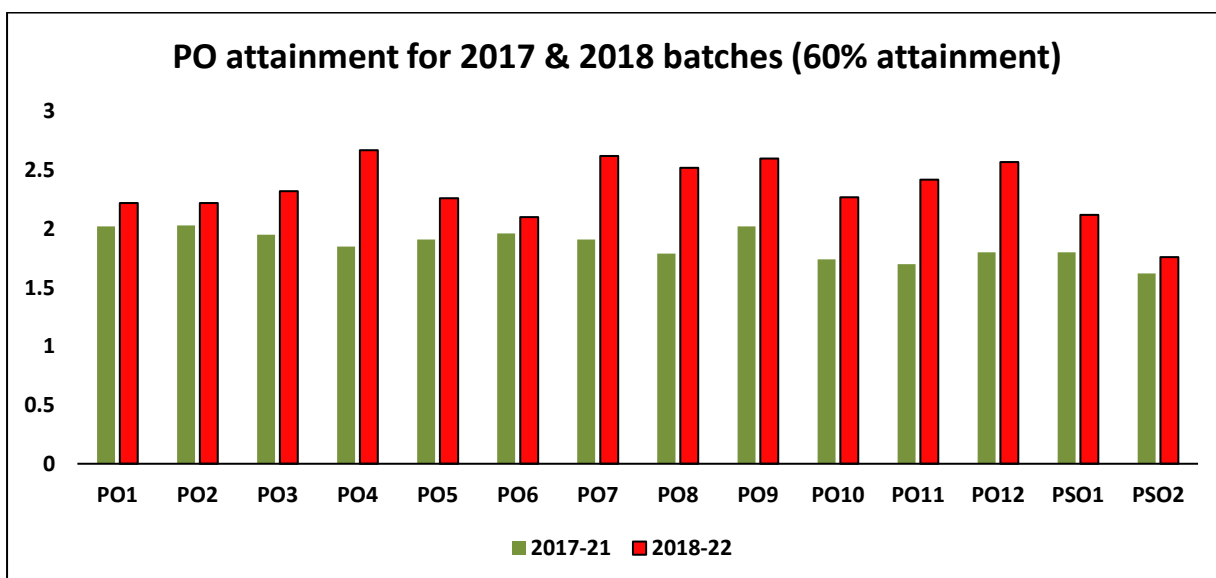
Action 2	The Institution has increased the involvement of students in several environment-related activities with the active participation of students through the outreach programs like Eco-club and AICTE activities.		
Action 3	Best Practices like Rain water harvesting, Sewage treatment plants, proper waste management procedure are employed in the college.		
Action 4	The students observe that BMSIT&M campus is totally eco-friendly. The green campus motivates them to go with ecofriendly practices.		
PO8	1.56	2.03	The students' are made to practice ethics and morally be right in all the activities they do involve.
	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.		
Action1	Students are encouraged to adopt the best software engineering practices and ethics in the laboratory, PBL, Projects, Assignments and Report writing and Delivering the technical/research Seminars including examination that is mitigation of requisite ethics standards through various learning/training sessions.		
Action 2	Additional knowledge provided by organizing talks, interaction and counselling. Plagiarism checking software tool is made available for all departments' students and faculty members for checking integrity maintained in their communication.		
PO9	1.89	2.03	Students are encouraged to work/act individually in their regular laboratory hours and as a team in projects.
	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.		
Action 1	Students work in team as a member and leader including focus on Interdisciplinary projects.		
Action 2	Students are encouraged to participate in organizing various co-curricular and extracurricular activities like departmental fest and college fest etc.		
PO10	1.86	1.90	Students will be trained in soft skills, aimed at improving their communication through activities such as group discussions and presentations.
	Communication: Communicate effectively on complex engineering activities with the engineering Community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.		
Action1	Students are encouraged to give technical talks, research presentations, seminar, and poster presentations with respect to their project work. They are guided to write effective reports and are communicated to their community through project reports, social media such as portals, presenting papers in conferences/journals.		
PO11	1.80	1.97	There are courses in the curriculum that educate students on the practical application of managerial principles in their work, encompassing financial considerations
	Project management and finance: Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and Leader in a team, to manage projects and in multidisciplinary environments.		
Action1	Managerial skills are emphasized through their final year projects and courses.		
Action 2	Students are encouraged to prepare project proposals with the guidance of faculties for various funding agencies.		
PO12	1.77	1.98	Students are trained to be a lifelong learner through courses, projects etc.,
	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.		
Action 1	More open-ended experiments, PBL, projects, seminars provide them lifelong learning experience.		
Action 2	Students are encouraged to participate in cocurricular and extra-curricular activities to recognize the importance of life long learning.		

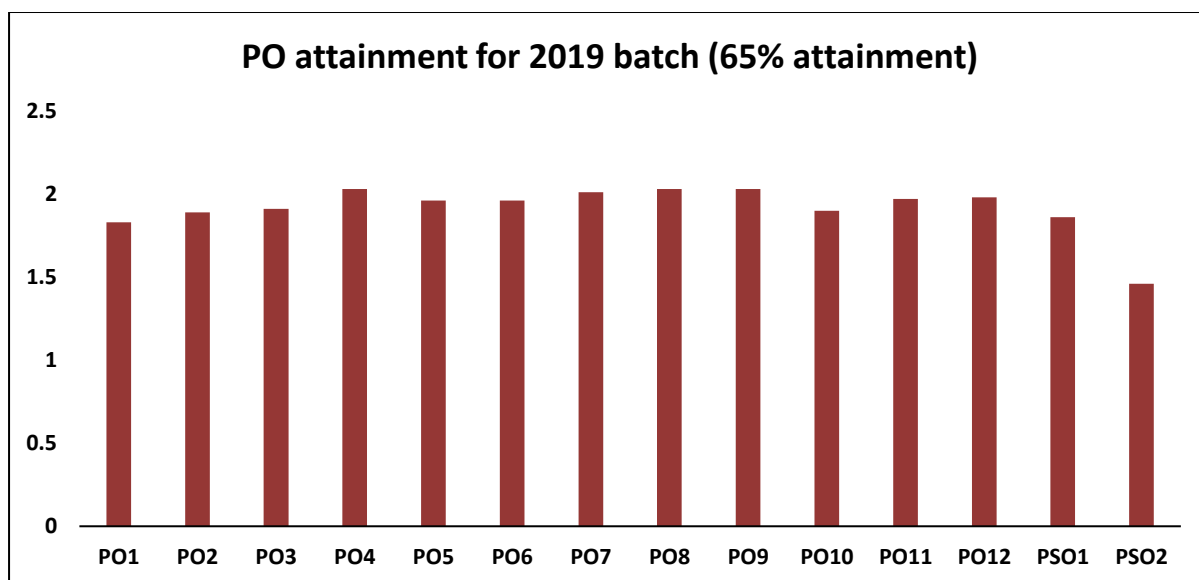
PSOs	Target Level	Attainment Level	Observations
PSO 1: .	Apply the Knowledge of Information technology to develop software solutions.		
PSO 1	1.56	1.86	Over the course of their degree program, students cultivate a robust knowledge of software development techniques.
Action Plan:	Action 1: Students are encouraged to incorporate principles of software engineering into their projects. Action 2: Expert talks/ seminars/ partial deliveries from industry experts are organized.		
PSO 2: Design and develop hardware systems, manage and monitor resources in the product life cycle.			

PSO 2	0.72	1.46	Exposure is provided to the required level to develop hardware systems.
Action Plan:	Action 1: Students are encouraged to take-up hardware related projects in PBL/minor/major projects		

Program Outcomes and Program Specific Outcomes with graph:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
2017-21														
Target	1.6	1.68	1.53	1.35	1.57	0.93	1.53	1.35	1.54	1.53	1.25	1.41	1.52	1.34
Attained	2.02	2.03	1.95	1.85	1.91	1.96	1.91	1.79	2.02	1.74	1.7	1.80	1.80	1.62
2018-22														
Target	1.55	1.64	1.57	1.44	1.7	1.11	1.5	1.47	1.62	1.56	1.5	1.5	1.61	1.34
Attained	2.22	2.22	2.32	2.67	2.26	2.10	2.62	2.52	2.60	2.27	2.42	2.57	2.12	1.76
2019-23														
Target	1.86	1.89	1.85	1.73	1.85	1.49	1.49	1.56	1.89	1.86	1.80	1.77	1.56	0.72
Attained	1.83	1.89	1.91	2.03	1.96	1.96	2.01	2.03	2.03	1.90	1.97	1.98	1.86	1.46



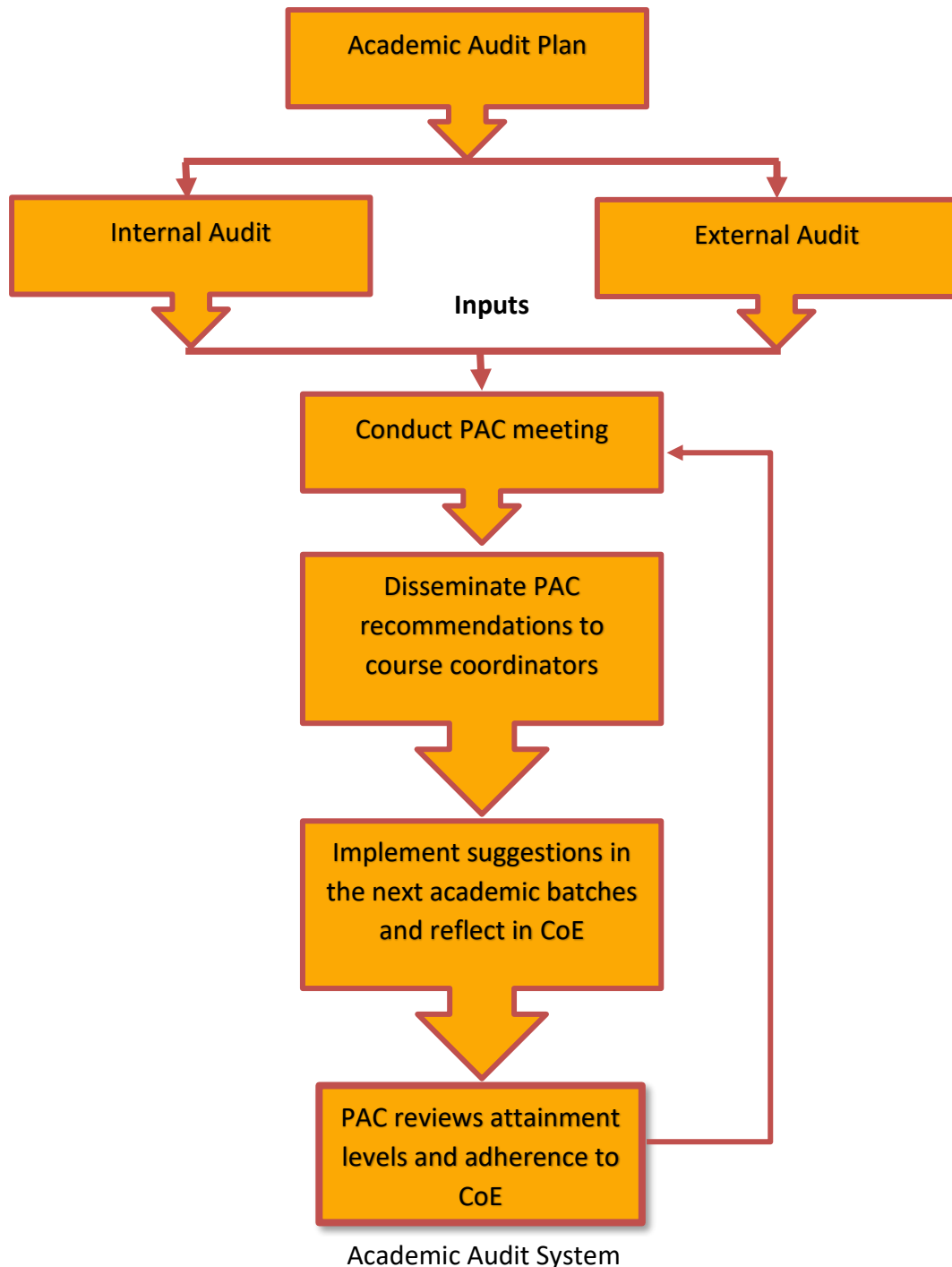


7.2 Academic Audit and actions taken thereof during the period of Assessment (10)

The Academic Audit System/process and its implementation concerning continuous improvement. This document is envisioned to elaborate the process of academic auditing, which can aid the engineering institution / faculty/ student for success in the Engineering Education arena. This process is depicted in the below figure.

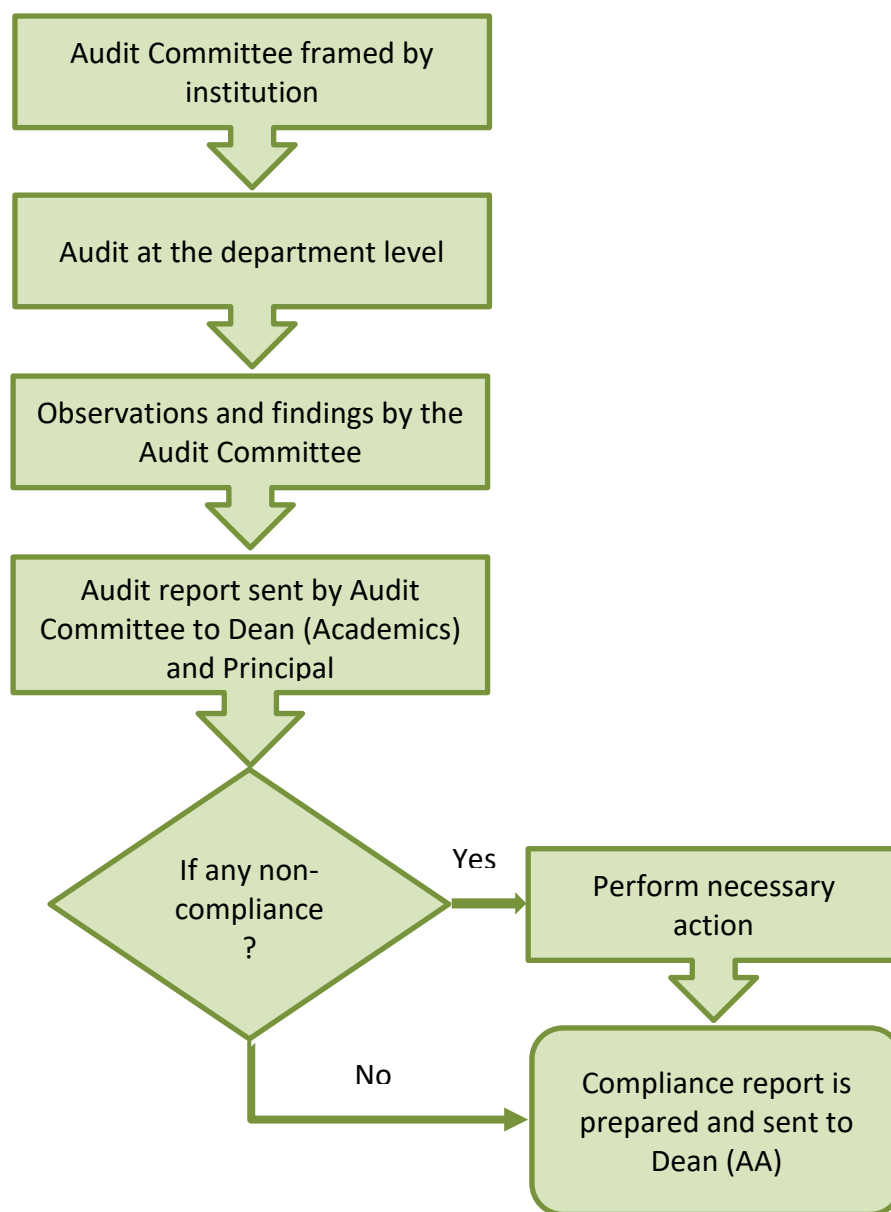
The Academic Audit contains internal and external audits. The inputs from external audit are considered and implemented in the internal audit. After the conduction of internal audit, the PAC committee upgrades the target level for already attained POs and required advice is given to course coordinators. The advice given by the PAC committee are implemented by the respective course coordinators for the next academic batches and same is reflected in the calendar of events. On completion of the semesters, PAC meeting is conducted to review the target attainment level and adherence to the calendar of events. The meeting also discusses the course wise activities to be conducted in the next academic batch. The recommendations and inputs of the PAC meeting are disseminated to the course coordinators by the module coordinators. These suggestions are implemented by the course coordinators in the next academic batches and the same is reflected in the calendar of events.

The internal academic audit involves a review by peers called the Academic Monitoring Team. This team reviews a program's



self-study report, conducts a site visit, and writes its own report that includes appreciations, affirmations and recommendations for continued improvement. It is based on structured conversations among faculty, stakeholders and peer reviewers all focused on a common goal as to improve the quality processes in teaching and learning and thus enhance student success. This process is depicted in the above figure.

The internal audit is done approximately around the Internal Assessments periodically. Then a final audit is conducted at an Institution level by the committee to maintain consistency in the academics and check down the maintenance process of the necessary documents.



Academic Audit Process

The committee prepares a comprehensive report based on the observations and submits the periodic reviews to the Institutional chief coordinator. Further, the Institutional chief coordinator consolidates the report and submits the same to the Principal for further necessary actions and assessment.

The Academic Audit Committee reviews the following parameters during the audit process:

1. **Curricular Aspects:** The curricular aspects concern the academic planning, participation of the department staffs in the curriculum development for BOS & BOE, elective courses offered by the department in the academic year, audit courses in CBCS system conducted by the department and value added courses conducted in the department.
2. **Teaching learning and evaluation course/curriculum delivery:**
 - The committee assess the course delivery plan and check whether it is in line with the prescribed university curriculum or not.
 - It ensures the correctness and completeness of prerequisite academic documents.
 - Usage of Information and Communication Technology (ICT) tools in teaching learning.

- Monitoring of Student Attendance and Student Performance.
 - Monitoring of a number of classes conducted and remedial/ extra classes taken.
 - The co-curricular and extracurricular activities of students.
3. Structured feedback: To improve the quality of the teaching learning process, time to time feedbacks are taken and analyzed. The students' feedbacks are collected twice in a semester. The interaction with the parents are arranged once in a semester and feedbacks are collected. The exit survey is done once in a year for the outgoing students. Once in a year Alumni meet is conducted by Alumni association at college level and have interaction with Alumni.
 4. Research, innovation, publication: The involvement of the faculties in the research activities are verified by number of funded projects, national & international journal and conference publications, and book chapters.
 5. Collaboration and linkages: The collaborations and linkages are built through student internships, industrial visits and MoUs. More number of collaborations help students to explore new directions and to develop a network.
 6. Student placement: Among total number of students, number of students placed and number of students gone for higher studies are verified.
 7. Activity conducted / organized by the department: The parameter involves the technical event/ workshops conducted for students, FDP/ workshops/ STTPS/ conferences conducted for the faculties.
 8. Achievements: This parameter concern to awards and prizes received by the students and faculties, participation of faculties in various activities as members of committees at university level, state level, national and international level bodies. It also includes teachers' nomination on journal/ conference editorial board/ review committees.

The evidential document for the Academic and Administrative Audit for the year 2022-24 is provided below.



BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT
(An Autonomous institution, affiliated under VTU Belagavi)

Yelahanka, Bengaluru-560 064

ACADEMIC AND ADMINISTRATIVE AUDIT

For ACADEMIC YEAR: 2022-2023

(Provide information for Academic Year 2022- 2023)

2021-22
AY (Both even & odd)

Section I: Basic Information

1	Audit Date	19/09/2022
2	Name of Department	Information Science & Engineering
3	Head of Department	Dr. Pushpa S K
4	Number of Full time teachers	Prof. 3 Associate Prof. 7 Asst. Prof. 17
5	Number of Technical Staff	5
6	Number of Student	PG:0 UG: 781 (781)
7	Student Full Time Teacher Ratio	24.9

Section II: Curricular Aspects

Academic Planning

Sr. No.	Particular	Available Yes /No	Remark (if any)
1	Departmental Academic Calendar	Yes	Both odd and even semester
2	Faculty Subject Choices	Yes *	
3	Elective Choices from Students	Yes	
4	Course/ Subject Distribution to Faculty	Yes	
5	All Time Tables	Yes ✓	
6	Teaching Plan & Laboratory Plan	Yes	

Participation of the Staff in the department in the curriculum development for BOS & BOE.

Sr. No.	Name of Faculty	Participated as	Course	Class
1	Dr Pushpa S K	HoD	* Vehicle, Semesters	
2	Dr Sudhamani M V	BOS member		
3	Dr Sheela Kathavate	BOS member	Software Engineering, Management & Entrepreneurship	
4	Dr Surekha K.B.	Member Invitee		
5	Dr Veena N	BOS	Algorithms	
6	Prof Mahalakshmi S	Member Invitee		

► List of Elective Courses offered by department in this academic year

Sr. No.	Semester	Name of Elective Course				
		Open Elective	No of Students Registered	Semester	Professional Elective	No of Students Registered
1	6	Occupational Health & Safety	35	6	Information Management System	92
2	6	Remote Sensing and GIS	11	6	Data mining :	90
3	6	Non-Conventional Energy Sources	15	6	Cloud Computing	45
4	6	Sensors and Signal Conditioning	5	7	Robotic Automation Processing	66
5	6	Traffic Engineering	26	7	Cryptography	81
6	6	Advanced Materials Technology	14	(7) *	User Interface Design	146
7	6	Renewable Energy Systems	62			
8	6	Basic VLSI Design	9			
9	6	Micro controllers	7			

10	6	Supply chain Management	32			
11	6	Signal processing	11			
12	7	Environmental Protection and Management	45			
13	7	Electric vehicles	8			
14	7	Electric energy conservation and auditing	48			
15	7	Neural networks	8			
16	7	Communication theory	20			
17	7	Automotive Engineering	17			

✱
► List of audit courses in CBCS system conducted by department

Sr. No.	Name of Audit Course	Class	Semester	no. of Students
1	Vyavaharika Kannada (Kannada for communication)/	4A/4B/4C	IV	
2	Adalitha Kannada (Kannada for Administration)	4A/4B/4C	IV	

► List of value-added courses conducted in department

Sr. No.	Target Audience	Name of Value-Added Course	No of Students Participated
1	All BMSIT&M Students and outside college Students	Hybrid Mobile Application Development using Ionic	38
2			61

	All BMSIT&M Students and outside college Students	IoT Hands on Approach	
3	All BMSIT&M Students and outside college Students	Deep Learning	45
4	All BMSIT&M Students and outside college Students	Data Analytics Boot Camp	49
5	All BMSIT&M Students and outside college Students	Hands on Approach to cyber security (cyber forensics)	51
6	All BMSIT&M Students and outside college Students	Full stack Web Development Using PYTHON	39
7	All BMSIT&M Students and outside college Students	Complete Python BOOT CAMP	43
8	All BMSIT&M Students and outside college Students	Problem Solving Using Java Programming	27

► Section III: Teaching Learning & Evaluation Course / Curriculum Delivery

Sr. No.	Name of Subject	Name of Faculty	No. of Lectures/ Practical's as Per Syllabus	No. of Lectures/ Practical as per teaching plan / Lab Plan	No. of Lectures/ Practical Conducted
Odd Semester: I					
1	Calculus and Differential Equations	Prof. Sreelakshmi T K/Dr. Priyanka pal/Dr. Arnab Bhattacharya	40	40	40
2	Engineering Physics	Dr. Yashaswini/Dr. R Lokesh/Mrs. Ashwini K R	40	40	40

3	Elements of Electrical Engineering	Prof. Ozwin Dominic/Dsouza /Mrs.Shilpa G//Prof. Rajnikanth	40	40	40
4	Engineering Graphics	Prof. Madhu/Prof. Gurumurthy/Prof. SriGanesh T G/Dr. Avinash G//Dr. Y J Jagadeesh/Dr. Ravichandra	40	40	40
5	Elements of Civil Engineering	Dr. Lalit KumarGupt/Dr. Anoop G Ekbote/Dr. Aruna G/Dr. Lalit KumarGupta/Dr. Aruna G	40	40	40
6	Engineering Physics Laboratory	Dr. Yashaswini/Dr. R Lokesh/Mrs. Ashwini K R	40	40	40
7	Electrical Engineering Laboratory	Prof. Ozwin Dominic Dsouza/Mrs. Shilpa G/Prof. Rajnikanth	40	40	40
8	Technical English-I	Dr. Kavita Harihar/Dr. Kavitha C/Prof. Subhash	28	28	28
9	Yoga/Sports/NCC /Music	Prof. Shivakumar T/Mr. Mallikarjun Patil/Lt. Rani M Srinivas/Dr. Prashanth A Athavale	28	28	28
10	Design Thinking & Innovation	Dr Prakash	28	28	28

18 + online

classes claimed

Odd Semester: III					
1	Transform Calculus, Fourier Series And Numerical Techniques	Dr Sreelakshmi	40	40	40

2	Data Structures and Applications	Dr Sudhamani/Dr Veena/Prof Shanthi D L	50	50	50
3	Analog and Digital Electronics	Dr Narasimha murthy/Prof Vinutha	40	40	40
4	Computer Organization	Prof Chandrashekar/Dr Geeta mam	40	40	40
5	Software Engineering	Dr Sheela mam/Prof Swetha	40	40	40
6	Discrete Mathematical Structures	Dr Shobha/Dr Pushpa S K	40	40	40
7	Analog and Digital Electronics Laboratory	Dr Nasimha murthu/ Prof Vinutha	36	36	36
8	Data Structures Laboratory	Dr Sudhamani/Dr Veena/Prof Shanthi D L	36	36	36

Odd Semester: V


1	Management, Entrepreneurship for IT Industry	Prof Ambika	40	40	40
2	Computer Networks and Security	Prof Gireesh/ Dr Surekha.Prof Swetha	50	50	50
3	Database Management System	Dr Manjunath/ Dr prakash	50	50	50
4	Automata theory and Computability	Dr Shobha/Dr Surekha	40	40	40
5	Application Development using Python	Prof Chandrashekar/ Dr Shridhar Sanshi	40	40	40

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6	Unix Programming	Dr Veena / Prof Mahalakshmi/Prof Santosh	40	40	40
7	Computer Network Laboratory	Prof Gireesh/ Dr Surekha.Prof Swetha	36	36	36
8	DBMS Laboratory with mini project	Dr Sheela/Dr Shobha	36	36	36
9	Environmental Studies	Prof Tejeswini	13	13	13
Odd Semester: VII					
1	Artificial Intelligence and Machine Learning	Prof Vinutha K/Dr Rudresh	50	50	50
2	Big Data Analytics	Prof Gireesh/Dr Shanthi D L	50	50	50
3	User Interface Design	Prof Ambika	40	40	40
4	Cryptography	Dr Swetha M S	40	40	40
5	Robotic Process Automation Design & Development Open Elective – B (Not for CSE / ISE P)	Prof Mahalakshmi S	40	40	40
6	Open elective		40	40	40
7	Artificial Intelligence and Machine Learning Laboratory	Prof Vinutha K	36	36	36
8	Project Work Phase – I	Dr Geeta Patil/ Dr Swetha M s	2Hrs/week	2Hrs/week	2Hrs/week

9	Internship	Prof Ambika	-	-	-
Even semester: II					
1	Calculus and Differential Equations	Dr Sreelakshmi T K/Dr Priyanka Pal/Dr Arnab	40	40	40
2	Engineering Chemistry	Dr Jyothi Roy Choudhuri/ Dr Rama Krishnappa /Dr Jyothi C Abbar	40	40	40
3	C Programming for Engineers	Dr.Drakshaveni G/Mr Ravikumar/ Dr Aruna Kumari	TH:26 PH:52	TH:26 PH:52	TH:26 PH:52
4	Basic Electronics Engineering	Prof Asha G/Dr Aniyha V R/Dr Saneesh	40	40	40
5	Elements of Mechanical Engineering	Dr Shripad Diwakar/Dr Ravichandra / Dr Keerthi Kumar N	40	40	40
6	Engineering Chemistry Laboratory	D1:Dr Jyothi C Abbar, D2:Dr K Sureshkumar, D3:Dr Jyothi C Abbar, D4:Dr Bincy Rose Vergis	40	40	40
7	Indian Knowledge System	Dr. Shoba M	26	26	26
8	Technical English-I	Dr. Kavita Harihar/Dr. Kavitha C/Prof. Subhash	26	26	26
9	Yoga/Sports /NCC/Music	Prof. Shivakumar T/Mr. Mallikarjun	26	26	26

		Patil/Lt. Rani M Srinivas/Dr. Prashanth A Athavale			
Even Semester: IV					
1	Complex Analysis, Probability And Statistical Methods	Dr Sreelakshmi	40	40	40
2	Design and Analysis of Algorithms	Dr Pushpa S K/ Prof Vinutha K/ Dr P SUDARSAN AM	40	40	40
3	Operating Systems	Dr Karthik S A/Dr Savitha	40	40	40
4	Microcontroller and Embedded Systems	Dr Narasimha murthy/ Dr Savitha	40	40	40
5	Object Oriented Concepts	Dr Basavaraj	40	40	40
6	Data Communication	Dr Sudhamani/ Dr Swetha/ Prof Gireesh Babu	40	40	40
7	Design and Analysis of Algorithm Laboratory	Dr Prakash/ Prof Vinutha K/ Dr. P Sudarsanam	36	36	36
8	Microcontroller and Embedded Systems Laboratory	Dr Narasimha murthy/ Dr Savitha	36	36	36
9	Vyavaharika Kannada (Kannada for communication) /	Mr Krishnappa	13	13	13

Even Semester: VIII					
1	Internet of Things	Dr Surekha/Prof Vinutha K	40	40	40
2	NoSQL Database	Dr Sheela K. Prof Gireesh Babu	40	40	40
3	Project Work Phase - 2	Dr Geeth/Dr Swetha	40	40	40
4	Technical seminar	Dr Geeth/Dr Swetha	3Hrs/week	3Hrs/week	3Hrs/week 
5	Internship	Prof Ambika	3Hrs/week	3Hrs/week	3Hrs/week

Use of ICT Tools in Teaching Learning

Sr. No.	Name of Faculty	Name of Subject for which ICT Used	ICT Tool/ Technique Used (Specify)
1	kshama	—	—
2	Dr. M V Sudhamani	Data Structures Data Structures Lab Introduction to AI Data Communications Software Testing Lab As Resource Person	Blackboard, Powerpoint presentations, ERP, Google classroom, Conference Tools, PDF, Quiz tools 
3	Geeta Patil	Python Programming	Blackboard, Datex for powerpoint presentations, Google classroom, ERP
4	Dr Veena N	File Structures	PPTs presentation, Demonstration, ERP
5	Prof Mahalakshmi S	Robotic Automation Processing / IMS	PPTs, UI Path Tool
6	Dr. Shoba M	Automata Theory & Computability, Discrete Mathematica structures, File Structures	Blackboard, PowerPoint presentations, ERP, Google classroom, Conference Tools, PDF, Quiz tools

► List of Expert Lectures/Workshops Conducted

Sr. No.	Expert Lecture Topic Name	Expert Speaker / Resource Person	Date of Conduction	Target Audience
1	Expert Talk on " Web Development using React"	Mr.Satish Agarwal,Software Development Engineer,Microsoft Inc.,	28th May 2022	IV semester students
2	Expert Talk on "Goal Setting & Professional Etiquettes"	Ms. Bijal Kothari, Founder Director - Finesco Training Solutions.	19th May 2022	IV semester students
3	Expert Talk on "Applications of Python in Industry".	Mr. Pritam Kulkarni, Machine Learning Engineer, Randstad Risesmart, Pune, Maharastra.	22nd January 2022	V semester students
4	2days skill development program on hands on cloud computing with AWS Cloud Computing and its applications	Dr. prakash G L and Prof Swetha M S	26 and 27 th May 2022	V semester students
5	Expert Talk on "Block chain and Crypto"	Mr. Arifa Khan	01 July 2022	2 nd and 4 th Semester

► Counseling and Mentoring

Sr. No.	Particular	Yes/ No	Remark (if any)
1	Mentor Allocation	Yes	
2	Class wise Student Profile Record maintained	Yes	
3	Mentor Mentee Session Record maintained	Yes	

No. of Students in Department	No. of Teachers in Department	Mentor: Mentee Ratio
2021-22 Even = 215+227+146=588	22 teachers allocated proctor students	1:27
2022-23 Odd = 219+215+227 =661	25 teachers allocated proctor students	1:26

► Internal Evaluation System

Sr. No.	Particular	Yes / No	Remark (if any)
1	Continuous Evaluation Record	Yes	
2	Unit test/ Class Test Record	Yes	
3	Mock/ Oral/ Practical Record	Yes	
4	Seminar / Project Review Record	Yes	

► Learning Outcome

Sr. No.	Particular	Yes / No	Remark (if any)
1	PO, PSO, CO are well stated	Yes	Complete data is been received
2	Correlation of COs in PSOs and POs	Yes	Complete data is 2018 been received
3	Course Outcome attainment calculated	Yes	Complete data is 2018 been received
4	Program Specific Outcome & Program Outcome attainment through course outcome calculated	Yes	Complete data is 2018 been received

21-22 — one batch passout —
PO attainment 2

► **Activities for Slow and Advanced Learner**

Sr. No.	Name of Subject	Name of Faculty	Slow Learners / Adv. Learners Identified (Yes / No)	No. of Sessions Conducted for Slow Learners	Activities/ Task Assigned for Advanced Learner
1	IV SEM 16.07.22 <i>name of subject</i>	Dr Pushpa S K/ P. Sudarsanam/ class teachers	Slow Learners	01	Remedial inputs given
2	II SEM 28.07.22 ?	Dr Pushpa S K/ P. Sudarsanam/ class teachers	Slow Learners	01	Remedial inputs given
3	VI SEM ?	Dr Pushpa S K/ P. Sudarsanam/ class teachers	Slow Learners	01	Remedial inputs given

► **List of Bridge Courses Conducted**

Sr. No.	Name of Subject for which Bridge Course Conducted	Name of Faculty	Class	Semester
1	OOC	Dr Basavaraj	4A	IV
2	OOC	Dr Anil	4B	IV

Conducted & documented

7	Number of Students Failed	50	-	-
8	Passing Percentage	76.28%	-	-

Sr. No.	Particular	Semester Odd : V		
1	Number of students appeared	226	-	-
2	Number of All Clear Students	182	-	-
3	Number of students passed with distinction	119	-	-
4	Number of students passed with first class	45	-	-
5	Number of students passed with higher second class	14	-	-
6	Number of students passed with second class	04	-	-
7	Number of Students Failed	52	-	-
8	Passing Percentage	80.5%	-	-

Sr. No.	Particular	Semester Odd : VII		
1	Number of students appeared	146	-	-
2	Number of All Clear Students	140	-	-
3	Number of students passed with distinction	117	-	-
4	Number of students passed with first class	21	-	-
5	Number of students passed with higher second class	02	-	-
6	Number of students passed with second class	-	-	-

Section V: Research, Innovation, Publication

- Research grants, projects completed and ongoing from funding agencies (like SPPU, BCUD, UGC, AICTE, DST)

Sr. No	Principal Investigator	Title of Project	Funding Agency	Amount (Rs. In Lakh)	Remark (if any)
1	NA				

► Faculty Publications

Number of Publication in National Journals	-
Number of Publication in International Journals	6
Number of Publication in National Conferences	-
Number of Publication in International Conferences	10/14

National Journal

Sr. No	Title of Paper	Name of the Author/s	Name of Journal	ISBN/ISSN number
NA				

D International Journal

Sr. No	Title of Paper	Name of the Author/s	Name of Journal	ISBN/ISS Number
1	Protecting Big Data Sets from Unauthorized Users on Cloud	DR. MANJUNATH T N	Communications in Computer and Information Science	1865-0929
2	Development of Security Clustering Process for Big Data in Cloud	DR. MANJUNATH T N	Lecture Notes in Networks and Systems	2367-3370
3	Analyzing the Performance of Marketing Life Cycle Process Using Software Architecture Model	SMT. S. MAHALAKSHMI	International Journal of Aquatic Science	2008-8019
4	The Internet Of Things On Neural Networks Provides Intelligent Healthcare Management For Diabetic Patients	SMT. S. MAHALAKSHMI	International Journal of Aquatic science	2008-8019

5	ExypnoSteganos - A smarter approach to steganography	MRS. SWETHA M S	Journal of Intelligent and Fuzzy Systems	ISSN (Online): 1875-8967 ISSN: 1064-1246
6	Design and development of anonymous location-based routing for mobile ad-hoc network	MRS. SWETHA M S	International Journal of Electrical and Computer Engineering	2743-2755. DOI:10.1159/1/ijece.v12i3.pp2743-2755
7	Optimized artificial neural networks assisted trade-off between transmission and delay in LTE networks	Shanthi D L	ScienceDirect: Materials Today Proceedings	Vol-56, Part-4, DOI: https://doi.org/10.1016/j.matpr.2021

National Conference

Sr. No	Title of Paper	Name of the Author/s	Title of the Proceedings of the Conference	Name of the Conference	ISBN/ISSN Number	Publisher
NA						

International Conference

Sr. No	Title of Paper	Name of the Author/s	Title of the Proceedings of the Conference	Name of the Conference	ISBN/ISSN Number	Publisher
1	FM radio wave based early earthquake detection	SMT. SHANTHI D L	Proceedings of the 2021 8th International Conference on Computing for Sustainable Global Development, INDIACom 2021	International Conference on Computing for Sustainable Global Development, INDIACom 2021		IEEE

2	Soft computing technique for block chain enabled secure healthcare system	SMT. BHAVYA G	Proceedings - 5th International Conference on Intelligent Computing and Control Systems, ICICCS 2021	International Conference on Intelligent Computing and Control Systems, ICICCS 2021		
3	Prediction of employability of engineering graduates using machine learning techniques	MRS. VINUTHA K	Proceedings of the 2021 8th International Conference on Computing for Sustainable Global Development, INDIACom 2021	International Conference on Computing for Sustainable Global Development, INDIACom 2021		
4	MOESIL: A Cache Coherency Protocol for Locked Mixed Criticality L1 Data Cache	Dr. Geeta Patil	Proceedings of the 2021 IEEE/ACM 25th International Symposium on Distributed Simulation and Real Time Applications, DS-RT 2021	International Symposium on Distributed Simulation and Real Time Applications, DS-RT 2021	1550-6525	IEEE
5	Heart Disease Prediction Using Soft Computing Methods	Veena, N., Mahalakshmi, S., Ragunthar, T., Subash, A.R., Vinutha, K.	Intelligent Systems and Networks. Lecture Notes in Networks and Systems, vol 471. Springer, Singapore.			

6	Developing Virtual Station To Receive Fir Through Digital Signature	Swetha M S	6th International Conference on Intelligent Computing and Control Systems [ICICCS 2022]	International Conference on Intelligent Computing and Control Systems [ICICCS 2022]		IEEE
7	Automated Identification of mi car parking slot and bill generation System	Prof.S.Mahalaksh	IEEE indexed International Conference on Electronics and Renewable Systems (ICEARS 2022)	International Conference on Electronics and Renewable Systems (ICEARS 2022)		IEEE
8	Heart disease Prediction mi	Prof.S.Mahalaksh	International conference on Forensics, Analytics, Big data & Security (FABS-2021)	International conference on Forensics, Analytics, Big data & Security (FABS-2021)		IEEE
9	Real time alert system to prevent Car Accident	Prof. Gireesh Babu C N, Prof.Chandrashe khar K T	International Conference on Forensics, Analytics, Big data & Security (FABS-2021)	International Conference on Forensics, Analytics, Big data & Security (FABS-2021)		IEEE

10	Heart Disease Prediction using mi Soft computing Methods	Prof.S.Mahalakshmi	International Conference on Intelligent Systems and Networks (ICISN 2022) Held on 19th March 2022 at Swinburne Vietnam Innovation Space, Hanoi, Vietnam.	International Conference on Intelligent Systems and Networks (ICISN 2022) Held on 19th March 2022 at Swinburne Vietnam Innovation Space, Hanoi, Vietnam.	
11	Breatheasy - An Android Application to Quit The Smoking	Dr. Mohan B A	2021 IEEE International Conference on Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER)	DOI:10.1109/DISCOVER52564.2021.9663588	IEEE
12	Autonomous temperature scan system using IOT to detect COVID-19 symptoms	Shanthi D L	2021 International Conference on Forensics, Analytics, Big Data, Security (FABS)	pp. 1-6, doi: 10.1109/FABS52071.2021.9702675.	IEEE
13	Traffic prediction system using IOT in smart city perspective	Shanthi D L	IEEE International Conference on Mobile Networks and Wireless Communications, ICMNWC 2021	pp. 1-6, doi: 10.1109/ICMNC52512.2021.9688355.	IEEE
14	Maximization of Disjoint K-cover Using Computation Intelligence to Improve WSN Lifetime	Shanthi D L	Intelligent Sustainable Systems. Lecture Notes in Networks and Systems,	vol 458. Springer, Singapore. https://doi.org/10.1007/978-981-19-2894-9_17	Springer

Books / Book Chapters

Sr.No	Title of the Book/Chapters Published	Name of the Author/s	ISBN/ISSN Number	Publisher
1	Classification of Malicious Websites Using Feature Based Machine Learning Techniques	Swetha M S		Intelligent Systems and Networks. Lecture Notes in Networks and Systems, vol 471. Springer, Singapore. https://link.springer.com/chapter/10.1007/978-981-19-3394-3_67 , published FDP on 5th july 2022
2	IOT-Based Smart Street Light Control Application for Smart Cities	Swetha M S		Lecture Notes in Networks and Systems Inventive Communication and Computational Technologies pp 321–333 DOI: 10.1007/978-981-16-5529-6_26
3	Emergency Medical Services Using Drone Operations in Natural Disaster and Pandemics	Swetha M S		Inventive Communication and Computational Technologies pp 227–239

Section VI: Collaborations & Linkages

► Student Internships:

Sr. No.	Student Name	Name of Sponsored Industry/ Research Institute / Partnering Institution	Duration in months
1	ABHINAV SHARMA	DELL TECHNOLOGIES	2
2	Divyam Jain	Consulting Hub	1
3	Prashanth R	Money View	3
4	S Reethu Shree	Micro Focus	4
5	Rakshitha.R	Money View	3
6	Pavithra D A	Cognizant Technology Solutions India Pvt. Ltd.,	4
7	Nibha Venkappa Rai	Cognizant Technology Solutions	4
8	RASHMI B S	Cognizant	4
9	Nibha Venkappa Rai	Cognizant Technology Solutions	4
10	Nirisha B	Epsilon	5
11	Prajwal R	Money View	3
12	Arul Suresh Kumar	CSS CORP	3
13	Arpit Jaiswal	Exactspace Technologies Private Limited	6
14	Arnav Aggarwal	Amazon	5
15	Raghavendra K M	SAP Labs India	5

16	Amandeep Singh	Nokia	5
17	Disha D Shanbhag	Altimetrik India Private Ltd	4
18	Amisha Sawlani	Money View	3
19	Nikhil Anand Mahendrakar	Siemens Healthineers	5
20	Amrutha Murali	PhonePe	3
21	MITHUN G	PLAY GAMES 24X7	4
22	Anisha Diyya G	Informatica	6
23	Akanksha Tanu	Amazon Web Services	3
24	Buthuru Jagadeep Reddy	BMSIT	2
25	NEHA HEGDE	PWC ACCELERATION CENTERS	5
26	Akash Shankar	ZEISS	2
27	Prajwal R	Money View	3
28	Rachana Nataraj	PricewaterhouseCoopers (PwC)	5
29	Anisha Diyya G	Informatica	6
30	MITHUN G	PLAY GAMES24X7	4
31	Nikhil Anand Mahendrakar	Siemens Healthineers	5
32	Disha Shanbhag	Altimetrik India Private Ltd	4
33	Rakshitha.R	Moneyview	3

34	Poorvi Harish Nayak	Informatica	6
35	Nibha Venkappa Rai	Cognizant Technology Solutions	4
36	RASHMI B S	Cognizant	4
37	Faiqa Farooq	Vyakta consulting services pvt.ltd	1
38	Nirisha B	Epsilon	5
39	Shruti	SkillVertex	4
40	Shresth Bhadani	Siemens Healthineers	5
41	Chaitanya Manoj Turmari	SAP Labs India Pvt. Ltd.	5
42	Ayesha Sahel Rahmath	Hope Traders	1
43	Shresth Bhadani	Siemens Healthineers	5
44	Akhilesh B Kalnoor	Flo Mobility	2
45	Patel Rutvik Popatbhai	Games 24x7 Pvt Ltd	3
46	Prabhat Chhajer	MONEYVIEW	3
47	Divyanshu Sachan	HackerRank	5
48	Suprit H s	sap labs	5
49	Divyajeet	Gameskraft	6
50	Aditya Kumar	Gustovalley Technovation	1
51	Arnava Shrestha	Alecado Systems	2

52	S Reethu Shree	Micro Focus	4
53	Bipin Singh	ZEE Technology and Innovation	2
54	Shohebahmed Najeerahmed Gadawale	Mindtree Ltd.	2
55	Khyati Gupta	CLOUDERA	5
56	Shashwat Kumar	PVH Software Solutions	1
57	manoj b	phrameasy	5
58	NEHA HEGDE	PWC ACCELERATION CENTERS	5
59	Anand	SAP LABS PVT LTD, INDIA	5
60	Shashwat Kumar	PVH Software Solutions	1
61	Rachana Nataraj	Pricewaterhouse Coopers (PwC Acceleration Centers)	5
62	Sumukha S	Micro Focus	4
63	PRACHI KHANDELWAL	PWC AC-BENGALURU	5
64	KOPPARAPU SUDHA VINAY	LG Soft India	2
65	Hemanth B N	Nokia Networks	5
66	Akash Barman	Nokia	5

► Sponsored Projects

Sr. No.	Project Title	Name of Staff/ Student	Name of Sponsored Industry / Research Institute / Partnering Institution
1	Adaptive Ambulance Monitoring System	Shohebahmed - 1BY18IS112	VTU Sponsored Project
		Pranav R D - 1BY18IS087	
		Sumukha S - 1BY18IS120	
		Nithin Urala M R - 1BY18IS076	
2	SvayaKT - An E-Agriculture Ecosystem	Karan Venkatesh Upamanyu - 1BY18IS057	
		Ananth D - 1BY18IS024	
		Adarsh Hiremath - 1BY18IS004	

► Industrial Visits

Sr. No.	Name of Industry / Company Research Institute/ Partner in Institution	Date of Visit	Number of Student Participated
1	GKVK, Bengaluru	2-7-2022	62

► **Functional Memorandum of Understanding (MoU)**

Sr. No.	Name of Industry / Company Research Institute / Partner in Institution	Date of commencement	Duration
1	UiPath Academic Alliance	15-07-2021	From 2021 continue
2	Mitron Technologies & Innovations	30-08-2021	5 Years
3	Infidata Technologies	28-08-2021	5 Years
4	Digipix Technologies	30-08-2021	5 Years

Section VII: Student Placements

► Placements

Summary table can be included

SI No	No. of students on Roll	No. of student with 1 job	No. of students with 2 or more
Highest package			
lowest			
avg			

Sr. No.	Name of the Student	Company
1	Abhinav Sharma	PROTEGRITY
2	ACHUTHA SANDESH S CHATRA	CAPGEMINI/INFOSYS
3	Adarsh Hiremath	COGNIZANT ELEVATE
4	ADARSH SADANAND SHETTY	GALAXE SOLUTIONS/COGNIZANT GENC
5	ADITYA ARYAN	CAPGEMINI
6	Aditya Kumar	COGNIZANT ELEVATE
7	ADITYA YADAV	CAPGEMINI/OFSS
8	Adya	L&T FINANCIAL SERVICES
9	Aishwarya S	WIPRO/COGNIZANT GENC
10	Akanksha M S	PWC KOLKOTA
11	AKANKSHA TANU	INFOSYS
12	Akash Barman	NOKIA
13	Akash Shankar	WIPRO
14	AKHILESH B KALNOOR	VALTECH/WIPRO
15	ALLADA ALEKHYA	LTTS
16	Amandeep Singh	NOKIA

17	AMISHA SAWLANI	EPSILON
18	AMRUTHA MURALI	MPHASIS
19	ANAND	INFOGAIN/WIPRO
20	ANANTH D	CAPGEMINI/COGNIZANT ELEVATE
21	ANISHA DIYYA G	CAPGEMINI
22	Apurv Gautam	ENVISION
23	Arnava Shrestha	CYRAACS-2
24	Arul Suresh Kumar	CSS CROP
25	ATULYA JAISWAL	VALTECH
26	Ayanabha Talukdar	ADANI GROUP
27	B E ABHIJITH	KHOROS/COGNIZANT NEXT
28	BIPIN SINGH	ZEE
29	BUTHURU JAGADEEP REDDY	VALTECH
30	Chaitanya Manoj Turmari	WIPRO/LTI
31	CHAITHRA V	CAPGEMINI/COGNIZANT ELEVATE
32	Chandra Prakash Choraria	OSG
33	Charan SV	CAPGEMINI
34	CHIRASYA V	ACCENTURE/COGNIZANT GENC

35	DISHA D SHANBHAG	ALTIMETRIK
36	Divyajeet	CAPGEMINI
37	Divyam Jain	COGNIZANT NEXT/OFSS
38	DIVYANSHU SACHAN	COGNIZANT ELEVATE
39	FAIQA FAROOQ	MPHASIS
40	GURU DUTT A G	GREENWAY HEALTH/WIPRO
41	HARSHITH KS	OFSS/COGNIZANT ELEVATE
42	HEMANTH B N	NOKIA
43	KARAN VENKATESH UPAMANYU	CAPGEMINI/OFSS/COGNIZANT NEXT
44	KHYATI GUPTA	CLOUDERA
45	KIRAN S ITAGI	ABB
46	KOPPARAPU SUDHA VINAY	GALAXE SOLUTIONS/COGNIZANT GENC
47	Kshitiz Aryan	ZENSAR
48	Laya M R	COGNIZANT GENC
49	MALAVIKA S ANAND	INFOGAIN/ACCENTURE
50	Manoj b	CAPGEMINI/FAMPAY
51	MITHUN G	GALAXE SOLUTIONS/COGNIZANT GENC
52	MOHAMMED OWAIS	WIPRO/THE MATH COMPANY

53	MRIDUL MUNDHRA	COGNIZANT ELEVATE
54	MUSKAN MALU	WIPRO
55	nalmathullah rafath	ZEE
56	NEHA HEGDE	PWC AC/WIPRO
57	Nibha Venkappa Rai	CAPGEMINI/COGNIZANT GENC
58	Nikhil Anand Mahendrakar	EPSILON
59	NIKHITA GOPAL HONNATTI	ACCENTURE
60	NIRISHA B	EPSILON
61	PARAS GOYAL	OSG
62	PATEL RUTVIK POPAT BHAI	INFOGAIN
63	Pavithra D A	CAPGEMINI/COGNIZANT ELEVATE
64	POORVI HARISH NAYAK	CAPGEMINI
65	PRABHAT CHHAJER	HPE
66	Prajwal R	CAPGEMINI/COGNIZANT ELEVATE
67	Prakhar Jaiswal	OFSS
68	PRAMOD GOUDA	VALTECH
69	PRANAV R DESHKULKARNI	GAIN SIGHT/COGNIZANT GENC/EPICOR
70	Pranjal Gupta	ANZ-2

71	PRASHANTH R	GALAXE SOLUTIONS/COGNIZANT GENC
72	R K Manohar	ACCENTURE(AASE)
73	R U RAKSHITH	SKILL VERTEX-2
74	Rachana Nataraj	PWC AC
75	RAGHAVENDRA K M	COGNIZANT ELEVATE
76	RAGHAVENDRA PRASHANTH	SKOLAR/SKILL VERTEX/PROLIFICS
77	RAHUL RAJ	INFOSYS
78	RAKSHITHA R	EPSILON
79	RASHMI B S	COGNIZANT GENC
80	RITWIK DAS GUPTA	UNSCHOOL
81	RITWIK SINGH	PWC AC
82	ROHAN RAGHAVENDRA DESAI	CAPGEMINI
83	Rose Yadav	CSS CORP
84	S REETHU SHREE	ACCENTURE/LTI
85	SANJANA GAJANANA SHETTY	COGNIZANT ELEVATE
86	Sanjit Kumar	INTIME TEC
87	SAURAV VASHISTHA	PWC KOLKOTA

88	SHAMANTH KUMAR SHETTY	CYRAACS
89	Shashwat Kumar	COGNIZANT NEXT/OFSS
90	Shivendra Pathak	Carl Zeiss
91	Shohebahmed Najeerahmed Gadawale	REVENTURE/JOB DOST
92	SHREEDEVI R MOGAVEER	ANZ
93	SHRUTI	OFSS
94	SRAVYA KOTTAPALLI	SKOLAR/MAVERIC SYSTEMS
95	SUMUKHA S	VALTECH
96	SUPRIT HANAMANTH SORAGANVI	SAP LABS
97	SURAJ SINGH BASERA	OFSS
98	SWEEKRITHI RAO N	CAPGEMINI
99	TATHAGAT	PWC KOLKOTA
100	Vinay C	CAPGEMINI
101	Yash Gupta	PHARMEASY-2
102	Arjoo Jha	COGNIZANT GENC
103	ARNAV AGGARWAL	COGNIZANT NEXT
104	ARPIT JAISWAL	HEXAWARE
105	Avinash Sharad Naidu	OSG

106	HARSH KUMAR	ACCENTURE(AASE)
107	Prachi Khandelwal	PWC AC
108	Shresth Bhadani	COGNIZANT NEXT/SIEMENS HEALTHINEERS
109	Somesh shukla	ZEE
110	UJJWAL SUKHEJA	[Pillow Digital Technologies Pvt. Ltd.](OFF CAMPUS)
111	VISHAL JALAN	HPE
112	CHIRAG S	WIPRO
113	GANASHREE K C	JOB DOST
114	KIRAN A	NAGARRO
115	NIDHI KUMARI	SKOLAR-2
116	Prajwal M Korishettar	SKILL VERTEX
117	SNEHA J S	SKOLAR
118	Sahil Karnany	ACCENTURE

$$\frac{118}{146} = 80\%$$

► Higher Education

Sr. No.	Name of Students	Name of Institution Admitted To	Name of Program Admitted To
1	Shreya V	University of Dayton	MS Computer Science
2	KALHIRE.DDY PARTHA SAI PREETAA^ PtrNNV	Syracuse University College of Engineering & Computer Science	Master's program in Cybersecurity
3	RAMYA S	University of Birmingham	MSc (Taught): International Business (FT)
4	SPOORTHIC MAHADIMANE	School of Information Studies (iSchool) at Syracuse University	Master of Science in Information Systems

Section VIII Activity Conducted / Organized by Department

► Technical Event/ Workshop for Students

Sr. No.	Name of Event/ Workshop	Organized under (Department/ Student Association/ Profession Chapter / Student Club)	Date of Event	Level (University/ State/ National/ International)	No. Of Participants
1.	REBOOT: CODING QUIZ COMPETITION	Coding Club	22 nd JULY 2022	College level	46
2.	Open course on Problem solving using Java Programming	CSI	13.6.2022 to 17.6.2022	College level	30
3.	Open course on Hands-on approach to Cybersecurity and Cyber Forensics.	CSI	13.6.2022 to 17.6.2022	College level	57
4.	Open course on Deep Learning - Building Conversational AI Applications	CSI	13.6.2022 to 17.6.2022	College level	60
5.	Open course on Full Stack Web Development using PHP	CSI	13.6.2022 to 17.6.2022	College level	60
6.	Open course on Internet of Things	CSI	13.6.2022 to 17.6.2022	College level	66

	Hands-on Approach				
7.	Open course on Data Analytics-BootCamp	CSI	13.6.2022 to 17.6.2022	College level	60
8.	Open course on Robotics with Artificial Intelligence	CSI	1.06.2021 to 5.06.2021	College level	66
9.	Open course on Data Science using Python	CSI	1.06.2021 to 5.06.2021	College level	67
10.	Open course on Internet of things on Hands on	CSI	1.06.2021 to 5.06.2021	College level	44
11.	Open course on Android Application Development	CSI	1.06.2021 to 5.06.2021	College level	64
12.	Open course on Programming for IT career	CSI	1.06.2021 to 5.06.2021	College level	69

(13) Workshop on AWS

26 & 27th May 2022

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► FDP / Workshop/ STTP/ Conference for faculty

Sr. No.	Name of Event/ Workshop	Date of Event	Level (University/ State/National/ International)	No. of Participants
1	AWS Cloud Tools and Services	20 th September to 24 th September 2022	National Level will be organized from tomorrow.	40*

Section IX: Achievements

Awards and Prizes received by students

Sr. No.	Name of Student	Achievement / Position / Prize	Event Name Details	Organized by
1	Lokesh and Team	Secured 1 st Prize of 1 Lakh Rupees in "Smart India Hackathon"	Smart India Hackathon	Govt of India

2	Shashwath Aiyappa and Team	Secured 3 rd Prize in "prathibotsava" VTU Youth festival	prathibotsava" VTU Youth festival	VTU, Belagavi
3	Aishwarya Manjunath	Secured 3 rd position in Trading Simulation Competition in association with StockGro	Trading Simulation Competition in association with StockGro	IIT Bombay
4	S Kaushik	Winner of "Lense of light photography competition"	photography competition	Rotract club of Yelahanka
5	Tejaswini K S	2 nd prize in Badminton event as part of utsaha vaibhava	Badminton event as part of utsaha vaibhava	BMSSA
6	Spandana T S	Secured 1 st place in VTU South zone Table Tennis tournament	VTU South zone Table Tennis tournament	RV College of Engineering, Bangalore
7	Swetha jaya Kumar	Secured 3 rd place in VTU Inter zone Table Tennis tournament	VTU Inter zone Table Tennis tournament	RV College of Engineering, Bangalore
8	Shashwath Aiyappa	Won second place in "Earth Trivia" organized by Prakruthi-Nature club of BMSCE	Earth Trivia" organized by Prakruthi-Nature	BMSCE Bangalore
9	Lokesh E	Won 1 st place in Bangalore Rural District Chess Championship	Won 1 st place in Bangalore Rural District Chess Championship	Bangalore Rural District Chess-Board
10	Chaitanya M	Secured rank of CSM(Company Sergeant Major) second highest commanding rank during NCC.	NCC	BMSIT
11	Monish S (1by20is088) – Team Leader 2.Murali Manohara Hegde A S (1by20is091) 3.Pranav Aditya (1by20is114)	Won 1 st prize in SPL competition held by EDC Cell	SPL competition(Start-Up)	EDC Cell, BMSIT&M

6 to 11 are before 2021-22.

Participation of teachers in various activities as members of committees at University level, State

level, National level, International level bodies

Check with
Dr. TNM, ?
Dr. SKP ?

Sr.No.	Name of Faculty	Members of committees at University level/ State level /International Level as
1.	Dr. M V Sudhamani	BOS – External Member, SIT, Tumkur BOE – External Member, BMSCE, Bengaluru
2.	Dr. Shoba M	Examination Assessment Reform Panel Member for REVA University Bengaluru

Details of teachers appointed / Nominated on Editorial Board / Reviewers

Sr.No.	Name of Faculty	Name of Editorial Boards/ Conference
1	Dr. Shoba M	Editor for a book titled "Futuristic Trends in Computing Technologies and Data Sciences" under IIP, USA & India
2.	Dr. Shoba M	Authored book titled " Big Data Analytics using Python", published by Scientific International Publishing House, ISBN: 978-93-5625-195-3

3. Dr. TNM

► Awards/ Prizes and recognitions received by teachers at university, state, national and international level:

Sr.No.	Name of Faculty	Name of Award
1	Prof. Gireesh Babu C N	Team won 1 st place in Smart India Hackathon-2022 mentored by Prof. Gireesh Babu C N
2	Dr. Mohan B.A	Chief Guest and Judge for NMIT HACKS 2022

► Details of teachers participated in Refresher courses, Orientation courses, Seminars, Workshops, Conferences at national and international levels.

Sr. No.	Name of Faculty	FDP/STTP/Workshop/ Conference	Organized by	Duration (in days/ weeks)
1	Dr. Sudhamani M V and Dr. Surekha K.B.	One day workshop on "Fine-Tuning of NEP Compliance Syllabus-Disciplines under CSE Board of VTU"	SJCIT, Chickballapur	1- Day
2	Dr. Drakshaveni G	Five days workshop on "Developing and Deploying Spring Boot Microservices on Kubernetes cluster"	Dept. of computer science Ramaiah Institute of Technology	5 Days

3	Dr. Shoba M	One week workshop on "Designing & Modeling of IoT & AI & ML Systems"	AICTE, ATAL Academy, Arm Education and STMicroelectronics from August 1 st to 5 th 2022.	5 Days
4	Dr. Shoba M	2 – Days workshop on "Applied Artificial Intelligence and Machine Learning" (an initiative inline with NEP)	Dept. of AI & ML, BMSIT&M, Bengaluru on 4 th and 11 th March 2022	2 Days
5	Dr. Shoba M	4 – Days online Conference on "GPU Technology Conference"	NVIDIA from March 21 st – 24 th 2022.	4 Days
6	Dr. Shoba M	10 Days National Level FDP on "Elevated Analytics: Blockchain Deals with Big Data" – Online Mode from November 22 nd 2021 to December 1 st 2021	NIT Warangal Telangana and Rajarambapu Institute of Technology (An Autonomous Institute, Affiliated to Shivaji University Kolhapur) sponsored by MeitY, GOI.	10 Days
7	Dr. Shoba M	5-Days FDP on "e-Governance"	Dept. of EEE, Bangalore Institute of Technology from April 18 th – 22 nd 2022 in association with Govt. of Karnataka.	5 Days
8	Dr. Shoba M	one week AICTE-VTU Joint Training Programme for AICTE Approved & VTU Affiliated Technical Institution Teachers on "Data Science & Analytics"	Visvesvaraya Technological University Centre for PostGraduate Studies Bengaluru Region, Muddenahalli . Chikkaballapur-562101 from 25 th to 29 th April 2022.	5 Days
9	Dr. Swetha M S	5 days FDP on Cyber security	Presidency University, Bengaluru .14-3-22 to 18-3-22	5 Days
10	Dr. Swetha M S	AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Smart cities for sustainable development"	07/03/2022 to 11/03/2022 at Motilal Nehru National Institute of Technology Allahabad.	5 Days
11	Dr. Swetha M S	"Recent Innovation and Development in RF and Microwave Engineering for Wireless Communication"	Department of Electronics and Communication Engineering, National Institute of Technology Hamirpur, Hamirpur-177005 (H.P.), India. 12 th – 16 th May 2022	5 Days
12	Dr. M V Sudhamani	11 -days (40 hrs) National level FDP on "Research Trends in Wireless Sensor Networks", 7 th – 16 th March, 2022.	Organized by the Ministry of Electronics and Information Technology, GOI, and E&ICT Academy, NIT, Warangal and NIT, Tiruchirappalli,	11 days

13	Dr. M V Sudhamani	one-week AICTE-VTU Joint Training Programme for AICTE Approved & VTU Affiliated Technical Institution Teachers on "Data Science & Analytics"	Visvesvaraya Technological University Centre for Postgraduate Studies Bengaluru Region, Muddenahalli, Chikkaballapur-562101 from 25 th to 29 th April 2022	5 Days
14	Dr. Mohan BA	5 Days FDP on Internet of Things, GITAM Institute of Technology & E&ICT Academy IITG	IIT, Gowali, January 24 th to 29 th January 2022	5 Days
15	Dr Prakash G L	FDP on Introduction to Deep Learning	AICTE, UVCE from 20/12/21 to 24/12/21	5 Days
16	Dr Prakash G L	Vtu Joint Teachers Training Programme	AICTE 21 st Feb 22 to 25 th Feb 22	5 Days
17	Dr Prakash G L	Vtu Joint Training Programme	AICTE 6 th to 10 th December 2021	5 Days
18	Dr Prakash G L	FDP on Artificial Machine Learning	28 th September to 8 th October 2021	40 Hours
19	Dr. Shanthi D L	ATAL FDP on AI and IOT based Technology for precision farming and Smart Agriculture	7 th June 2021 to 11 th June 2021	5 days
20	Dr. Shanthi D L	ATAL FDP Introduction to Quantum Computing	7 th February 2022 to 11 th February 2022	5 days
21	Dr. Shanthi D L	ATAL FDP on Applications of Artificial intelligence in research development	22 nd November 2021 to 26 th November 2021 CSIR Bhopal	5 days

Declaration by HOD:

I am aware that the above information provided by the department is correct and verified:

Date: 19/9/22

[Signature]
HOD 19/9/22

Auditors

Dr. Prashant A. A. *[Signature]*
19/9/22

Recommendations:

1. Documentation, formats review, collection of crucial data pertaining to the performance of the department needs immediate attention.
2. Lesson plan is not reflecting the OBE.

Auditors

1] Dr. Prashant A. A. *[Signature]*
19/9/22

2] Dr. Keerthi Kumar N *[Signature]*
19/9/22

Concerning to above audit, the action is taken and same has been documented. The respective copy is given below.



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT
Avalahalli, Doddaballapur Main Road, Bengaluru - 560064
Department of Information Science and Engineering

Action taken for the Academic and Administrative audit for AY 2022-23
conducted on 19.9.2022

Sl.No	Points discussed	Action Taken
1.	Collection of crucial data pertaining to the performance of the Department needs immediate attention	Necessary data has been collected and documented
2.	Lesson plan is not reflecting the OBE	Attainment has been calculated and loop has been closed

[Signature]
HOD Signature 10/10/2022

7.3. Improvement in Placement and Higher Studies and Entrepreneurship (10)

Assessment is based on improvement in:

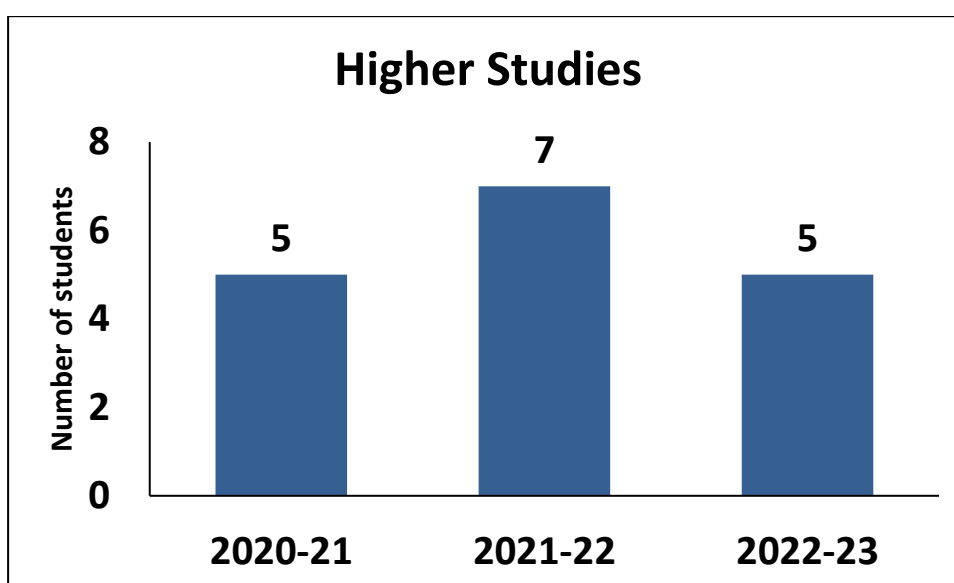
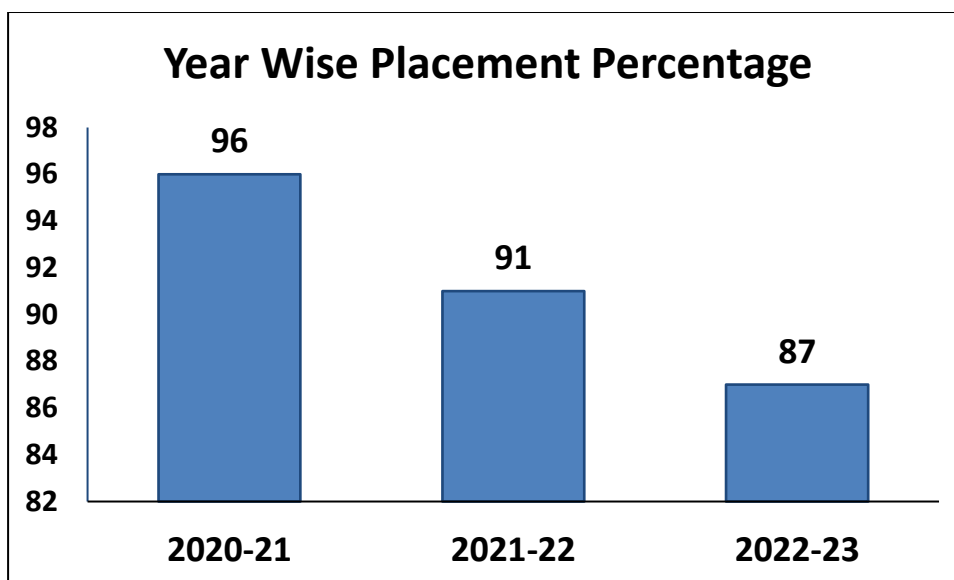
- Placement: number, quality placement, pay packages etc.
- Higher studies: performance in GATE, GRE, GMAT, CAT etc., and admissions in premier institutions.
- Entrepreneurs.

The department has managed to provide 100% placements consistently since 2014. Every year around 100-200 companies visit BMSIT for campus selection, all the eligible students in the department will get placed through campus selection.

In every batch around 5% of students will pursue higher studies by qualifying score in many competitive exams like GRE, TOFEL, GATE etc., and around 2% of students will choose to be entrepreneurs.

The following table shows the details:

ITEM	2019-2020 (LYG)	2018-2019 (LYG)	2017-2018 (LYGm1)
Total No. of Final Year Students (N)	215	143	72
No. of students placed in companies or Government Sector (x)	181	122	63
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	5	7	5
No. of students turned entrepreneur in engineering/technology(z)	0	1	1
$x + y + z =$	186	130	69
Placement Index: $(x + y + z)/N$	P1=0.87	P2=0.91	P3=0.96
Average placement= $(P1 + P2 + P3)/3$	0.91		



It is observed that there is an improvement in terms of placement, students admitted to higher studies. Also after 2 years of experience good number of students are admitted in QS Ranking institutions for their MS program.

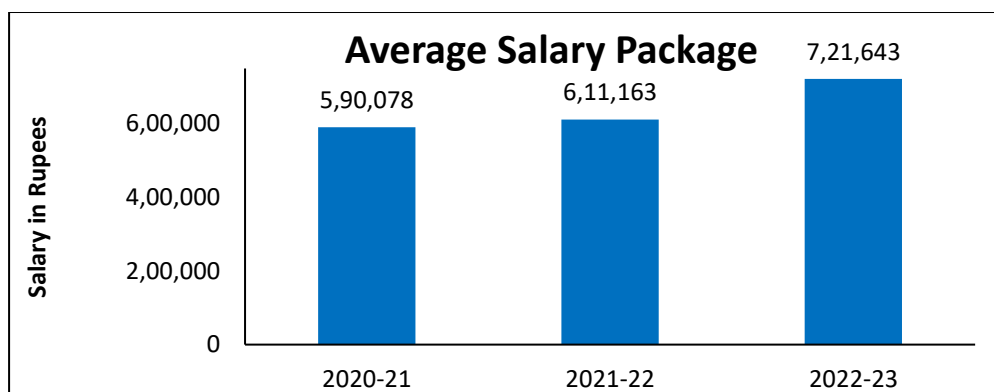
Placement Quality

The placement quality is measured based on the parameters

- i) Number of offers by the companies
- ii) Salary package offered by the companies

The placement quality of the department is showing the substantial improvement; the average pay package is also improving from 5.9 to 7.21 lakhs.

Average Salary		
2020-21	2021-22	2022-23
5,90,078	6,11,163	7,21,643



7.4. Improvement in the quality of students admitted to the programme (10).

Assessment is based on improvement

- In terms of ranks/score in qualifying state level/national level Entrances tests.
- Percentage of marks in Physics, Chemistry and Mathematics in 12th Standard
- Percentage Marks of lateral entry students.

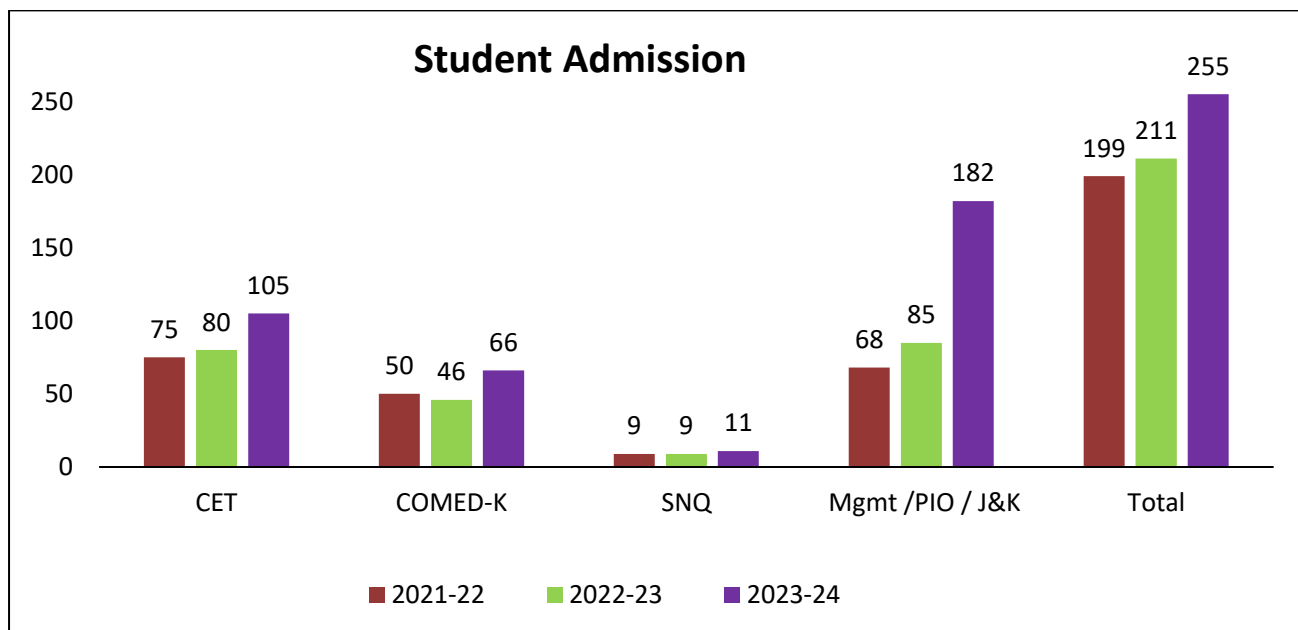
The Students are admitted to the Programme through four means viz.

- KCET (Karnataka Common Entrance Test)
- COMEDK
- Management Quota, PIO, SNQ
- Lateral Entry (for diploma students)

The following table shows the details:

Students Admission Intake

Item	CAY(2023-24)		CAY m1(2022-23)		CAYm2(2021-22)		CAYm3(2020-21)	
Sanctioned intake strength of the programme (N)	240		180		180		180	
Total number of students admitted on merit basis (N1)	CET	105	CET	73	CET	75	CET	80
	COME D-K	66	COMED-K	47	COMED-K	50	COMED-K	46
	SNQ	11	SNQ	09	SNQ	09	SNQ	09
	Total	182	Total	129	Total	134	Total	135
Number of students admitted in Management Quota /PIO/ Quota Jammu & Kashmir (N2)	69+3+ 1(J&K)= 73		69+21+1(J&K)=82		53+11 (PIO) + 1(J&K)= 65		54+ 2 (PIO) + 2=58	
Total number of students admitted in the programme (N1+N2)	255		211		199		193	



Item	CAY(2022-23)	CAY(2021-22)	CAY(2020-21)
Lateral Entry	18	18	23

Quality of the students admitting to Program is consistently showing the improvement.

- The quality students admitting through KCET is improving as the opening and closing rank is reducing every year.
- The students admitted through COMEDK are showing good improvement in terms of opening rank but the closing rank is not reducing.
- The opening rank of the students admitting through Lateral entry is not reducing consistently but the closing rank shows reduction
- The PCM average percentage of all the students admitted to the programme is showing good rise from 80 % to 84% from 2012 till now.

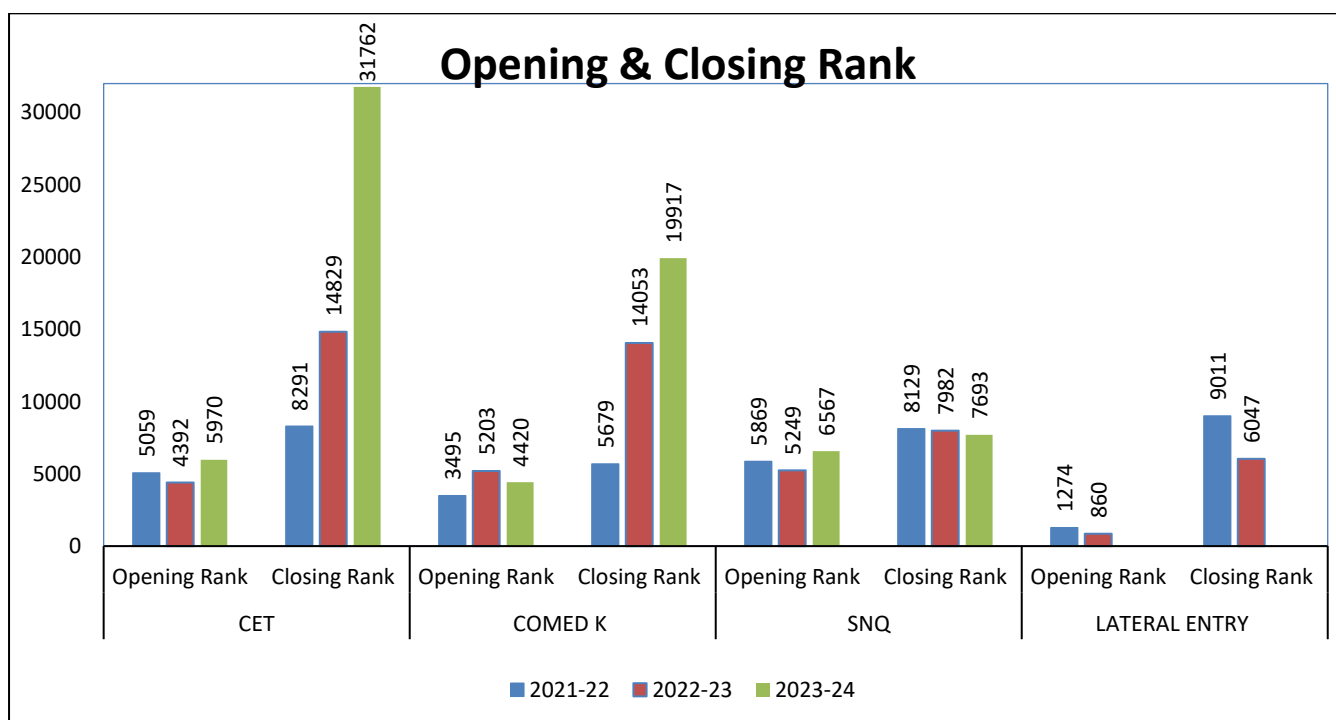
The following table shows the details:

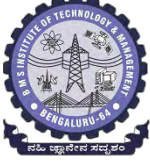
Item		CAY 2023-24	CAYm1 2022-23	CAYm2 2021-22	
National Level Entrance Examination	No. of Students admitted		-----	-----	
	Opening Score/Rank				
	Closing Score/Rank				
State/University/ Level Entrance Examination/ Others	CET	No. of Students admitted	105	73	75
		Opening Score/Rank	5970	4392	5059
		Closing Score/Rank	31762	14829	8291
		No. of Students admitted	66	47	50

	COMEDK	Opening Score/Rank	4420	5203	3495
		Closing Score/Rank	19917	14053	5679
	SNQ	No. of Students admitted	11	9	09
		Opening Score/Rank	6567	5249	5869
		Closing Score/Rank	7693	7982	8129
LATERAL ENTRY DETAILS	No. of Students admitted	*	18	18	
	Opening Score/Rank	-	860	1274	
	Closing Score/Rank	-	6047	9011	
	Average percentage	-	71.54%	72.30%	
Average CBSE/Any other Board Result of admitted students (Physics, Chemistry & Maths)			84.56%	81.34%	82.04%

*Admission process not yet completed

Graph for Rank Range of State/University/Level Entrance Examination/Others:





ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Under VTU)

Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CRITERION - 8

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Autonomous College under VTU

Avalahalli, Doddaballapura Main Road, Bengaluru – 560 064

(Accredited by National Assessment & Accreditation Council (NAAC) with 'A' grade)

(Approved by AICTE, New Delhi & Affiliated to Visvesvaraya Technological University, Belagavi)

Doddaballapura Main Road, Avalahalli, Yelahanka, Bengaluru-560 064



Criteria 8 – First Year Academics

Program: Information Science and Engineering

CAY: 2023-24, CAYm1:2022-23, CAYm2:2021-22,
CAYm3: 2020-21

Part B

8 FIRST YEAR ACADEMICS (50)

8.1. First Year Student-Faculty Ratio (FYSFR) (5)

Faculty Ratio(FYSFR) (5) Assessment = $(5 \times 20) / \text{Average FYSFR (Limited to Max.5)}$

Data for first year courses to calculate the FYSFR

SL. NO.	Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated(Yes/No)	Nature Of Association	Date of leaving
								CAY (2023-24)	CAYm1 (2022-23)	CAYm2 (2021-22)			
1	Dr. Karabi Sikdar	CHCPS1410H	M.Sc., Ph.D	06-05-2004	Queueing Theory	Professor	04-08-2008	60	55	58	Yes	Regular	
2	Dr. Annamma Abraham	ACSPA0773A	M.Sc., Ph.D	03-10-2002	Fluid Mechanics	Professor	03-08-2010	55	55	58	Yes	Regular	
3	Dr. Joji Joseph Idicula	AAJPI1312C	M.Sc., Ph.D	31-05-1999	Approximation Theory	Professor	03-03-2003	55	55	58	Yes	Regular	
4	Dr. Chethan A S	AWDPS5808F	M.Sc., Ph.D	17-06-2013	Fluid Mechanics	Professor	17-09-2003	55	55	58	Yes	Regular	
5	Dr. Anitha Kiran	BCSPK8758C	MSc,PhD	12-04-2023	Queueing Theory	Assistant Professor	16-08-2010	41	35	73	Yes	Regular	
6	Dr.Annapoorna M S	DINPS9906P	M.Sc., Ph.D	13-07-2018	Graph Theory	Assistant Professor	20-07-2011	18	71	41	Yes	Regular	
7	Dr. Kallur V Vijaya Kumar	ADHPV6207A	M.Sc., Ph.D	17-08-2019	Numerical Methods	Assistant Professor	02-07-2014	41	71	41	Yes	Regular	
8	Dr. Sreelakshmi T K	CNLPS9283B	M.Sc., Ph.D	07-05-2008	Fluid Mechanics	Assistant Professor	07-07-2014	35	71	41	Yes	Regular	
9	Dr.Pushpa B V	ARZPP9937F	M.Sc., Ph.D	09-01-2018	Fluid Mechanics	Assistant Professor	01-07-2019			43	No	Regular	16-04-2022
10	Dr. Arnab Bhattacharya	BCCPB7233F	M.Sc., Ph.D	18-02-2021	Fluid Mechanics	Assistant Professor	02-08-2021	100		73	Yes	Regular	

11	Dr.Priyanka Pal	BXLPP8812L	M.Sc., Ph.D	05-04-2021	Fuzzy automata theory	Assistant Professor	21-10-2021	65	33	73	Yes	Regular	
12	Dr.Aruna Kumara H	BNKPH6891L	M.Sc., Ph.D	31-11-2022	Differential geometry	Assistant Professor	05-11-2022	100	71	33	Yes	Regular	
13	Dr. S Saranya	FOJPS4471H	M.Sc., Ph.D	12-09-2014	Topology	Assistant Professor	13/9/2023	100			Yes	Regular	
14	Dr. Dhananjaya N	AQAPD2393P	M.Sc., Ph.D	18-07-2013	Materials Science	Professor	13-08-2010	100	100	100	Yes	Regular	
15	Dr. R Lokesh	ACEPL7417N	M.Sc., Ph.D	10-11-2012	Solid state physics	Associate Professor	07-08-2015	100	100	100	Yes	Regular	
16	Dr. Kavitha C	BJIPK4667H	M.Sc., Ph.D	01-10-2008	Spectroscopy	Associate Professor	07-09-2017	100	100	100	Yes	Regular	
17	Dr. Yashaswini	AEVPY7467G	M.Sc., Ph.D	05-08-2021	Condensed matter physics	Assistant Professor	02-08-2010	100	100	100	Yes	Regular	
18	Dr. Ashwini K R	AYKPA4877B	M.Sc., Ph.D	13-09-2022	Nuclear physics	Assistant Professor	12-08-2010	100	100	100	Yes	Regular	
19	Dr. Daruka Prasad	AHFPB9192E	M.Sc., Ph.D	20-02-2017	Nuclear physics & Materials science	Assistant Professor	24-09-2013	100	100	100	Yes	Regular	
20	Dr. Basavaraj B R	ASSPB8744Q	M.Sc., Ph.D	27-02-2019	Solid state physics	Assistant Professor	01-07-2019	100	100	100	Yes	Regular	
21	Dr. Harish Sharma	BSXPA3479H	M.Sc., Ph.D	11-03-2016	Materials Science	Assistant Professor	30-09-2023	100			Yes	Regular	
22	Dr. R Venkatesh	AQOPR6126L	M.Sc., Ph.D	20-02-2020	Material Science	Assistant Professor	01-09-2023	100			Yes	Regular	
23	Dr. Ramakrishnappa T	ANSPR9760M	M.Sc., Ph.D	30-04-2010	Inorganic Chemistry	Professor	18-06-2018	100	100	100	Yes	Regular	
24	Dr.Jyoti Roy Choudhury	AOUPC9060N	M.Sc., Ph.D	23-02-2015	Physical Chemistry	Associate Professor	20-07-2018		100	100	No	Regular	12-08- 2023
25	Dr..Jyothi C Abbar	AOIPA6732K	M.Sc., Ph.D	22-08-2012	Physical Chemistry	Associate Professor	28-06-2019	100	100	100	Yes	Regular	
26	Dr. Bincy Rose Vergis	AFXPV5052R	M.Sc., Ph.D	01-06-2019	Material Science	Assistant Professor	11-10-2006	100	100	100	Yes	Regular	
27	Dr. Sudheer Kumar K H	BYLPS6202A	M.Sc., Ph.D	20-12-2014	Material Science	Assistant Professor	02-07-2007	100	100	100	Yes	Regular	
28	Dr. Swetha G A	BRHPS6731F	M.Sc., Ph.D	07-04-2022	Electrochemistr y	Assistant Professor	01-09-2010	100	100	100	Yes	Regular	
29	Dr Suresh Kumar	BMWPS8616M	M.Sc., Ph.D	24-08-2014	Inorganic Chemistry	Assistant Professor	05-07-2019	100	100	100	Yes	Regular	
30	Mr. Praveen Kumar T N	AEFPT0767E	Ph.D	17-11-2000	Production Engineering and Systems	Associate Professor	01-10-2011	25	53	18	Yes	Regular	

31	Dr. Anantha Krishna L	AHTPG4741L	Ph.D	03-04-2021	Design Engineering	Assistant Professor	29-10-2007		36	45	Yes	Regular	
32	Dr. O Gurumurthy	AIVPM2688M	Ph.D	10-03-2022	Production Engineering	Assistant Professor	01-09-2005	12	100	58	Yes	Regular	
33	Dr. Shripad Diwakar	AHKPD8585C	Ph.D	08-07-2021	Thermal Engineering	Assistant Professor	22-08-2008			36	Yes	Regular	
34	Mrs. Nitya Poornima	CMZPS7683G	M.E	12-03-2008	Computer Integrated Manufacturing	Assistant Professor	05-02-2009	15	57	38	Yes	Regular	
35	Mr. K Chandrasekara Reddy	AJBPC9899H	M.Tech	01-12-2006	Industrial Engineering	Assistant Professor	25-06-2007	18		46	Yes	Regular	
36	Mr. Sundresh S	BBEPS2182M	M.Tech	05-04-2013	Product Design and manufacturing	Assistant Professor	16-08-2012	21	42	32	Yes	Regular	
37	Mr. Madhu M C	ASVPM8463E	M.E	09-04-2012	Thermal Engineering	Assistant Professor	08-08-2014	44	46	62	Yes	Regular	
38	Mr. Sri Ganesh T G	EJCPS8011J	M.Tech	09-04-2012	Computer Integrated Manufacturing	Assistant Professor	01-08-2011	18	31	42	Yes	Regular	
39	Dr. Jagdeesh Y J	AHZPJ0704G	Ph.D	18-03-2019	Thermal Science and Engineering	Assistant Professor	04-03-2013	38	63	56	Yes	Regular	
40	Dr. Keerthikumar M	BXQPK3697B	Ph.D	03-04-2021	Thermal Engineering	Assistant Professor	01-07-2014	44	25	55	Yes	Regular	
41	Dr. Kiran Kumar M D	ASZPD4490J	Ph.D	13-09-2022	Machine Design	Assistant Professor	03-08-2015		53	50	Yes	Regular	
42	Dr. Sangamesh B	FNDPS9471N	Ph.D	18-03-2019	Thermal Science and Engineering	Associate Professor	15-05-2019			50	No	Regular	12-01-2022
43	Dr. Avinash G	BQPPA8999D	Ph.D	25-07-2017	Thermal	Assistant Professor	08-07-2019	38	69	100	Yes	Regular	
44	Dr. Santosh Kumar	EJXPS4247F	Ph.D	06-10-2018	Manufacturing	Assistant Professor	01-07-2019			84	No	Regular	25-07-2022
45	Dr. Ravichandra K R	ANPPR7784N	Ph.D	26-08-2019	Manufacturing	Assistant Professor	28-10-2021	56	46	78	Yes	Regular	
46	Dr. Nagamadhu	ALZPN5793K	Ph.D	08-06-2020	Material science	Assistant Professor	25-10-2021	38	62	68	Yes	Regular	
47	Dr. G Aruna	ANPPA4065R	Ph.D	15-12-2017	Structural Engineering	Associate Professor	02-11-2021			35	Yes	Regular	
48	Dr. Deepak M S	CJEPD6612C	Ph.D	12-06-2020	Structural Engineering	Assistant Professor	27-01-2020	24	18	22	Yes	Regular	

49	Dr. Lalit Kumar Gupta	BEWPG4610K	Ph.D	18-01-2020	Structural Engineering	Assistant Professor	10-08-2021		13	30	Yes	Regular	
50	Mrs. Shimna Manoharan	COBPM6831G	M.Tech	09-08-2014	Geotechnical Engineering	Assistant Professor	31-07-2015			25	Yes	Regular	
51	Dr. Velumani P	AIRPV7032A	Ph.D	10-05-2017	Structural Engineering	Associate Professor	27-01-2020			29	No	Regular	11-11-2022
52	Dr. Athiyamman V	BTOPA7479P	Ph.D	29-11-2019	Structural Engineering	Assistant Professor	25-03-2021		26	33	Yes	Regular	
53	Dr. Vibha Venkataramu	AKRPV9831D	Ph.D	28-07-2021	Concrete Technology	Assistant Professor	02-11-2021			31	No	Regular	25-01-2023
54	Dr. Marsh M Bandi	AVGPB7975A	Ph.D	29-10-2021	Traffic and Transportation Engineering	Assistant Professor	15-07-2021	18	33		Yes	Regular	
55	Dr. Anupkumar G Ekbote	ABQPE4215Q	Ph.D	15-01-2021	Geotechnical Engineering	Assistant Professor	12-10-2020			28	Yes	Regular	
56	Dr. Chandrashekarappa	AKUPA9747Q	Ph.D	15/12/2015	Geology	Assistant Professor	27/01/2020	12			Yes	Regular	
57	Dr. Drakshaveni G	AIPPG8389K	Ph.D	04-01-2022	Medical image processing	Assistant Professor	10-02-2010		62	100	Yes	Regular	
58	Mr. Ravikumar B N	BVPPR8663B	M.Tech	03-05-2014	Artificial Intelligence	Assistant Professor	03-07-2014			100	Yes	Regular	
59	Mr. Chandrashekar K T	AHFPC8324B	M.Tech	07-12-2009	Networks	Assistant Professor	16-08-2012		33		Yes	Regular	
60	Mrs. Mahalakshmi S	AWJPM3270H	ME	30-06-2008	Softcomputing	Assistant Professor	13-08-2012	14	11		Yes	Regular	
61	Dr. Sheela	ACWPH5710J	Ph.D	20-07-2019	Parallel Computing	Associate Professor	05-03-2020		8		Yes	Regular	
62	Dr. Geeta Patil	AOQPP3113H	Ph.D	07-12-2018	Systems real-time Mixed criticality	Associate Professor	15-03-2021	50	38		Yes	Regular	
63	Dr. Shobha	BNNPS0488M	Ph.D	18-09-2018	Wireless Sensor Networking and IOT	Associate Professor	11-10-2021		50		Yes	Regular	
64	Dr. Prakash G L	ALEPP8212A	Ph.D	24-02-2019	Cloud computing	Associate Professor	11-10-2021	25	33		Yes	Regular	
65	Dr. Narasimha Murthy	BCFPS2400P	Ph.D	01-10-2018	Cloud computing	Assistant Professor	26-02-2021		16		Yes	Regular	
66	Dr. Mohan B A	ASTPM7014P	Ph.D	18-10-2018	Computer network	Assistant Professor	18-10-2021		13		Yes	Regular	

67	Dr. Anil Kumar N	BGPPK8609F	Ph.D	21-08-2021	High performance computer /ML	Assistant Professor	09-05-2022	6	27		Yes	Regular	
68	Dr. Kshama	AXIPG7169H	Ph.D	30-07-2022	Cloud Computing	Assistant Professor	05-08-2022		14		Yes	Regular	
69	Dr. Surekha K B	AVMPK4538N	Ph.D	17-11 2017	Wireless Sensor Networks	Associate Professor	19-02-2021	9	27		Yes	Regular	
70	Dr. Rakesh N	AGPPN1542G	Ph.D	13-10-2013	Voice security, Propagation Channel Modeling, Networks	Associate Professor	27-05-2022	19	50		Yes	Regular	
71	Dr. Gireesh Babu C N	ASRPG0606M	ME/M. Tech and PhD	45059	Data Science,AI ML	Assistant Professor	41517		13		Yes	Regular	
72	Dr. Harish Kumar	CPCPK1290K	Ph.D	07-07-2022	Internet of Things, Machine Learning	Assistant Professor	05-05-2023	29	40		Yes	Regular	
73	Dr. Veena N	AMGPN2579 M	Ph.D	08-08-2020	Brain Computer Interface	Associate Professor	09-07-2015	11			Yes	Regular	
74	Dr. Shanthi D L	BIEPD9536P	Ph.D	25-08-2022	Wireless Networks	Assistant Professor	13-08-2012	6			Yes	Regular	
75	Dr. Karthik S A	AVCPA3618B	Ph.D	04-05-2021	Machine Learning	Assistant Professor	06-06-2022	6			Yes	Regular	
76	Prof. Srinivas B . V	EVYPS9951M	M.Tech	04-08-2012	Cloud Computing	Assistant Professor	28/07/2023	41			Yes	Regular	
77	Dr.Kalaivani Y S	BIFPK9786D	ME/M. Tech and PhD	17-05-2022	Cyber Security, Machine Learning	Assistant Professor	10-05-2023		14		Yes	Regular	
78	Mrs.Bhavya G	BGPPB0289N	M.Tech	30-08-2013	Machine Learning	Assistant Professor	24/08/2023	41			Yes	Regular	
79	Dr. Sanjay Laxmi Narayan	ABOPL7209H	Ph.D	14-12-2007	Power Electronics	Professor	06-10-2017		50	50	Yes	Regular	
80	Mr. H D Kattimani	AHRPK8385J	M.S.	21-09-1998	Electronics and Control	Associate Professor	13-09-2006		17	75	Yes	Regular	
81	Dr. Prashanth Athavale	ANOPA0367P	Ph.D	29-07-2019	Bio Medical Signal Processing & Instrumentation	Assistant Professor	16-01-2009	24	38	58	Yes	Regular	

82	Dr Narappa Reddy Rama Rao	ACRPN2757N	M.S., Ph.D	15-11-2014	Electrical and electronics Engineering	Associate Professor	30-07-2014	29					
83	Mrs Manjula B K	BEEP2777J	M.Tech	28-08-2014	VLSI Design & Embedded System	Assistant Professor	26-07-2010	24		19	Yes	Regular	
84	Mr Vikram Chekuri	ARKPC4551D	M.Tech	30-06-2009	Power System Engineering	Assistant Professor	01-08-2011	9		38	Yes	Regular	
85	Mr Manjunath Babu P	AXQPM7595M	M.E	10-06-2010	Power and Energy Systems	Assistant Professor	10-08-2012	9	30	83	Yes	Regular	
86	Mr Ozwin Domnic D'souza	AAKPO8032E	M.Tech	18-04-2011	computer applications in industrial drives	Assistant Professor	16-08-2012	9		45	Yes	Regular	
87	Mrs. Shilpa G	CGTPS1911F	M.Tech	03-05-2013	Computer Applications in Industrial Drives	Assistant Professor	02-07-2014	21		61	Yes	Regular	
88	Mr. Rajanikanth V K	AZRPR0266K	M. Tech	25-08-2014	Computer Applications in Industrial Drives	Assistant Professor	01-08-2015	44	62	59	Yes	Regular	
89	Dr. Prashanth N A	AOQPP4931B	PhD,	28-08-2020	Computer Applications in Industrial Drives	Assistant Professor	16-07-2014	18	18	71	Yes	Regular	
90	Mr. Babu Naik G	AIYPN5414D	M.E,	01-10-2011	Power System Engineering	Assistant Professor	19-08-2011	18	25	26	Yes	Regular	
91	Mr Nagaraj D Chonali	AJEPC7573P	MTech	30-11-2013	VLSI Design & Embedded System	Assistant Professor	01-08-2015	9	23	29	Yes	Regular	
92	Dr. Madhu M Palati	ALTPP0102A	Ph.D	06-06-2016	High voltage Engineering	Assistant Professor	23-01-2017	9		31	Yes	Regular	
93	Mrs Suma Umesh	ABBPU2259H	M. Tech	17-04-2003	Power Electronics	Assistant Professor	04-08-2008	18	53	71	Yes	Regular	
94	Mrs. Bharathi R	AYCPB3084F	M.Tech	26-02-2007	Security in IoT	Associate Professor	12-08-2009	14	63		Yes	Regular	
95	Mr. Jagadish P	AOUPJ5449J	M.Tech	12-03-2008	Image Processing	Assistant Professor	06-02-2010		10		Yes	Regular	
96	Mrs. Durga Devi G Y	AUJPD8414E	M.Tech	28-03-2014	Network Security	Assistant Professor	06-02-2008	9	20		Yes	Regular	

97	Mr Muneshwara M S	ARJPM8071H	M.Tech	05-04-2013	Network and Cloud Computing	Assistant Professor	13-09-2006	9			Yes	Regular	
98	Mr. Guruprasad R	BOIPS5703P	M.Tech	12-03-2008	Data Science	Assistant Professor	02-07-2014		100		Yes	Regular	
99	Mr. Ravi Kumar B N	BVPPR8663B	M.Tech	03-05-2014	Artificial Intelligence	Assistant Professor	03-07-2014			67	Yes	Regular	
100	Dr. Srivani P	FRWPS9927L	M.Tech,P h.D.	10-03-2022	IOT and Machine Learning	Assistant Professor	16-07-2014	9		48	Yes	Regular	
101	Dr Anjan Krishnamurthy	ATAPA4874D	Ph.D	10-10-2017	Network Security and Forensics	Professor	14-08-2018	15	55		Yes	Regular	
102	Dr Aruna Kumari B N	AYXPA2357D	Ph.D	10-01-2020	Artificial Intelligence	Assistant Professor	06-08-2018		14	100	Yes	Regular	
103	Dr Mahesh G	AIVPG7290H	Ph.D	18-03-2019	Wireless Networks	Associate Professor	06-08-2018		20	71	Yes	Regular	
104	Dr Sathish Kumar T	BAVPS6450A	Ph.D	09-12-2015	Compiler Design	Associate Professor	28-08-2018			55	Yes	Regular	
105	Mrs. Shruthi J	CMPPS8271J	M.Tech	10-02-2009	Natural Language Processing	Assistant Professor	12-02-2009			46	No	Regular	10-08-2022
106	Dr. Sunada Dixit	AJUPD9156H	Ph.D	01-06-2015	Image Processing	Associate Professor	08-07-2019		17		Yes	Regular	
107	Mrs. A Mari Kirthima	AKBPA7798J	M.Tech	10-06-2005	Computer Networks	Assistant Professor	07-03-2012	47	67		Yes	Regular	
108	Dr. Usha B A	ABIPU5770A	Ph.D	21-01-2017	Network security	Professor	01-06-2018	25	27		Yes	Regular	
109	Mr.Anand R	AKWPA4115C	M.Tech	05-04-2013	Networks & Data Mining	Assistant Professor	03-10-2006	32	47	78	Yes	Regular	
110	Mrs Ambika G N	BABPA5376F	M.Tech	09-04-2012	Artificial Intelligence	Assistant Professor	07-03-2012	24			Yes	Regular	
111	Mr. Shankar R	CFYPS4134J	M.Tech	25-03-2015	Machine Learning	Assistant Professor	16-02-2015	18			Yes	Regular	
112	Dr Lakshmi B N	APFPN6495Q	Ph.D	20-06-2019	Machine Learning	Assistant Professor	12-02-2020	59	57	75	Yes	Regular	
113	Mrs. Vidya R Pai	BKUPP4887P	M.Tech	07-01-2010	Computer Network Security	Assistant Professor	07-03-2012		57	55	Yes	Regular	
114	Dr. Manoj H M	ATTPM8505A	Ph.D	26-08-2019	Software Engineering	Assistant Professor	31-01-2020	71	65	80	Yes	Regular	

115	Dr . Bhuvaneshwari C M	AEJPM9930Q	Ph.D	27-10-2016	Natural Language Processing	Professor	01-04-2021		100		Yes	Regular	
116	Dr. Archana R A	BBQPA9151G	Ph.D	14-10-2019	Big Data Security	Assistant Professor	25-03-2021		42	64	Yes	Regular	
117	Dr.Nagabhushan S.V	AGHPN9615P	MCA and PhD	09-01-2018	Decision Science and Optimization	Associate Professor	04-08-2006	21		44	Yes	Regular	
118	Dr. Dhanalakshmi B K	AQWPB0187F	Ph.D	22-10-2020	Cloud Computing	Assistant Professor	01-03-2021		71	44	Yes	Regular	
119	Mrs.. Durga Bhavani A	AYDPA2890B	M.Tech	08-12-2010	Internet of Things	Assistant Professor	14-03-2011			38	Yes	Regular	
120	Mrs Asha G H	AECPH1764G	M.Tech	08-04-2012	Digital Communication	Assistant Professor	15-07-2011			25	Yes	Regular	
121	Dr. Anitha V R	AKXPV4651R	Ph.D	30-01-2010	Antennas and Microwaves	Associate Professor	18-06-2021		23	29	Yes	Regular	
122	Dr. Vijayalakshmi G V	AFAPV6494C	Ph.D	16-09-2019	Signal Processing	Associate Professor	10-07-2019			24	Yes	Regular	
123	Dr. Saneesh Cleatus T	AECPT2176E	Ph.D	09-03-2022	Signal Processing	Associate Professor	22-11-2005	100	31	31	Yes	Regular	
124	Dr. Jayadeva G S	ACSPJ1222D	Ph.D	13-07-2010	Device Modelling, Low power VLSI.	Professor	04-09-2015			44	Yes	Regular	
125	Mrs. Sudha J	CAIPS9444L	M.Tech	17-12-2012	VLSI design and embedded system	Assistant Professor	10-11-2021			21	No	Contractual	31-03-2022
126	Mr. Thyagaraj T	AHOPT4319C	M.Tech.	26-02-2007	Artificial Intelligence	Assistant Professor	27-08-2013		24		Yes	Regular	
127	Mr. Satya Sreenivas Matsa	AMOPS6142F	M.Tech.	03-08-1990	Microwave and radar	Assistant Professor	22-10-2022		33		No	Contractual	20-04-2023
128	Mr. Suryakanth B	BXRPS7345M	M.Tech.	31-12-2008	VLSI design and embedded systems	Assistant Professor	04-03-2013		13		Yes	Regular	
129	Mrs. Champa C H	AMHPC9228K	M.Tech.	19-01-2018	VLSI Design	Assistant Professor	27.10.2022		17		No	Contractual	20-04-2023
130	Mrs. Chandraprabha R	ASRPC8009L	M.E/M.Tech	10-02-2009	Communication and Image Processing	Assistant Professor	12-03-2011	40			Yes	Regular	

131	Dr. Lakshmisagar H S	AEJPL6981N	PhD	04-04-2023	VLSI design and embedded systems	Assistant Professor	14-07-2011	6			Yes	Regular	
132	Dr. Suneet Kumar Agnihotri	BJGPA2226J	M.Tech, Ph.D	18-07-2023	VLSI	Assistant Professor	17-04-2023	44	28		Yes	Regular	
133	Dr. Rashmi N	ATKPR0386B	ME/M. Tech and PhD	03-02-2021	Wireless Communication	Assistant Professor	05-08-2008	6			Yes	Regular	
134	Dr. Dankan V Gowda	BKBPD0365F	ME/M. Tech and PhD	08-02-2020	Signal Processing	Assistant Professor	24-01-2020	6			Yes	Regular	
135	Mrs. Mamatha K.R	ATDPM6272C	M.E/M.Tech	02-07-2007	Signal Processing, Communication	Assistant Professor	21-04-2007	6			Yes	Regular	
136	Dr. Anna Merine George	BFCPG2463R	M.Tech.	09-10-2015	Digital electronics and advanced communication	Assistant Professor	23-02-2023	6	28		Yes	Regular	
137	Dr. Sabina Rahaman	ALKPR3807R	ME/M. Tech and PhD	22-07-2021	Nano materials	Assistant Professor	15-07-2011	21			Yes	Regular	
138	Dr. Asha K	BBKPK2715G	PhD	10-03-2022	Photonics & Intergrated Optics	Assistant Professor	12-04-2023	19	28		Yes	Regular	
139	Dr Raju Hajare	AIZPR3318K	Ph.D	18-03-2019	Nanoelectronics	Associate Professor	09-02-2010		25		Yes	Regular	
140	Dr. Surekha R Gondkar	AMEPG1284G	Ph.D	04-06-2020	Image Processing	Associate Professor	05-02-2009	8			Yes	Regular	
141	Mrs Prathiba N	AZMPP9207H	M.Tech	03-05-2014	Signal Processing	Assistant Professor	28-08-2013		38	37	Yes	Regular	
142	Mr Raghunandan G H	AZRPR0265L	M.Tech, Ph.D	04-01-2022	Wireless sensor networking	Assistant Professor	09-07-2014		48	41	No	Regular	27-01-2023
143	Mr. Siddiq Iqbal	ABBPI0049K	M.Tech	12-03-2008	Digital Electronics and Communication Systems	Assistant Professor	16-07-2007			29	Yes	Regular	
144	Mrs. Chandrababha R	ASRPC8009L	M.Tech	10-02-2009	Communication and Image Processing	Assistant Professor	12-03-2011	40			Yes	Regular	

145	Dr.. Sumathi M S	CRBPS4223F	Ph.D.	03-04-2021	Wireless Sensor networks	Assistant Professor	30-07-2010		54	36	Yes	Regular	
146	Dr.Saritha I G	ABHPI0377G	PhD	26-05-2023	Digital Electronics and Communication Systems	Assistant Professor	04-02-2008	11		36	Yes	Regular	
147	Dr. Banuprakash R	AUBPB4980F	Ph.D	29-06-2021	Antennas	Assistant Professor	10-08-2007		30		Yes	Regular	
148	Dr.Bharathi Malaka Reddy A	AEQPA2748K	PhD	05-03-2015	Wireless Sensor Networks	Professor	10-02-2015			22	Yes	Regular	
149	Dr. Pradeep K R	BDDPP8645R	M.Tech ,Ph.D	03-04-,2021	Machine Learning, IOT,Healthcare Analytics	Assistant Professor	27-10-2021	27	11	14	Yes	Regular	
150	Dr. Chandrashekhar B N	AHAPC9503B	PhD	10-03-2022	High performance computing applications	Assistant Professor	10-11-2022	100	75		Yes	Regular	
151	Dr. Kantharaju	AZCPK2048R	PhD	15-05-2023	Wireless sensor network	Assistant Professor	01-12-2022		82		Yes	Regular	
152	Dr. Anupama H S	AIWPA2060N	Ph.D	01-03-2018	AI & ML	Associate Professor	06-08-2018	60			Yes	Regular	
153	Dr.Archana Bhat	AWGPB3542A	PhD	08-06-2023	Networks	Assistant Professor	05-08-2022		12		Yes	Regular	ML
154	Mr. Subhash M	BODPS1521N	MA	20-07-1998	European Literature	Assistant Professor	16-07-2019			100	No	Contractual	30-04-2022
155	Mrs. Kavita	AFKPH2321G	MA	06-04-2008	English Literature	Assistant Professor	05-06-2023	100	100	100	Yes	Contractual	
156	Sandhya Devi N K	LQCPS5491J	MA	01-06-2016	English Literature	Assistant Professor	05-06-2023	100			Yes	Contractual	
157	Mrs. Tejaswini B J	AIUPT3094R	B.AL,LL B,LLM	27-05-2005	Business law	Assistant Professor	03-03-2008	100	50		Yes	Regular	

In order to determine the First Year Student Faculty Ratio (FYSFR) we obtained the number of faculty member (F) contributing in first year courses considering their fractional load. The number of faculty member (F) is rounded off to nearest integer. The actual intake of students in all branches together is taken as the number of students (N). The ratio of number of faculty members (F) and the number of students (N) gives us the FYSFR. Assessment (limited to 5) is determined from the formula $(5 \times 20)/\text{FYSFR}$. These calculations are tabulated below:

Year	No. of students (approved intake strength) N	No. of faculty members (considering fractional load) F	FYSFR (N/F)	Assessment = $(5 \times 20)/\text{FYSFR}$ (Limited to max. 5)
2021-22 (CAYm2)	840	55	15	5
2022-23 (CAYm1)	840	51	16	5
2023-24 (CAY)	1080	42	26	4
Average	920	49	19	4

8.2 Qualification of Faculty Teaching First-Year Common Courses (5)

Assessment of qualification = $(5x + 3y)/\text{RF}$

x = Number of Regular Faculty with Ph.D,

y = Number of Regular Faculty with Post-graduate qualification

RF = Number of faculty members required as per SFR of 20:1, Faculty definition as defined in 5.1

Most Faculty (X) are doctorates, however, few Faculty (Y) are postgraduates. The Number of Faculty Members (RF) is determined by dividing the Number of Students (N) by 20. The numbers are shown in the table given below:

Year	x (Number of Regular Faculty with Ph.D)	y (Number of Regular Faculty with Post graduate Qualification)	RF Number of Faculty Members Required as per SFR of 20:1)	Assessment of faculty qualification = $(5x+3y)/\text{RF}$
2021-22	30	12	42	4
2022-23	33	8	42	4
2023-24	29	8	54	3
Average assessment				3.67

8.3. First Year Academic Performance (10)

Academic Performance = ((Mean of 1st Year Grade Point Average of all successful Students on a 10-point scale) or (Mean of the percentage of marks in First Year of all successful students/10)) x (number of successful students (Y) / number of students appeared in the examination(Z)).

Successful students are those who are permitted to proceed to the second year

Academic Performance	2022-23 (CAYm1)	2021-22 (CAYm2)	2020-21 (CAYm3)
Mean of CGPA or mean percentage of all successful students (X)	7.95	7.99	6.98
The total no of successful students (Y)	196	199	197
Total number of students appeared in the examination (Z)	196	199	199
API	7.95	7.99	6.91
Average Academic Performance	7.62		

8.4. Attainment of Course Outcomes of first-year courses (10)

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

(Examples of data collection processes may include, but are not limited to, specific exam questions, laboratory tests, internally developed assessment exams, oral exams assignments, presentations, tutorial sheets etc.)

The data collection gathered for the evaluation of Course Outcomes of the first year is based on the following points:

•INTEGRATED COURSES:

(The data for CO attainment is considered from the performance of students in internal tests, AAT/CCAs, record marks and semester-end examinations.)

50% of the weightage was given for the University semester-end examination (SEE) for all integrated courses and 50% of weightage was given for CIE.

For the odd semesters of the academic year 2022-23, three internal tests were conducted during 6th, 11th and 15th week of the semester and conducted centrally for three days. Stream-wise question papers were set for all the courses. The average of all three internal tests and alternative assessment tests (AAT) (assignment/presentation), record marks were considered for the final continuous improvement examination (CIE) calculation. 50% of weightage was given for CIE (Max. 50 Marks; theory component is 30 marks and laboratory component are 20 marks). For theory CIE (30 marks) calculation, the three internal tests were conducted for 40 Marks each, and the average of all the tests was considered along with 20 marks for AATs and finally reduced to 30 marks. For the award of laboratory CIE (20 marks), the calculation of the weekly evaluated laboratory journals/reports carries 30 marks each. The average record marks are reduced to 15 marks and 5 marks for one practical/ Laboratory test which was conducted at the end of the semester.

SEE was conducted for a maximum of 100 marks which was then reduced to 50 Marks.

For the even semesters of the academic year 2022-23, continuous improvement examination (CIE)

two internal tests were conducted during 6th and, 10th week of the semester and conducted centrally for three days. Stream-wise question papers were set for all the courses. The average of two internal assessment tests each of 40 marks, scale down the marks scored to 15 marks (the minimum marks to be scored is 6 marks). The comprehensive continuous assessment (CCA) marks were calculated in two phases. CCA-1 and CCA2 each of 10 marks (any two assessment methods as per clause 22OB4.2 of regulations), scale down the marks scored to 10 marks (the minimum marks to be scored is 4 marks). For the award of CIE in the laboratory: the weekly evaluated laboratory journals/reports carries 30 marks each. The average record marks are reduced to 15 marks (the minimum marks to be scored is 6 marks). One laboratory test was conducted after the successful conduction of all experiments for 50 marks and scaled down to the marks scored to 10 marks (the minimum marks to be scored is 4 marks).

• THEOREY COURSES:

(The data for CO attainment is considered from the performance of students in internal tests and university examinations.)

Three internal tests were conducted during 6th, 11th and 15th week of the semester and conducted centrally for three days. Common question papers were set for all the courses (common to all the programs). The average of all three internal tests, quizzes and AAT (assignment/presentation) were considered for the final continuous improvement examination (CIE) calculation.

For the odd and even semesters of the academic year 2021-22, 50% of weightage was given for CIE (Max. 50 Marks). For CIE calculation, the three internal tests were conducted for 50 Marks each, and the average of all the tests (reduced to 25 Marks) was considered along with 25 marks for AAT. 50% of weightage was given for the University semester-end examination (SEE) for all courses. SEE was conducted for a maximum of 100 marks which was then reduced to 50 Marks.

- For the odd semesters of the academic years 2020-21, 40% of weightage was given for CIE (Max. 40 Marks). For CIE calculation, the three internal tests were conducted for 50 Marks each, and the average of all the tests (reduced to 30 Marks) was considered along with 10 marks for assignments/quizzes. 60% of weightage was given for the University semester-end examination (SEE) for all courses. SEE was conducted for a maximum of 100 marks which was then reduced to 60 Marks.
- For the even semesters of the academic year 2020-21, due to the COVID-19 pandemic, students were promoted by the University based on 50% of the weightage of the CIE and 50% of the weightage for the performance based on the previous semester examination results.

CIE of 40 marks was done as per the following norms;

- The student wrote all three tests online - proctored mode. One invigilator was allotted for every 20-25 students.
- To resolve the bandwidth issues (if any), students were allowed to upload the scanned answered scripts to Google Classrooms with a buffer time of 20 minutes in addition to 90 minutes which was the duration of the test.
- For the even semester of the academic year 2020-21, three online internal tests were conducted for 50 Marks each (later reduced to 30 marks) and 30 Marks each respectively.

The average of all the internal tests considered for CIE calculation along with 10 marks for assignments/quizzes.

• **LABORATORY COURSES:**

(The data for CO attainment is considered from the performance of students in internal tests, record marks and university examinations.)

For the odd and even semesters of the academic years 2021-22, 50% of weightage was given for CIE (Max. 50 Marks). For the award of CIE of 50 marks in Practical / Laboratory, 30 marks were based on the weekly evaluated laboratory journals/reports and 10 marks for one practical/ Laboratory test which was conducted at the end of the semester in line with the final examination and 10 marks for AAT. 50% of weightage was given for the University semester-end examination (SEE) for all laboratory courses. SEE was conducted for a maximum of 100 marks which was then reduced to 50 Marks.

- For the odd semesters of the academic years 2020-21, 40% of weightage was given for CIE (Max. 40 Marks). For the award of CIE of 40 marks in Practical / Laboratory, 30 marks were based on the weekly evaluated laboratory journals/reports and 10 marks for one practical/ Laboratory test which was conducted at the end of the semester in line with the final examination. 60% of weightage was given for the University semester-end examination (SEE) for all laboratory courses. SEE was conducted for a maximum of 100 marks which was then reduced to 60 Marks.
- For the even semesters of the academic year 2020-21, due to the COVID-19 pandemic, students were promoted by the University based on 50 % of the weightage of CIE and 50 % of the weightage for the performance based on the previous semester examination results.

CIE of 40 marks was calculated as per the following norms;

30 marks were awarded based on the weekly evaluation of laboratory journals/reports and 10 marks were awarded based on an online internal test conducted at the end of the semester in line with a final examination.

• **CALCULATION OF CO ATTAINMENT:**

For the year 2022-23, 2021-22, and 2020-21

The CO attainment was calculated for both theory and laboratory courses as follows:

A target of 60% marks was fixed for theory and lab courses.

Ratings of 1,2 & 3 are fixed as follows:

- 60% and above of the total number of students scoring 60% of marks was rated as 3.
- 55% to 59% of the total number of students scoring 60% of marks was rated as 2.
- 50% to 54% of the total number of students scoring 60% of marks was rated as 1.

Sum of these ratings for each program in a particular course for internal tests was calculated and an average was computed(X1). Similarly, sum of these ratings in each course was calculated for the final examination scores and the average was computed(X2).

- $\text{CO ATTAINMENT} = 0.4 \times X1 + 0.6 \times X2$ for the year 2020-21.
- $\text{CO ATTAINMENT} = 0.5 \times X1 + 0.5 \times X2$ for the year 2021-22 and 2022-23.

• **SUPPORTING DOCUMENTS:**

- Blue Books

- Quiz papers
- Assignments
- AATs/CCAs
- Result Sheets
- Laboratory journals/reports

8.4.2. Record the attainment of Course Outcomes of all first year courses (5)

Program shall have set attainment levels for all first year courses.

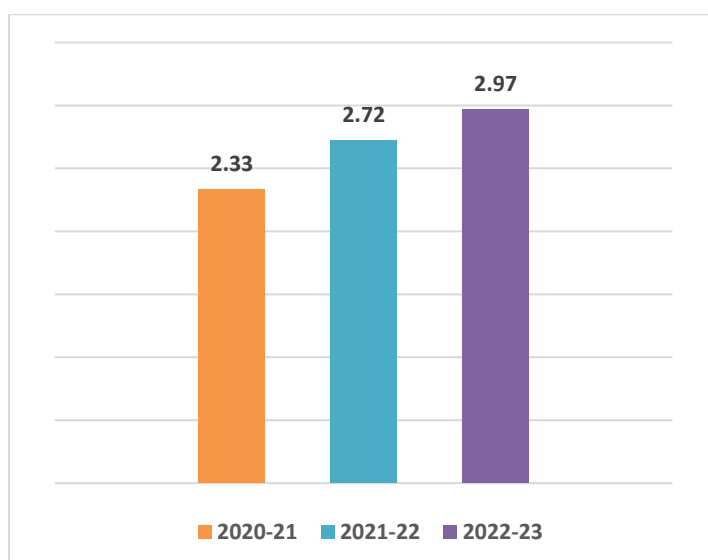
(The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect the COs of a subject plus the performance in the University examination)

40% of Internal assessment and 60% of external assessment marks were considered to compute average CO attainment in each subject in the year 2020-21. 50% of Internal assessment and 50% of external assessment marks were considered to compute average CO attainment in each subject in the year 2021-22 and 2022-23.

Sl. No.	Course Code	Course Title	2020-21
1	18MAT11	Calculus and Linear Algebra	3
2	18PHY12	Engineering Physics	1.97
3	18ELE13	Basic Electrical Engineering	3
4	18 CIV14	Elements of Civil Engineering and Mechanics	1.8
5	18EGDL15	Engineering Graphics	3
6	18PHYL16	Engineering Physics Laboratory	3
7	18ELE17	Basic Electrical Engineering Laboratory	3
8	18EGH18	Technical English-I	1.2
9	18MAT21	Advanced Calculus and Numerical Methods	2.57
10	18CHE22	Engineering Chemistry	3
11	18CPS23	C Programming for Problem Solving	1.65
12	18ELN24	Basic Electronics	1.92
13	18ME25	Elements of Mechanical Engineering	2.4
14	18 CHEL26	Engineering Chemistry Laboratory	3
15	18CPL27	C Programming Laboratory	1.6
16	18EGH28	Technical English-II	1.2
Cii			2.33

Sl. No.	Course Code	Course Title	2021-22
1	21MA11	Calculus and Differential Equations	3
2	21PY12	Engineering Physics	2.17
3	21EE13	Elements of Electrical Engineering	3
4	21ME14	Engineering Graphics	3
5	21CV15	Elements of Civil Engineering	2.77
6	21PYL16	Engineering Physics Laboratory	3
7	21EEL17	Electrical Engineering Laboratory	3
8	21HS18	Technical English-I	3
9	21AE19Y/S/N/M	Yoga/Sports/NCC/Music	1.34
10	21AE110	Design Thinking & Innovation	3
11	21MA21	Advanced Calculus, Laplace Transforms and Linear Algebra	2.97
12	21CH22	Engineering Chemistry	2.83
13	21CS23	C Programming for Engineers	1.88
14	21EC24	Basic Electronics Engineering	3
15	21ME25	Elements of Mechanical Engineering	3
16	21CHL26	Engineering Chemistry Laboratory	3
17	21AE27	Indian Knowledge System	3
18	21HS28	Technical English-II	3
19	21AE29Y/S/N/M	Yoga/Sports/NCC/Music	1.71
Cii			2.72

Sl. No.	Course Code	Course Title	2022-23
1	BMATS101	Mathematics for CSE Stream - I	3
2	BCHE102	Chemistry for CSE Stream	2.58
3	BCEDK103	Computer-Aided Engineering Drawing	3
4	BESCK104C	Introduction to Electronics Engineering	3
5	BPCK105B	Introduction to Python Programming	3
6	BENGK106	Communicative English	3
7	BICOK107	Indian Constitution	3
8	BSFHK158	Scientific Foundation of Health	3
9	BMATS201	Mathematics for CSE Stream - II	3
10	BPHYS202	Physics for CSE Stream	3
11	BPOPS203	Principles of Programming Using C	3
12	BESCK204D	Introduction to Mechanical Engineering	3
13	BETCK205H	Introduction to Internet of Things (IoT)	3
14	BPWSK206	Professional Writing Skills in English	3
15	BKSKK207/B KBKK207	Samskrutika Kannada /Balake Kannada	3
16	BIDTK258	Innovation and Design Thinking	3
Cii			2.97



8.5 Attainment of Program Outcomes from first year courses (20)

8.5.1 Indicate results of evaluation of each relevant PO and/ or PSO, if applicable (15)

(Describe the assessment processes that demonstrate the degree to which the Program Outcomes are attained through first-year courses and document the attainment levels. Also, include information on assessment processes used to gather the data upon which the evaluation of each Program Outcome is based indicating the frequency with which these processes are carried out)

1. COs that were strongly related to a particular PO were given a rating of 3, moderately related were given a rating of 2, and weakly related were given a rating of 1. Based on this process, all first-year courses are mapped into various POs and the CO-PO matrix was formed. Course- PO matrix was prepared by taking the average ratings of various COs of a particular course.
2. The average value of C_{ii}^* for all POs was calculated. C_{ii}^* value of each PO will be the target for the attainment of a particular PO.
3. PO's of each course was computed as follows:

Whichever PO had a relevance of 3 with respect to a particular course was given the same PO attainment value as the CO attainment value and for the POs with the relevance of 2 & 1 for a particular course, the PO attainment value was given by $\text{PO attainment value} = 0.66 * \text{CO attainment value}$ and $0.33 * \text{CO attainment value}$ respectively.

4. The attainment of each PO was computed as follows:

A certain percentage of the target which is the C_{ii} value was fixed for checking the PO attainment. Wherever the percentage of PO attainment was equal to or greater than the percentage fixed (60%) for the attainment then those POs were considered as attained. Wherever the percentage of PO attainment was less than the percentage fixed for the attainment, those POs were considered as not attained, and for such POs corrective measures to achieve the target were listed under the action plan.

PO fixed attainment for all the first-year subjects during the academic year 2022-23

Note: Enter corelation levels 1, 2 and 3 as defined: 1. Slight (Low) 2. Moderate (Medium) 3. Substantial (High)

Sl. No.	Course Code	Course Title	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	BMATS101	Mathematics for CSE Stream - I	C101	3	2			3							
2	BCHES102	Chemistry for CSE Stream	C102	3	2		2			1					1
3	BCEDK103	Computer-Aided Engineering Drawing	C103	3	3	2.5		3	1			1	2		2
4	BESCK104C	Introduction to Electronics Engineering	C104	3	1.75	2		3				2	2	2	1
5	BPCK105B	Introduction to Python Programming	C105	3	3	3		3							
6	BENGK106	Communicative English	C106									2.75	3		2.75
7	BICOK107	Indian Constitution	C107						1.75	1					
8	BSFHK158	Scientific Foundation of Health	C108	3					3			3	3		
9	BMATS201	Mathematics for CSE Stream - II	C109	3	2			3							
10	BPHYS202	Physics for CSE Stream	C110	3	2.4	1		2			1	1			1
11	BPOPS203	Principles of Programming Using C	C111	2.5	2			3					2		
12	BESCK204D	Introduction to Mechanical Engineering	C112	3						3		3	3		3
13	BETCK205H	Introduction to Internet of Things (IoT)	C113	3	3			3	3			3	3		3
14	BPWSK206	Professional Writing Skills in English	C114									2.75	3		2.75
15	BKSKK207/ BKBBK207	Samskrutika Kannada /Balake Kannada	C115								1				
16	BIDTK258	Innovation and Design Thinking	C116	2	2.50	3	2		2.33	2		2.33	2.50	2	2
Cii				2.88	2.37	2.30	2.00	2.88	2.22	1.75	1.00	2.31	2.61	2.00	2.06

PO attainment for all the first-year subjects during the academic year 2022-23

Note: Enter correlation levels 1, 2 and 3 as defined: 1. Slight (Low) 2. Moderate (Medium) 3. Substantial (High)

Sl. No.	Course Code	Course Title	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	BMATS101	Mathematics for CSE Stream - I	C101	3	2			3							
2	BCHES102	Chemistry for CSE Stream	C102	2.58	1.72		1.72			0.86					0.86
3	BCEDK103	Computer-Aided Engineering Drawing	C103	3	3	2.5		3	1			1	2		2
4	BESCK104C	Introduction to Electronics Engineering	C104	3	1.75	2		3				2	2	2	1
5	BPCK105B	Introduction to Python Programming	C105	3	3	3		3							
6	BENGK106	Communicative English	C106									2.75	3		2.75
7	BICOK107	Indian Constitution	C107						1.75	1					
8	BSFHK158	Scientific Foundation of Health	C108	3					3			3	3		
9	BMATS201	Mathematics for CSE Stream - II	C109	3	2			3							
10	BPHYS202	Physics for CSE Stream	C110	3	2.4	1		2			1	1			1
11	BPOPS203	Principles of Programming Using C	C111	2.5	2			3					2		
12	BESCK204D	Introduction to Mechanical Engineering	C112	3						3		3	3		3
13	BETCK205H	Introduction to Internet of Things (IoT)	C113	3	3			3	3			3	3		3
14	BPWSK206	Professional Writing Skills in English	C114									2.75	3		2.75
15	BKSKK207/B KBKK207	Samskrutika Kannada /Balake Kannada	C115								1				
16	BIDTK258	Innovation and Design Thinking	C116	2	2.50	3	2		2.33	2		2.33	2.50	2	2
Cii				2.84	2.34	2.30	1.86	2.88	2.22	1.72	1.00	2.31	2.61	2.00	2.04

8.5.2 Actions taken based on the results of evaluation of relevant PO (5)

(The attainment levels by direct (student performance) are to be presented through Program level Course-PO matrix as indicated)

PO Attainment Levels and Actions for improvement – CAYm1 – Mention for relevant POs

POs Attainment Levels and Actions for Improvement- (2022-23)

Target: 70%

POs	Target Level	Attainment Level	Observations
PO1: Engineering Knowledge			
PO1	2.02	2.84	Attained Basic Engineering fundamental knowledge of students further be enhanced.
Action 1: Emphasize Mathematical fundamentals before teaching concerned subject topics and make them solve more problems. Action 2: More problems will be given for practice. Action 3: More emphasis shall be given to teaching fundamental concepts using modern ICT tools e.g., to display animated videos on engineering fundamentals.			
PO 2: Problem Analysis			
PO 2	1.66	2.34	Attained Students' analytical skills are to be improved to analyze complex Engineering Problems.
Action 1: Mini projects to be done to improve the analytical skills in the higher semesters. Action 2: Preference shall be given to hands-on sessions during class hours during the forthcoming semesters. Action 3. More tutorial problems will be given to improve understanding of subjects.			
PO 3: Design/development of Solutions			
PO 3	1.61	2.30	Attained Students' ability to design solutions for complex problems can be further improved.
Action 1: Encourage to carry out of projects on societal and environmental concerned issues Action 2: Students shall be made to design and implement additional programs during lab sessions. Action 3: Organize visits to the industry to get familiar with engineering problems and solutions.			
PO 4: Conduct Investigations of Complex Problems			
PO 4	1.40	1.86	Attained Students further need to be made more research-oriented towards analysis and synthesis of results.
Action 1: Students shall be advised to refer to relevant sources during the literature survey to gain research-based knowledge. Action 2: Case studies will be assigned to Students.			

PO 5: Modern Tool Usage			
PO 5	2.02	2.88	Attained The usage of modern tools in the program needs to be improvised.
Action 1: Hands-on session to be conducted to learn modern tools. Action 2: Encourage students to participate in the workshops. Action 3: Encourage students to use simulation software to understand the modeling of problems.			
PO 6: The Engineer and Society			
PO 6	1.55	2.22	Attained The ability to map technology to give solutions to societal problems needs to be strengthened.
Action 1: Students are to be encouraged to consider the impact of engineering solutions on Society, Health, safety etc., during the induction program. Action 2: Awareness to be created among the student fraternity by conducting socio-economic lectures. Action 3: Motivate the students to join different activities on societal and health issues.			
PO 7: Environment and Sustainability			
PO 7	1.23	1.72	Attained Motivated to develop a real-time application by considering the impact on environmental contexts.
Action 1: Students would be encouraged to carry out projects related to the environment and design sustainable solutions. Action 2: NSS activities shall be planned for socio-economic development.			
PO 8: Ethics			
PO8	0.7	1	Attained Student knowledge further to be enhanced more on professional ethics and responsibilities.
Action 1: Students are to be briefed about Ethics in the Constitution of India and Professional Ethics. Action 2: Students are motivated to attend seminars/lectures on professional ethics.			
PO 9: Individual and Team Work			
PO 9	1.62	2.31	Attained Students need to improve in functioning effectively as an individual and as team leaders.
Action 1: To work in a team of large size, students form batches during the laboratory. Action 2: Students would be encouraged to present the technical seminar independently. Action 3: Group activities will be conducted Action 4: Promote students' leadership qualities by providing a platform for co-curricular and extra-curricular activities.			
PO 10: Communication			
PO10	1.83	2.61	Attained The communication and presentation skills are to be further improved among the students.

Action 1: Encourage students to utilize the English language lab.			
Action 2: The training will be given on soft skills, technical, Group Discussions, etc., to improve communication and write-ups through placement cell.			
PO 11: Project Management and Finance			
PO 11	1.40	2	Attained Plan to improve further.
Action 1: Students are encouraged to participate as members or team leaders to organize Department or college events.			
PO 12: Life-long Learning			
PO12	1.44	2.04	Attained Learning habits among students can be further strengthened.
Action 1: The students are motivated to educate themselves about the changing technological environment.			



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Under VTU)

Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CRITERION - 9

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

CRITERION 9
STUDENT SUPPORT SYSTEMS

CRITERION - 9 STUDENT SUPPORT SYSTEMS (50)

9.1 Mentoring system to help at individual level (05)

(Type of mentoring: Professional guidance/career advancement/course work specific/laboratory specific/all-round development. Number of faculty mentors: Number of students per mentor: Frequency of meeting: (-The institution may report the details of the mentoring system that has been developed for the students for various purposes and state the efficacy of such system)

Preamble: Mentoring of students is an essential feature to render equitable service to all our students having varied background and to solve or address personal/ psychological problems of students. Student-mentorship has the following aims:

- To enhance teacher-student contact hours
- To enhance students' academic performance and attendance
- To minimise student drop-out rates
- To identify and understand the status of slow learners and encourage advanced learners
- To render equitable service to students

Mentoring at BMSIT&M:

- Mentoring system: Yes, in place.
- Type of mentoring: One to one
- No. of faculty mentors: 159
- No. of students per Mentor: 20-35
- Online Portal: Yes, available

Frequency of Meeting: Every Friday between 1.45 pm and 2.40 pm. (However, faculty members/Proctors are available always for guidance and mentoring except during class hours)

Types of Mentoring: To help the students, resolve both academic and other personal / psychological issues, BMSIT&M has introduced a new mentoring system from the academic year 2016-17 based on the following objectives:

- To address the grievances of students and to enable them to perform better in their academics.
- To monitor constantly the attendance of students, their academic performance. Further identification of slow learners and irregular students.
- 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 by organizing motivational talks on human values and Personality development.

Table:1 Details of Mentoring at BMSIT&M

Academic Year	2019-20	2020-21	2021-22	2022-23	2023-2024
Type of Mentoring	One to one				
No. of Faculty Mentors	0125	0139	0159	0159	0159
Number of Mentees	3233	3737	3677	3977	3951
Number of Mentees/Mentor	20 – 35				
Frequency of the Meeting	Once in a week: Friday afternoon				

The Mentor continuously counsels the Mentees/students with respect to their academic progress and personality development and records the minutes of the meeting in the GNUMS portal. The Mentors also have communication/correspondence with the parents of their respective Mentees/students through the software GNUMS where an SMS on progress of students is communicated periodically.

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT
(Autonomous Under VTU)

19F - BMSIT&M (BMSIT&M - B.E. - 19F) BMSIT&M - 19F - Dr. Sheela Kathavate - 01-06-2022 (07-12-2022 to 06-02-2023)

Proctoring History

Issued Discussed: all the set point in agenda

Proctor's Opinion:-

Special Remarks for Proctor Coordinator: students have expressed their satisfaction on all the points discussed as part of agenda

Special Remarks for Me:

Other Remarks: students have expressed their satisfaction on all the points discussed as part of agenda

Proctor: 19F205002 - ARYUSH JAGWAL / Proctor: Dr. Narasimha Murthy M S / Proctoring Date & Time: 02-12-2022 01:45 PM

Meeting Agenda: Regular weekly meeting

Issued Discussed: 1st IA marks, PBL, shortage of attendance, Placement training, etc.

Proctor's Opinion: Proctor has agreed to the points discussed in the meeting

Special Remarks for Proctor Coordinator:-

Special Remarks for Me:

Other Remarks:-

Proctor: 19F205002 - ABDUL SADIQ / Proctor: Dr. Narasimha Murthy M S / Proctoring Date & Time: 02-12-2022 01:45 PM

Meeting Agenda: Regular weekly meeting

Issued Discussed: 1st IA marks, PBL, shortage of attendance, Placement training, etc.

Proctor's Opinion: Proctor has agreed to the points discussed in the meeting

Special Remarks for Proctor Coordinator:-

Special Remarks for Me:

Other Remarks:-

Proctor: 19F205002 - ABDUL SADIQ / Proctor: Dr. Narasimha Murthy M S / Proctoring Date & Time: 02-12-2022 01:45 PM

Meeting Agenda: Regular weekly meeting

Issued Discussed: 1st IA marks, PBL, shortage of attendance, Placement training, etc.

Proctor's Opinion: Proctor has agreed to the points discussed in the meeting

Special Remarks for Proctor Coordinator:-

Special Remarks for Me:

Other Remarks:-

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Proctor Remarks For IA Proctoring

MY MENTEEES

Sl. No.	Program	Lab Batch	USN	Proctor Name	IA-1	IA-2
1	BMSIT&M/Aug- B.E.-02 02 (Aug)- 3-A	A1	19F205007	ADITHYAN NARAYAN	Not Discussed	Not Discussed
2	BMSIT&M/Aug- B.E.-02 02 (Aug)- 3-A	A1	19F205002	ANIL K. HARIHAR	Not Discussed	Not Discussed
3	BMSIT&M/Aug- B.E.-02 02 (Aug)- 3-A	A1	19F205001	ANISH PRANAV THIRAI	Not Discussed	Not Discussed
4	BMSIT&M/Aug- B.E.-02 02 (Aug)- 3-A	A1	19F205004	ANISH KUMAR P.ATHAR	Not Discussed	Not Discussed
5	BMSIT&M/Aug- B.E.-02 02 (Aug)- 3-A	A1	19F205005	ASHWIN BHATT	Not Discussed	Not Discussed
6	BMSIT&M/Aug- B.E.-02 02 (Aug)- 3-A	A1	19F205006	ASHWIN K. ANAND	Not Discussed	Not Discussed
7	BMSIT&M/Aug- B.E.-02 02 (Aug)- 3-A	A1	19F205007	ADITHYAN C	Not Discussed	Not Discussed
8	BMSIT&M/Aug- B.E.-02 02 (Aug)- 3-A	A1	19F205008	ADITHYAN R	Not Discussed	Not Discussed
9	BMSIT&M/Aug- B.E.-02 02 (Aug)- 3-A	A1	19F205009	ADITHYAN	Not Discussed	Not Discussed

Figure 9.1 Mentoring in software GNUMS

Typical Cases and Impact:

The critical cases counselled by professional counsellor Mrs Chethana Sreenivas, who visits the campus every Tuesday and Friday between 1:30 PM to 4:30 PM The Mentoring cum Counselling system has helped in improving the overall performance of the student. The same illustrated in few samples listed below.

Sl. No.	Details	
1)	Iffat Ayesha	2nd Semester CSE
	Counselled For	<ul style="list-style-type: none"> ● Academic deficits ● Mild Emotional disturbances
	Counselled during	August to December 2022 – 10 Sessions
	Counselling techniques used	<ul style="list-style-type: none"> ● Time table Management ● Effective Study skill techniques ● Client Centred Therapy
	Outcome	<ul style="list-style-type: none"> ● Academic improvement was observed in internal marks around 60% to 75%. ● Systematic and confident in approach to academics ● Emotional stability achieved.
2)	Vaishnavi	2nd Semester AIML
	Counselled for	<ul style="list-style-type: none"> ● Academic deficits ● Mild Emotional and family issues
	Counselled during	August to September 2022 – 06 Sessions
	Counselling Techniques used	<ul style="list-style-type: none"> ● Client Centred Therapy ● Effective Study skill techniques ● Time Management Strategies
	Outcome	<ul style="list-style-type: none"> ● Achieved 8.0 SGPA in 2nd Semester ● In first Sem, she had 6.5 SGPA ● Personal issues resolved
3)	Manjusha P	5th semester ISE
	Counselled during	October 2022 to January 2023
	Counselled for	Interpersonal disturbances
	Counselling Techniques used	<ul style="list-style-type: none"> ● Positive psychology technique ● Client Centred-Therapy
	Outcome	Resolved the Interpersonal issues.

Cases which demonstrate closing of loop February 2023 to May 2023

Sl. No	Name of the student	Branch/Semester
1.	Basavaraj	4 th sem Mechanical (Lateral entry diploma)
	Counselled from	March 2023 to May 2023
	Counselled for	Moderate emotional disturbance
	Counselling technique used	<ul style="list-style-type: none"> ● Client Centred therapy ● Positive psychology
	Outcome	<ul style="list-style-type: none"> ● Emotional stability achieved ● Ability to focus on academic, other areas increased
2.	Raju	4 th Sem Civil
	Counselled from	November 2022 to May 2023
	Counselled for	Academic deficit
	Counselling technique used	<ul style="list-style-type: none"> ● Effective study skills ● Timetable management
	Outcome	<ul style="list-style-type: none"> ● Cleared backs, passed in all subjects of 3rd Sem ● Confident in all spheres of life
3.	Iffat Ayesha	4 th sem CSE
	Counselled from	January 2022 to May 2023
	Counselled for	Improvement of Academics
	Counselling technique used	<ul style="list-style-type: none"> ● Effective study skills ● Timetable management
	Outcome	7.2 to 8.2 SGPA

9.2. Feedback analysis and reward/corrective measures taken, if any (10)

Feedback collected for all courses: YES

Specify the feedback collection process:

The Feedback collection system is a confidential online portal. At BMSIT&M, Students Feedback on Faculty is taken during twice in every semester, about various aspects of the teaching learning process adopted by the faculty.

1. The process commences with a communication to all the departments regarding nomination of faculty coordinators. The faculty coordinators involved in the feedback process are responsible for data collection.
2. All the students are informed via e-mail / SMS / WhatsApp regarding commensurate instructions. To ensure a secure feedback mechanism, a password based online ERP system is used. The students can securely login to the feedback portal using their password. Feedbacks are taken for all theory, laboratories, and project work.
3. Generally, the feedback process will get over within a week of commencement. Concerned faculty coordinators can track the status of feedback completion online.
4. The feedbacks are analysed based on a set of questionnaires defined by the Institute.

The evaluation is graded based on the scale of One to Five.

Scale of feedback system is as follows:

1-Very Poor, 2- Poor, 3-Satisfactory, 4-Good, 5-Excellent

An average score percentage from total number of feedbacks given is assessed to analyze the feedback.

5. All the faculty members are informed via e-mail / SMS / WhatsApp to download their feedback reports online after completion of the analysis process.
6. All the feedback reports are made available to the concerned HoD in the portal in their respective logins. The consolidated reports across the departments are available in the portal for Principal and Vice Principal logins.

The feedback for the academic years 2019-20 and 2020-21 was taken online using a software developed in-house and starting from academic year 2021-22, the feedback is taken using the ERP system.

Average Percentage of students who participate feedback.

Academic Year	Semester	Percentage of Students who Participated in Feedback
2019-20	ODD SEM	99.77%
	EVEN SEM	92.01%
2020-21	ODD SEM	92.39%
	EVEN SEM	91.72%
2021-22	ODD SEM	94.95%
	EVEN SEM	86.94%
Average		92.96%

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 20 questionnaires and laboratories/projects are evaluated based on a set of 10 questionnaires. Each of these questionnaires is graded on a scale of One to Five by the students.

Scale of feedback system is as follows:

1-Very Poor (VP), 2- Poor (P), 3-Satisfactory(S), 4-Good (G), 5-Excellent (E)

An average score percentage from total number of feedbacks given is calculated as

$$\text{Feedback \%} = (E \times 5 + G \times 4 + S \times 3 + P \times 2 + VP \times 1) / (\text{TOTAL} \times 5) \times 100$$

Where,

E is count of the Excellent values in feedback answer

G is count of the good values in feedback answer

S is count of the Satisfactory values in feedback answer

P is count of the Poor values in feedback answer

VP is count of the Very Poor values in feedback answer

TOTAL is the total count of feedback answers

Sample Report and Calculations

Competency	Excellent	Good	Satisfactory	Poor	Very Poor	Total %
Availability of teacher in the Laboratory for the full duration of Lab Session	0	1	0	0	0	80
Facilitate students in conducting experiments through demonstration	0	0	1	0	0	60
Facilitate students in exploring the area of study involved in the experiment	0	0	0	1	0	40
Conduct additional experiments apart from the regular VTU syllabus	0	0	0	0	1	20
Adopt open-ended experiment conduction through innovative methods	0	1	0	0	0	80
Adequacy of Depth of Coverage of Experiments	0	0	0	0	1	20
Quality of regular viva-voce in each lab sessions	1	0	0	0	0	100

Regular evaluation of Lab Records and Observation/sketch books etc.	0	0	1	0	0	60
Fairness in evaluation	0	0	0	1	0	40
Effective use of Lab Session	1	0	0	0	0	100
Total	2	2	2	2	2	60

Calculations: E = 2, G = 2, S = 2, P = 2, VP = 2, TOTAL = 10 (1 Full Response Considered)

$$\text{Feedback \%} = \frac{2 \times 5 + 2 \times 4 + 2 \times 3 + 2 \times 2 + 2 \times 1}{10 \times 5} \times 100$$

$$\text{Feedback \%} = 60$$

Basis of reward / corrective measures if any

Reward: Feedback is one of the components of faculty evaluation in PBAS (Performance based Appraisal System). Good feedback for the faculty will fetch good annual appraisal, which will have a direct bearing on his/her annual increment.

Corrective measures: If a faculty gets feedback less than 60%, then he/she will be counselled / inquired by a committee to ascertain the root cause of the performance. He/she will be encouraged to attend faculty development programs, and 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 norms of the institute, a teacher obtaining low feedback for 6 times will have to forego the increment and 12 times will face the action for retire compulsorily.

Number of corrective actions taken

Academic Year	Semester	Number of Faculty Members with Feedback < 60% who were counselled	
		Feedback-1	Feedback-2
2019-20	ODD SEM	NIL	NIL
	EVEN SEM	NIL	1
2020-21	ODD SEM	NIL	NIL
	EVEN SEM	3	NIL
2021-22	ODD SEM	NIL	NIL
	EVEN SEM	NIL	NIL

Indices used for measuring quality of teaching & learning and summary of the index values for all courses/teachers.

The feedback given by students is on various aspects of the teaching learning process adopted by the faculty for theory, laboratories, and projects. Each faculty member is expected to attain a minimum overall student's feedback of 60% in each of the course taught by them, every semester. The following are theory, laboratories and projects questionnaire used to take feedback from students.

Theory Feedback Questions:

1. Adequacy of Depth of Coverage of syllabus.
2. Black Board writing clarity / organisation.
3. Punctuality of faculty member to class.
4. Effective use of class time.
5. The test and assignment valued in time.
6. The faculty member communicated the information effectively.
7. Fairness in evaluation.
8. Course coverage as per lesson plan.
9. Help in solving your academic difficulties.
10. Class room discipline /management.
11. Usage of real-world examples / case studies.
12. Presentation style of the faculty member.
13. Availability of faculty member to students during working hours.
14. Encourages students to participate in discussion.
15. Making you to think through challenging questions.
16. Preparedness of faculty member to the class.
17. Clarity in defining and explaining the course objectives and expectations.
18. Encouragement to take an active role in self-learning.
19. Establishing good rapport with students.
20. Inspiring students to think innovatively.

Lab Feedback Questions:

1. Availability of teacher in the Laboratory for the full duration of Lab Session.
2. Facilitate students in conducting experiments through demonstration.
3. Facilitate students in exploring the area of study involved in the experiment.
4. Conduct additional experiments apart from the regular VTU syllabus.
5. Adopt open-ended experiment conduction through innovative methods.
6. Adequacy of Depth of Coverage of Experiments.
7. Quality of regular viva-voce in each lab sessions.
8. Regular evaluation of Lab Records and Observation/sketch books etc.
9. Fairness in evaluation.
10. Effective use of Lab Session.

Project Feedback Questions:

1. Availability of the guide for interaction.
2. Adequacy of the Knowledge of the guide.

3. Effectiveness of information flow from guide.
4. Involvement of guide in identifying/designing & implementing the project.
5. Contribution of guide through his/her ideas in attainment of quality in your project.
6. Periodical evaluation of progress (by guide).
7. Fairness in evaluation.
8. Facilitation of students in exploring the area of study.
9. Motivating the students to publish the work in Journal/Conferences.
10. Effectiveness in conveying the contents (Communication).

A sample information recorded in the feedback portal reflecting the student's feedback on theory, laboratory, and project for the academic year 2021-22 and 2022-23 is shown below.

Sl. No	Faculty Name Designation	Subject Name	Semester	Section	Batch	Feedback %
1	Dr. M V Sudhamani Professor	Data Structures and Applications	3	C	-	84.26
		Data Structures Laboratory	3	C	C2	89.44
		AI&ML Laboratory	7	B	B1	89.28
		Project work - II	8	-	-	100.00
2	Dr. Surekha K B Associate Professor	Introduction to Internet of Things (IoT)	2	J	-	83.32
		Computer Network Laboratory	5	C	C1	81.64
		Mobile application development Laboratory	6	A	A1	79.58
		Project work - II	8	-	-	92.01
3	Dr. Narasimha- Murthy M S Assistant Professor	Computer System Design	3	C	-	86.24
		Microcontroller and Embedded System Laboratory	4	B	B1	79.49
		Introduction to Python Programming Laboratory	1	H	H4	74.77
		Project work - II	8	-	-	91.75

9.3. Feedback on facilities

(5)

Feedback on facilities: Assessment is based on student feedback collection, analysis and corrective action taken.

Feedback on various facilities available/provided in the institute are also captured and assessed to improve their efficiency and usage. The infrastructure / facilities feedback is obtained once at the end of academic year during even semester. The process of obtaining this feedback is like faculty feedback in terms of scale and collection.

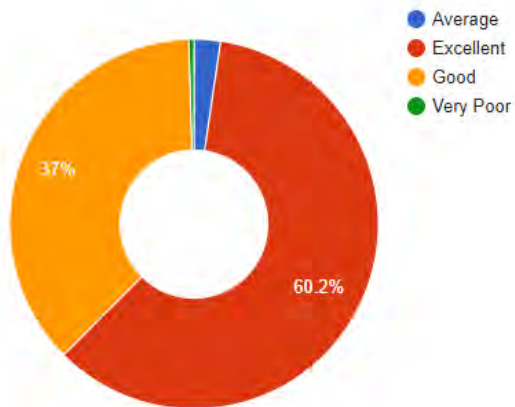
Scale of feedback system is as follows:

1-Very Poor, 2- Poor, 3-Satisfactory, 4-Good, 5-Excellent

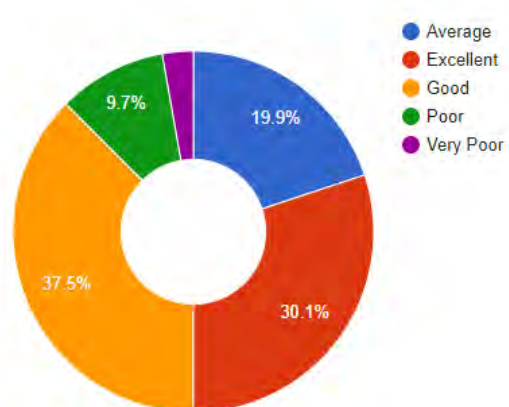
The following is the questionnaire used to take infrastructure / facilities feedback.

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)

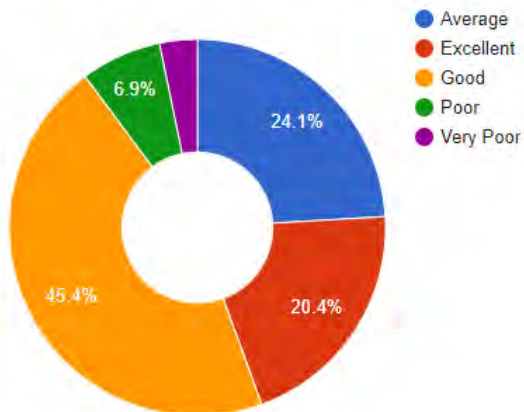
Infrastructure Feedback: 2021-22



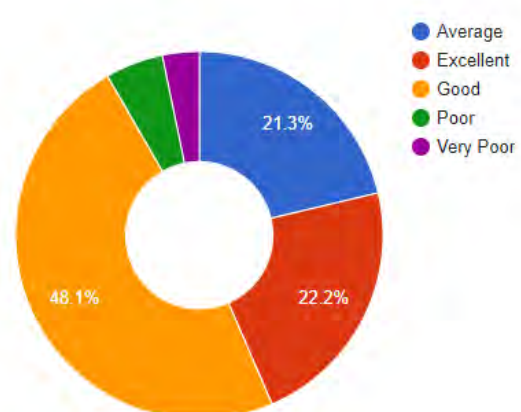
Q. 1 Campus facility - Ambience



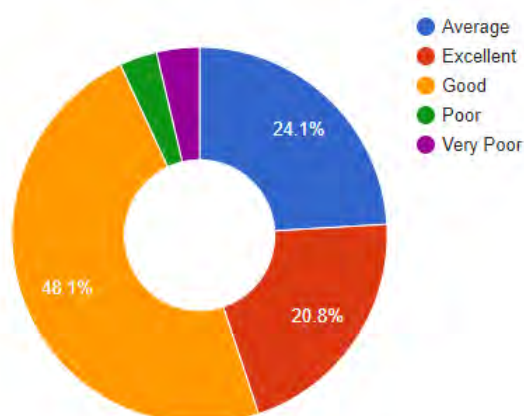
Q. 2 Campus facility - Parking



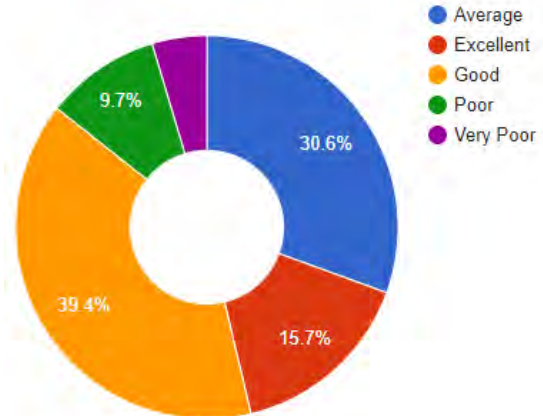
Q. 3 Campus facility - Drinking water



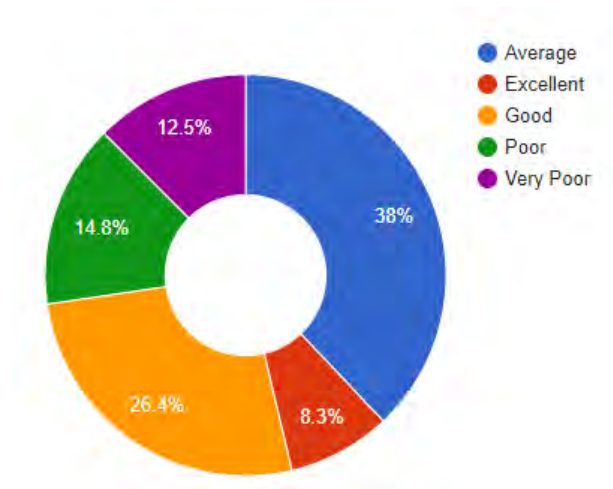
Q. 4 Campus facility - Toilet



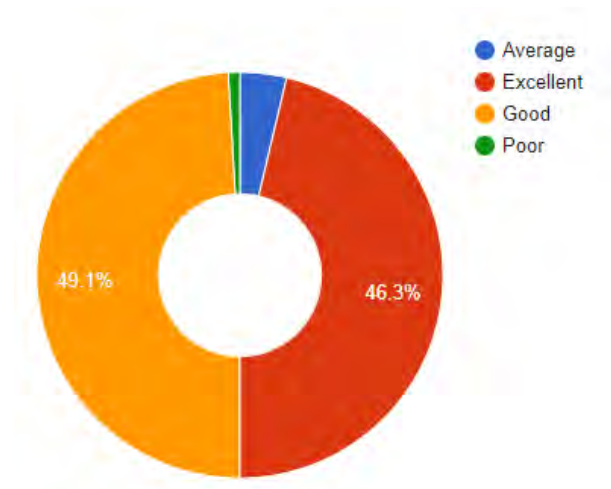
Q. 5 Campus facility - Rest room



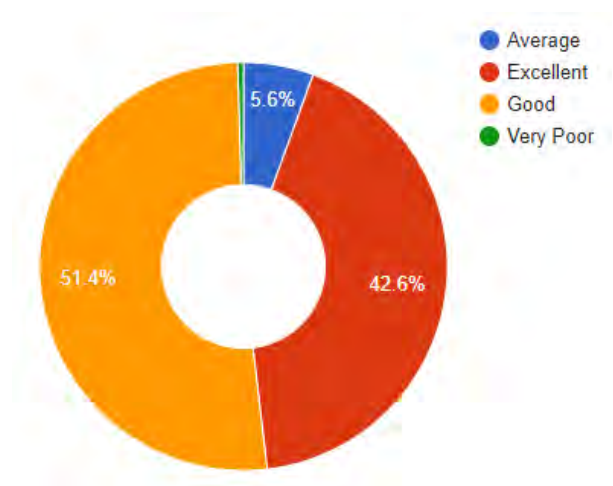
Q. 6 Canteen - Cleanliness



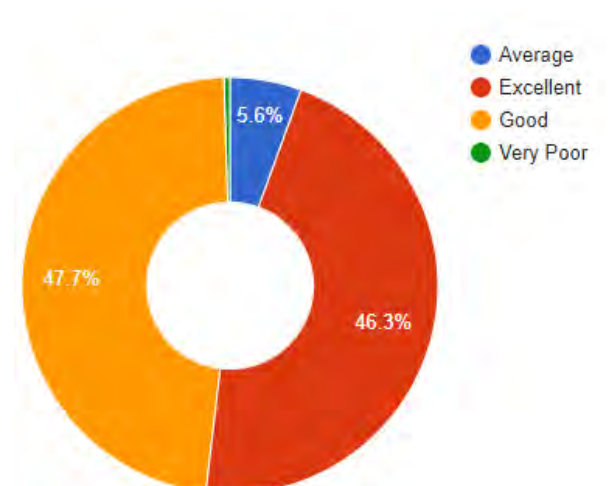
Q. 7 Canteen - Quality of food



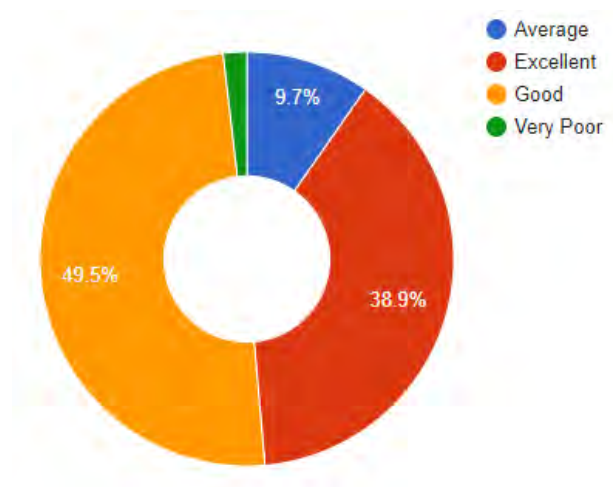
Q. 8 Library facility - Adequacy of books



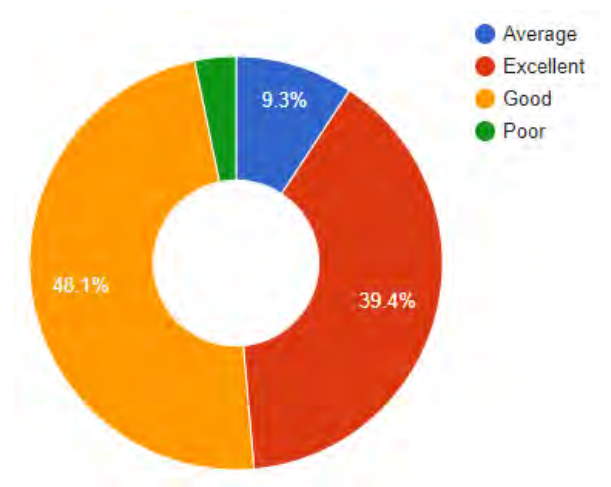
Q. 9 Library facility - Journals



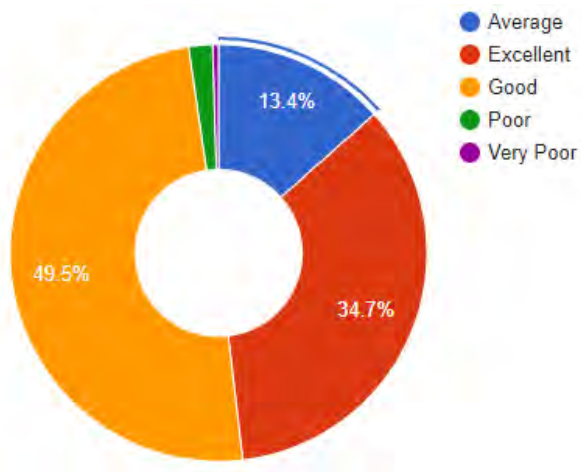
Q. 10 Library facility - Reference and reading room



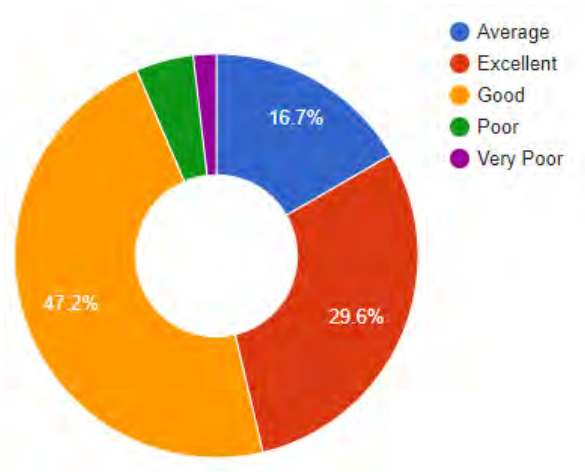
Q. 11 Library facility - Reprographic facility



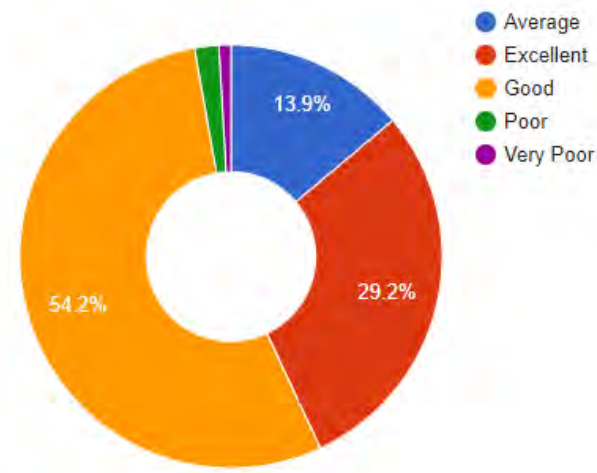
Q. 12 Internet Facility



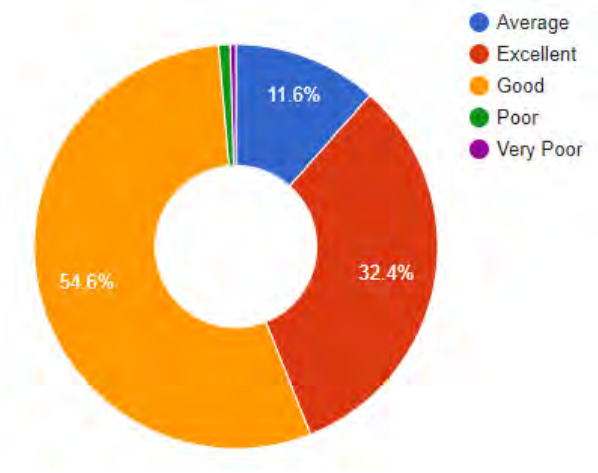
Q. 13 Banking Facility



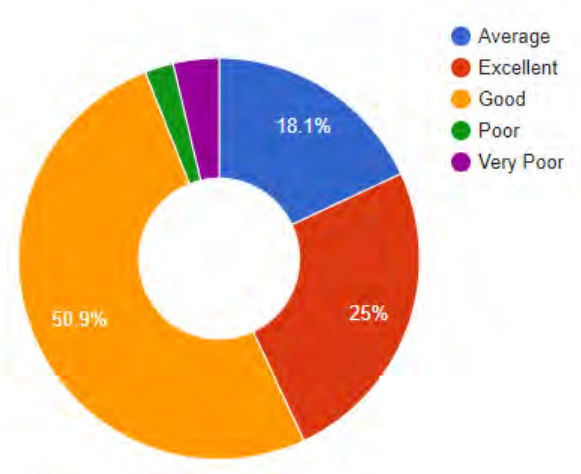
Q. 14 Encouragement for Innovative Research activity (like hobby club)



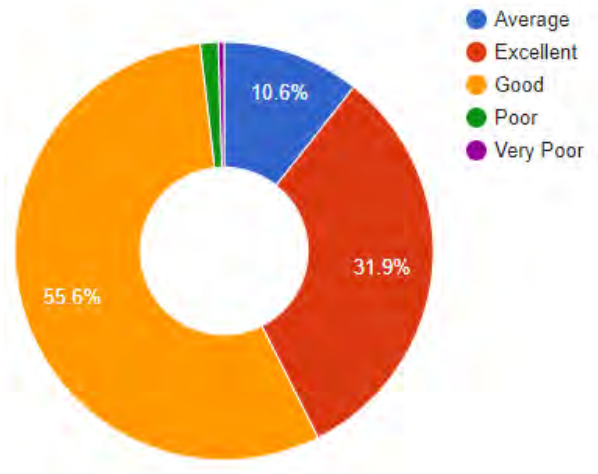
Q. 15 Sports Facility



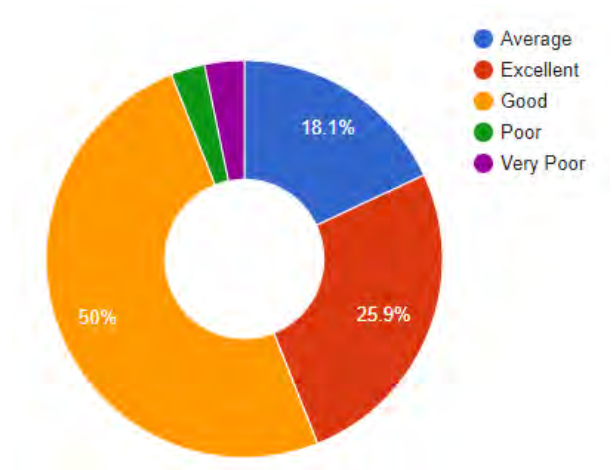
Q. 16 House keeping



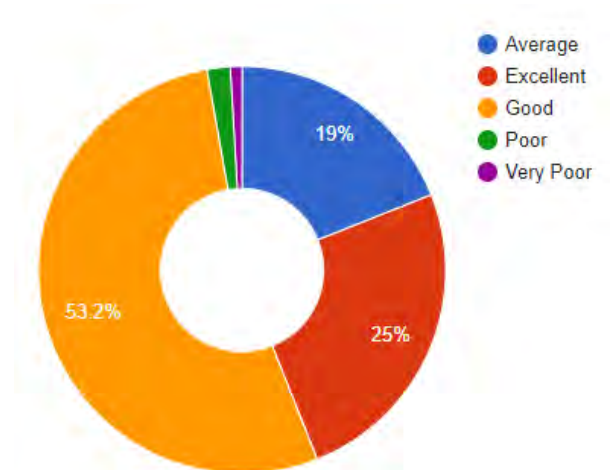
Q. 17 Electrical Maintenance



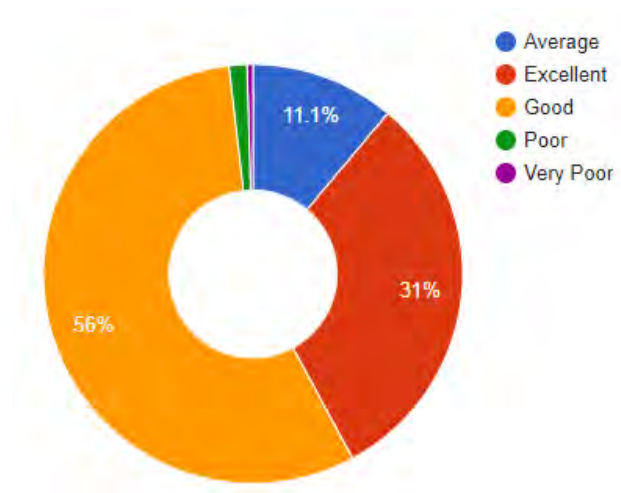
Q. 18 Security facility



Q. 19 Accounts Section



Q. 20 Estate Office (Project Engineer)



Q. 21 Central office (Establishment section)

The feedback obtained is analysed and passed on to the respective personnel in-charge for corrective actions / improvements.

Infrastructure Feedback: 2022-23

Staff Infrastructure Feedback: 2022-23

9.4 Self-Learning

(5)

Preamble: Self-learning is an important skill for students as they journey through education and beyond to adulthood, building independence and the ability to progress without reliance on a teacher. Traditional, instructional learning has a place in school, however working out an answer or solving a problem by yourself is not only more rewarding, and it also helps to solidify the learning. Encouraging students to assess their own work will enable them to gain a better understanding of what they are best at and what they need to work harder on. If students practice editing and reviewing their work on a regular basis, they will soon become familiar with the process of self-assessment.

Self-Learning by attending the Webinars: Webinar provides an opportunity to take the physical class to an online portal using a video conferencing system. This is a combination of web and seminar. The basic idea of webinars is to conduct seminars in online mode. However, the meaning of webinars in a broader sense is not restricted to online seminars only. They now also include meetings, conferences, demonstrations, training or teaching, or events that are designed to give information either one-way or interactively. The contents learnt in webinar can be extended further by self-study.

Massive Open Online Courses (MOOCs):

MOOCs **integrate social networking, accessible online resources**, and are facilitated by leading practitioners in the field of study. Most significantly, MOOCs build on the engagement of learners who self-organize their participation according to learning goals, prior knowledge and skills, and common interests.

Advantages of MOOCs:

- **Learning from the friends** through a social networking site.
- **Access to the course is free of cost.**
- **Material is advocated by top professors:** The course material of MOOCs has been selected by top professors in universities.
- **Allows you to learn different languages:** Since language-based learning is also available in MOOCs, they prepare students for entrance tests in various languages.
- **Such courses offer admission to everybody:** It's true that MOOCs are available for everybody who can't attend regular courses either due to time or financial constraints.

Sometimes, the course the students want to enrol in may not be taught at the college, same course may be opted by the students through MOOCs.

- **Choose a major:** If you are unable to decide on a major in college, then you can test yourself in a MOOC first. This will give you first-hand knowledge about the subject you are willing to study in college. You can get to know through a MOOC how interesting is that subject, rather than choosing that course in college and wasting your time and money.

Table: Details of MOOCs (Students and Faculty members) at BMSIT&M

MOOCs Details 2019-20, 2020-21, 2021-22 & 2022-23*	
Number of Students Registered	5210
Number of Courses Completed by Students	10119
Number of Faculties & Staff Registered	344
Number of Courses Completed by Faculties & Staff	979

Project Based Learning: The Project-Based Learning (PBL) is a flagship initiative of BMSIT&M. The major objective of this event is to make the students learn the concepts and gain knowledge in their field of interest through hands on experience. Students would build and develop working models, algorithms, or simulations in their chosen areas. The faculty members would actively mentor and facilitate the students in carrying out the projects. At the end, an Open day is conducted to exhibit the projects carried out by students. Open day is conducted every semester and best two projects in each year will be rewarded with cash prizes to further motivate the students. An industry expert and an external academician will evaluate the projects for awarding the prizes. Usually, the students of 2nd and 3rd year will carry out PBL projects.

Specific objectives of Project Based Learning:

- **Integration:** Integrate knowledge and skills from various areas through more complex and multidisciplinary projects
- **Autonomous learning and work:** Autonomy will lead to research and the search for information, and in that context is essential to develop their ability to discern which information is reliable and which is not.
- **Teamwork:** preparing students for a social environment
- **Self-Assessment:** Self-evaluation and self-criticism, against self-complacency, trying to see beyond their own ideas and knowledge.

Table-3: Details of PBL conducted during assessment period.

	2022-2023	2021-2022	2020-21	2019-20
CSE	242	238	266	160
ISE	204	224	195	58

ECE	202	193	199	101
ME	61	52	60	35
CIV	52	56	61	30
EEE	62	66	70	30
ETE	55	62	62	29
AI & ML	70	76	36	-
TOTAL	948	967	949	443

Self-Learning by attending the Webinars conducted by BMSIT&M during assessment period:

Sl. No.	Departments	Numbers of Webinar's Conducted
1	Civil Engineering	14
2	Electrical and Electronics Engineering	15
3	Information Science and Engineering	03
4	Computer Science and Engineering	17
5	Master of Computer Applications	08
6	Electronics and Communication Engineering	07
7	Mechanical Engineering	07
8	Electronics and Telecommunication Engineering	05
9	Department of Physics	08
10	Chemistry	06
11	Mathematics	01
12	Artificial Intelligence and Machine Learning	06
	Total	97

9.5 Career Guidance, Training and Placement (10)

- i.** Career Guidance, Training and Placement is provided to all the graduating students of BMSIT&M.

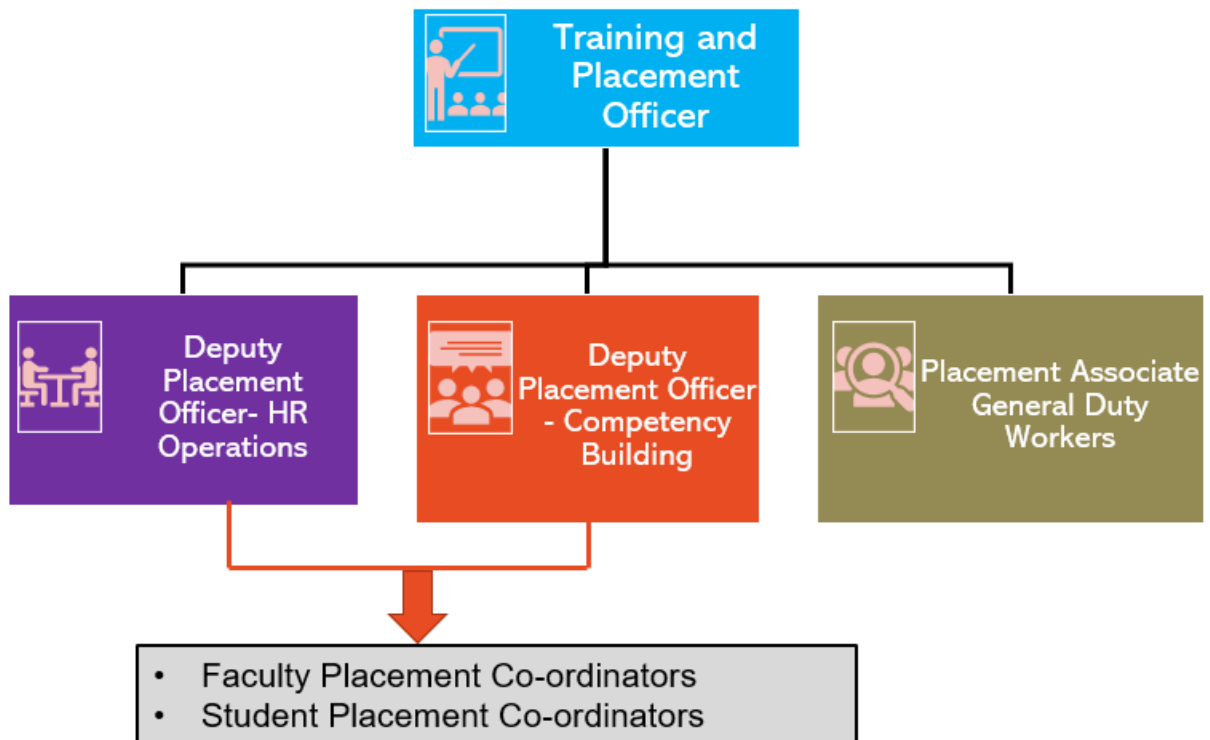
To address this aspect institute has well established three cells namely:

1. Training and Placement cell
2. Higher Education Facilitation Centre
3. Entrepreneurship Development Cell

Institute ensures that all the graduating students should get guidance from above sections/Cells as per the student aspirations and ensure graduates are passing out successfully.

1. Training and Placement (T&P) cell whose function is to provide the training and placement to all the aspiring students of BMSIT&M.

The organization Structure of T&P is given below:



i. Training and Placement Officer Roles and Responsibilities.



ii. Deputy Placement Officer – HR Operations:

- a) Liaison Ing with the Employers to get the JD, CTC, Job Description (JD), Role, Eligibility, Eligible Branches, CTC and Job Location.
- b) Coordinating with the Placement Associate (SDA) to get the eligible student list to share with the companies for placement drives.
- c) Scheduling the Pre - placement talks, Online Assessment and Technical and HR Rounds Co-ordination.
- d) Coordinating with the Student Placement Coordinators (SPCO's) for smooth conduction of the placement drives.
- e) Communicating all the communications after every step of the placement process to the students and Employers appropriately and respectively.
- f) Updation of the master DB and closure activities of the placement drive.
- g) Handling Student Queries on the rules and regulations, eligibility, etc.

iii. Deputy Placement Officer – Competency Building

- a) Planning the Training Needs to enhance the competency/Talent of the students
- b) Finalizing the Training vendors in co-ordination with the HODs of the department.
- c) Liaison with training vendors for smooth conduction of the training in the said training period.
- d) Conduction of mock tests/Company Specific Tests for the targeted students.
- e) Taking the feedback from the students on training quality and taking care of billing part for the training vendors.
- f) Coordinating with Student Competency Development Club to roll out different activities in a focused manner to increase breadth of the placements.

iv. Placement Associate (SDA) Roles and Responsibilities:

- a) Creation of the Master DB of all the students of that batch. (Approx. it will take 1.5 to 2 Months).
- b) Validation and verification of all the student data provided by them before we send it to the companies.
- c) Registration form generation for every campus drive based on the Job description, CTC and eligibility provided by specific company.
- d) Coordinating with Deputy Placement officer – HR operations to provide the data to the companies – Eligibility student list.
- e) All the communications to the students received from Deputy Placement -HR operations, Deputy Placement - Competency Building and Training & Placement Officer.
- f) Updating the Master DB and Schedule appropriately.
- g) Providing data to the statutory bodies/higher ups on need basis.
- h) Background Verification of the students.

- i) Handling Student Queries if they don't receive Emails.
- j) Settlement of Bills.
- k) Post Placement offer activities (Collection of Offers, Information Dissemination to the HODs, Offer Acceptance).
- l) Maintaining the files, Stock verification, In-Place newsletter.

Placement Training Details:

We conduct 72 hours focused training which will help students to become successful in placements.

The below table highlights with split of hours for topics identified.

Sl. No.	Topics	Number of Hours
1	Soft-Skills	12
2	Aptitude	30
3	Technical Training- Programming (Coding)	30
Total		72

The entire training is outsourced to outside vendors, the vendor names and various departments utilizing the services are highlighted in the below table:

Sl. No.	Vendor Name	Departments
1	Innovation Unlimited	ETE, EEE, MECH. & CSE-PG
2	Seventh Sense	ECE and CIVIL
3	10Seconds	CSE - UG
4	EDUPROF	ISE

The Process followed to select the vendors:

1. Call for Vendors for the Demonstration.
2. Students will Selects the Vendors in concern with the HODs.
3. After Finalizing the Vendors by Students and Department.
4. Call for Negotiation for the Rates.

Details on Outsourcing:

Training of students by external professional agencies towards preparing them for life skills in general and campus recruitment.

Company Name	Batch	Period	Training	Days
M/s. Innovations Unlimited	2019-20	Aug-Nov 2018, July 2019	Soft Skills, Aptitude and Technical Training	6 Day of Aptitude And 4 Days of Soft Skills And 2 Days of Technical Training
M/s. Seventh Sense				
M/s. 10 Seconds				
M/s. Eduprof				
M/s. Face				

Company Name	Batch	Period	Training	Days
M/S. Innovations Unlimited	2020-21	Aug-Nov 2018, July 2019, Feb 2020, June 2020	Soft Skills, Aptitude and Technical Training	Six
M/S. Seventh Sense				
M/S. 10 Seconds				
M/S. Eduprof				
M/S. Face				
M/S. Delith				

Company Name	Batch	Period	Training	Days
M/S. Innovations Unlimited	2021-22	Sep. 2018, May 2019, Apr. 2021	Soft Skills, Aptitude and Technical Training	Six
M/s. 10 Seconds				
M/s. Eduprof				
M/s. Seventh Sense				

Company Name	Batch	Period	Training	Days
M/s. 10 Seconds	2022-23	Aug 2022 – July 2023	Soft Skills, Aptitude and Technical Training	Eight
M/s. Seventh Sense				
M/s. Bizotec				

The Percentage of eligible UG/PG students' placements for the past six passed out batches is provided hereunder:

Year	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Overall % of eligible students placed (UG)	85.26	90.96	87.27	85.24	91.17	93.88
Overall % of eligible students placed (PG)	81.58	63.83	76.32	58.14	74.39	84.48

Placement Facilities: There is a full-fledged placement department in the institution. It is headed by the Placement Officer (senior faculty member) and supported by experienced 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.

Infrastructure & Facilities:

Sl. No.	Facilities	Quantity
1.	Placement Department	1
2.	Seminar Hall	4
3.	Placement Officer Room	1
4.	Rooms Well equipped Interview / GD Rooms	7
5.	Reception Area	1
6.	HR Room	1
7.	Career Counselling Room	1
8.	Fulltime Officer	1
9.	Support staff	5
10.	Online test facilities	10

2. Higher Education Facilitation Centre

HEFC was established 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/HigherEducationCenter

Outcome / Impact:

HEFC facilitated the admission process for 116 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.

9.6 Entrepreneur Development Cell

(5)

BMSIT&M established BICEP - BMS Innovation Centre and Entrepreneurship Park - Incubation centre to encourage students and faculties to catalyse development of innovation-driven enterprises.

BICEP is housed in the campus itself. It has the best facilities and resources available to incubate such as laboratories, development and testing centres, computing resources, library and above all highly experienced and knowledgeable human resource. In addition to these, Centre also has a network of eminent professionals, academicians, bankers, venture capitalists and businessmen, who can extend support to new ventures.

The Centre has several sections under it, namely Innovation centre, Incubation centre & EDC (Entrepreneurship Development Cell), Intellectual Property (IP) Cell. The services ranges from training in ideation, business planning, entrepreneurship, marketing, business communication, intellectual property, idea pitching etc.

Team BICEP is headed by Dean (Innovation & Entrepreneurship), Dr. Seema Singh with Section heads for Innovation centre, Incubation centre, EDC (Entrepreneurship Development Cell) and IP (Intellectual Property) Cell, which comprises of team of 35 members.

Table: 9.6.1 Members of BICEP

Section Heads	
Innovation Centre	Prof Madhu M C, Dr. Vinay H V Ms. Shama H M
Incubation Centre	Dr. Usha B A, Dr. Ravichandra K R
Entrepreneurship Development Cell (EDC)	Prof. Bharathi R, Prof. Archana K
Intellectual Property Cell (IP Cell)	Prof. Praveen Kumar T N

Department Faculty Coordinators

Department	Faculty Names
AI&ML	Dr. Pradeep K R, Dr Chandrashekar
Chemistry	Dr. K Suresh Kumar
Civil	Dr. Anup Ekbote, Dr. Marsh Bandi, Dr. G Aruna
CSE	Prof. Jagadish P, Prof. Rajesh N V, Prof. Mari Kirthima
ECE	Dr. Anitha V R, Dr. Suneet Kumar Agnihotri, Dr. Jagannath K B
EEE	Prof. Nagaraj D Chonali, Dr. Madhu Palati, Prof. Suma Umesh
ETE	Dr. Sumathi M S, Prof. Prathiba N
ISE	Prof. Mahalakshmi S, Dr. Karthik S A, Dr. Shanthi D L
Maths	Dr. Priyanka Pal
MBA	Dr. Nethravathi N
MCA	Prof. Dwarakanath G V, Prof Reshma C R
Physics	Dr. C Kavitha

➤ Innovation Centre

Innovation Centre at BMSIT&M was established in December 2015.

It promotes innovation by encouraging students and faculties to take up innovative, interdisciplinary technical projects. Innovation Centre provides technical support during the phase of ideation and prototyping. It also provides funding for meritorious prototypes. Since November 2018, our Institution has been selected by the **MOE's Innovation Cell for setting up Institution Innovation Council (IIC)** and multiple activities have been conducted since then.

1. Star rating secured for the year 2018-2019-
3 Stars
2. Star rating secured for the year 2019-2020-
4.5 Stars
3. Star rating secured for the year 2020-2021-
4 Stars
4. Star rating secured for the year 2021-2022-
3.5 Stars
5. Star rating secured for the year 2022-2023-
3.5 Stars



Sample Certificate

ARIIA Ranking:

1. ARIIA Ranking 2021- BMSIT&M was recognized under the Band- “Performer”
2. ARIIA Ranking 2022- BMSIT&M Positioned in the Band of 151-300 in the Innovation Category



Sample Certificate

Summary of Activities:

Summary of activities being carried out by the Innovation Centre is given below:

➤ Innovative Idea Contests

- An innovative idea contest viz., Anveshana is being conducted every year to enable students to showcase their innovative ideas.

➤ Participation in external events/competitions

- Students are encouraged to take part in the external competitions. As many as 33 ideas have been presented by a team of 15 for “Smart India Hackathon” competition.
- Since December 2015, students have participated in more than 50 competitions held at both State level and National level.
- Students have participated in workshops, project exhibitions and seminars, held within and outside the state.

➤ **Flagship events**

- Project with Professors- An initiative to collaborate with likeminded students and Professors to work on a prototype.
- Internship- A 3-week rigorous internship on Innovation, Entrepreneurship, Incubation and IPR started from the year 2022.
- Open Course- One-week program on Innovation & Entrepreneurship Boot camp was started in the year 2023.
- Faculty-driven product-oriented projects is an initiative to bring the product to market which is built by Professors with seed fund provided by the Institute.
- Brainstorm sessions are regularly conducted for both faculties and students with several expert talks, as per calendar of events of IIC.

➤ **Technical Support/Mentoring**

- Students are given additional support, mentoring in connection with interdisciplinary projects.
- Necessary guidance for the innovative projects has been obtained from the industry experts through mentor panel of BICEP.

➤ **Funding**

- Some of the innovative projects are being funded fully or partial.
- Students/faculty participation for competitions is supported financially.

➤ **Incubation Centre**

BMSIT&M Incubation Centre is a space for new age entrepreneurs and young minds to transform their innovative ideas into viable business propositions. Our primary vision is to facilitate a platform for a budding entrepreneur to start a business venture with minimum risks. It was established in 2018.

The Centre has been **recognized and approved as the Host Institute to setup Business Incubator (BI) by Ministry of MSME, Govt. of India since 2020**. The Incubation centre, activity engaged to enable its students get first-hand experience in entrepreneurship, promote innovation at the institute and provide comprehensive and integrated range of support including space, mentoring, training programs, networking, and an array of other benefits.



BMSIT Incubation Centre gives importance to mentorship and believes that sharing the knowledge from experience can ease challenges of an entrepreneur. The mentoring support is

offered through a pool of mentors consisting of senior faculties, Industry people, Business Consultants who will enlighten the road for incubates. Currently, BICEP-Incubation centre is supported by pool of 20+ mentors. Business modelling, Business plan preparation, finance and legal support are all other branches of the Mentorship Program. One of the objectives of Incubation is to utilize the technical expertise and lab infrastructure of BMSIT&M. Therefore, every company that is offered incubation at BICEP must select one faculty member from the Institute who shall act as a mentor to the incubated company and guide the company on product development.

BMSIT Incubation Centre may provide seed loan subject to the availability of funds/ grants/ schemes meant for this purpose. Seed loan will be sanctioned only to the registered companies and shall be based on the merits of each company. Further, the admission to BMSIT&M Incubation Centre shall not automatically entitle the companies to seed loan.

A company desirous of getting seed loan may apply for seed fund after three months of pre-incubation at BMSIT&M Incubation Centre. A team is recognised and supported as pre-incubate by BICEP based on their proposed Start-up profile and progress done under Innovation centre. Presently, 5+ teams are in Pre-incubation stage at BICEP-Incubation centre.

The seed loan will be sanctioned based on the eligibility criteria as decided by BMSIT&M Incubation Centre. It would also be subject to the terms stipulated as per the Seed funding Guidelines of BMSIT&M Incubation Centre.

MoU's are done with companies like Co-Create Ventures in the year 2022 to build the interest in student community for the following:

- To create an environment of innovation & entrepreneurship and for building great start-ups
 - To become enablers/ entrepreneurs creating start-ups
 - To generate value in terms of financial & intellectual capital with right legal structures
- Activities like Workshops, Road show, Panel discussion, Pebble sessions, virtual seminars etc. are conducted as an engagement with the company.

MoU with AIC NITTE Incubation centre in the year 2020 to cooperate for mutual benefits in the field of Innovation and Start-up ecosystem.

Proposals are written for various Public/private/government organization in seeking for fund in building system for supporting faculty/student community in the start-up ventures.

➤ **Entrepreneurship Development Cell (EDC)**

EDC was established during February 2014 at BMSIT&M. The aim of Entrepreneurship Development Cell (EDC) at BMS Institute of Technology and Management, is to develop and strengthen entrepreneurial qualities in the budding professionals who are interested in starting their own ventures. The EDC assists all the aspirants with mentoring, planning and execution

of their start up idea into a real business after incorporation. The EDC has maintained a pool of Sponsors like banks, national entrepreneurship training agencies and suppliers, who are willing to aid budding entrepreneurs.

As part, Funding support for Entrepreneurship promotional activities of **EDC comes from Govt. of India, DST-NIMAT through Entrepreneurship Development Institute of India.** Other funds have been received from our college BMSIT & M, there are about **300 student beneficiaries** of the stand-alone Entrepreneurship Awareness Camp (EAC) conducted discipline wise for 2nd year in the campus.

Various workshops, open discussion; tech talk by founders, live project demos on Entrepreneurship, field visit, panel discussion, business idea competition and evenings with EDC is a new online initiative to keep the students motivated during the Lockdown. EDC mentors the start-ups, incubate, and connect with govt. agencies, venture capitalist and angel investors.

Resource persons are highly trained mentors and comprised of motivated faculty of in-house EDC Team, leading entrepreneurs, industrialists, design experts, soft skills trainers, first generation entrepreneurs, start-up entrepreneurs, and experts from DELL EMC, Ekzen Robotics, Intepat IP Services Pvt. Ltd, SIDBI, Pushpak Industries, Infopace India.

Entrepreneurship Development Cell (EDC) is now called as E-Cell, BMSIT & M. E-Cell. Internship Program was introduced for the academic year 2022-23 and 30 students of 3rd semester successfully done the internship for one week in E-cell, BMSIT & M.

Objectives of EDC:

- To inculcate basic human values, induce healthy challenges, encourage sustainable accomplishments, and ensure enriching rewards.
- To identify, based on an informed perception of Indian, regional, and global needs, areas of specialization upon which the institute can concentrate.
- To develop human potential to its fullest extent so that intellectually capable leaders can emerge in a range of fields.
- To prepare the students to face the real-world business scenarios. To catalyse and promote employment opportunities.
- To create a strong foundation of academic learning with concepts and with the applications of the same.

BICEP Activities - Programs conducted for the assessment period.

Table:9.6.2 Statistics of E-Cell activities

Sl. No	Academic year	No. of event conducted
1	2022-23	05
2	2021-22	13

3	2020-21	13
4	2019-20	03
5	2018-19	03

Table:9.6.3 Details of activities

Date	Event	Collaboration	Eminent Speaker
2022-23 (5 No.)			
12/06/2023 to 16/06/2023	Innovation and Entrepreneurship Bootcamp	Dean IE, BICEP BICEP MANAGER CEO - BCS Innovations “Ergonomics for Entrepreneurs” CoCreate Ventures Founder, Consuma Founder Assert CoCreate Ventures Chartered Accountant Start-up Legalities Partner at AV Advisors Founder, RAY VECTOR Section Head BICEP - Innovation WorkCEO, AQMENZ Automation International Educationalist	Dr. Seema Singh Mr.Chennabasava Mr. Basavaraju Mr. Santhosh Bishnoi Mr. Abhilash M Mr. Anil J Mr. Chandesh Mr. Akhil Mr. Srikanth Dr. Vinay, Prof. Archan Mr. Mohan Mr. A H Sagar
27/06/2023	Innovation opportunities under industrial IoT	Solution architect RDL Technologies Pvt ltd	Mr. Raghavendra. G. Shetty
10/06/2023	Convocation ceremony and new team installation	Bicep, BMSIT & M	--
24/02/2023	National Startup Day Reverse Pitchfest	CoCreate Ventures	Competition
03/02/2023	Invited talk on “NSIC (National Small Industries Corporation) schemes for entrepreneurs”	NATIONAL SC-ST HUB, The National Small Industries Corporation Limited	KOKILA.A Branch Head

26/08/2022 to 28/08/2022	3-day webinar series on “Role of Startups and Innovators in Atma Nirbhar”	Chief Innovation Officer, Ministry of HRD, Govt. of India. Director, Projects (Corporate) & Regional Director, EDII, Southern Region. Head, NEB Division, DST, Govt. of India.	Dr. Abhya Jere Prof. Dr. Raman Dr. Anita Gupta,
12/11/22	Genesis 1.0	E-cell,BMSIT & M	Competition
2021-2022 (13 No.)			
28/07/22	Building an innovation / Product fir for market	Co-founder of Arbizz Solutions.	Mr. Jawed Raza
29/07/2022	Session on Prototype Validation: Converting prototype into a startup.	Director at Brikoven pvt. Ltd.	Mr. Sreeram Anvesh
19/07/22	Autodiacticism	Co-founder,Under25 community	Mr. Shreyans Jain Under25+
31/05/2022	StartUp Premier League	E-cell, RVCE	Competition
1/04/2022	Students’ Entrepreneurial Journey 2022	Innovation Centre In charge BMSIT&M Dean-External Relations BMSIT&M	MS. Shama H M Dr. Seema Singh
31/08/2021	Webinar on Accelerators/Incubation opportunities for students, faculties and early stage entrepreneurs.	CEO, AIC-BAMU Foundation	Sh. Amit Ranjan M+ connect
30/08/2021	Webinar on Building an Innovation/Product fit for market.	Professor, Dept. of ECE, RNS Institute of Technology	Mr. Suresh Delamoady M+ connect
25/08/2021	Webinar on Converting Prototype into a Startup.	President, Vision Karnataka Foundation Chairman & Managing Director, INFOPACE MANAGEMENT PVT LTD	Mr. Kishore Jagirdhar
23/06/2021	Workshop on Prototype/Process Design”	Founder and Director Mapletech Solutions	D Eregamani




25/06/2021	Workshop on & “Intellectual property rights and IP management for startup”	Patent and Trademark Attorney, Intellcopia IP Services Registered Patent Agent, Intellcopia IP Services	Mr. Narendra Bhatta Ms. Sushma K,
19/05/2021	Webinar on “Business Model canvas”	Strategic Innovation consultant, Founder of Gen Z Innovations.	Ms. Shireesha Abhilash
30/04/2021	Interactive session with “Successful Start-up founders” (Entrepreneurs in Campus)	Co-founder, Helping Panda and Shantanu Jain, CEO, Co-founder, Sterling Media Labs.	Mir Mohammad Abbas
06/02/2021	Webinar on What Industry expects from you?	VP, GE Digital GM, Mitsubishi Power GM, Brakes India Manufacturing Engineering, Caterpillar, USA	Dr. Vinay Jammu Mr. Subramaniyan Mr. Balaji S Mr. Hari Narayanan Grads Key Associate
2020-2021 (13 No.)			
30/01/2021	Webinar on Cloud Computing Career Opportunities	Cloud Enterprise Architect, Expert in Cloud transformation roadmap for customers	Raji Krishnamoorthy Grads Key Associated
30/12/2020	Webinar on “Motivational session by successful entrepreneur”	Co-Founder & CEO at Royal Brothers, Founder-Humus AgriTech Pvt. Ltd.	Mr. Manjunath T N
22/12/2020	National Innovation and Startup Policy	Assistant Professor, Mechanical Dept. & Incubation Manager, BMSIT & M	Dr. Sangmesh
19/12/2020	Start-up Development Phases (life cycle of a Start-up)	CEO, Boilerplate Technologies Pvt Ltd.	Mr. Nikhil Sridhar



19/12/2020	Panel discussion on “Atmanirbhar Bharat - Vocal for Local, Make in India”	CMS, Infopace Management Pvt. Ltd., Founder & CEO, SolutionBuggy, MD & CEO, Silicon Micro Systems	Mr. Kishore Jagirdhar Mr. Arjun N Mr. Jayachandra Aradhya,
18/12/2020	Entrepreneurs Product Showcase	Co-Founder of Bookoo, Co-Founder of Helping Panda, Co-Founder of Sterling Media Labs, Co-Founder of The Idiotic Marketers	Ms. Nikita Hasbi Ms. Tanya Ravi and Mr. Mir Mohammed Abbas Mr. Shantanu Jain Mr. Divyanshu Sachan. Mr. Rajat Mundhra.
18/12/2020	Workshop on Design Thinking, Critical thinking and Innovation Design	Design Thinker and calls himself an “Agent Provocateur”.	V. K. Pillai
08/10/2020	Evenings with EDC, “NURTURE THE ENTREPRENEURIALISM IN AN INDIVIDUAL”	Social Entrepreneur and Lead architect of Kalaam	Mr. Swanand Kadam
25/09/2020	Evenings with EDC, “NURTURE THE ENTREPRENEURIALISM IN AN INDIVIDUAL”	CEO, GradsKey	Mr. Achutharaman Rangachari
17/07/2020	Evenings with EDC, “NURTURE THE ENTREPRENEURIALISM IN AN INDIVIDUAL	CEO, India STEM Alliance	Mr. Raj Kapoor
25/05/2020	Evenings with EDC, “Nurture the Entrepreneurialism in an Individual”	CEO, SKILLENZA	Mr. Subhendu Panigrahi
10/02/2020 to 16/02/2020	Entrepreneurship Awareness Camp, (Funded by DST)	DST-NIMAT And EDII, Ahmedabad CEO, ACT.	Ms. Sreevidya Subramanyam

		Principal Consultant, Applied Management HR, CTS Director, Cyber Security (Field Trip to CTS (Cognizant Technical Services), Bengaluru Field Trip to Accutech Enterprises, Bengaluru.	Mr. Bhaskar.D. Sharma Mr. Ram Mrs. Shanti Accutech Enterprises
2019-2020 (3 No.)			
05/11/2019	Tech Talk by Founders	Founder, Playo	Mr. Danish Suhail Tech Transform 2019
05/11/2019	Panel Discussion	cofounder and CEO of GSA SAARC Founder & Managing Director at Wedoeconsult Pvt.Ltd. Head, Incubation services at BHIVE Workspace	Mr. Nelson Vasanth J Mr. Adil Ghani Mr. Suryanarayanan A Tech Transform 2019.
03/10/2019	Ignite	Stoned Santa Hybrid Chats	Mr. Shashank Shekar Mr. Ricky Goswami Tech Transform 2019
2018-2019 (3 No.)			
03/05/2019	Entrepreneurship Conclave	Deputy Director, MSME Co-founder of Orbis Edu Services. HOD, Civil Dept.	Mr. Gopinath Rao Mr Naveen P Senna Dr Jagadish
19/12/2018	Innovation and Entrepreneurship	Innovation Centre, BMS Institute of Technology and Management.	Mr Keith

27/09/2018 to 29/09/2018	Entrepreneurship Awareness Camp	DST-NIMAT Business Leader in Digital media. Founder, Open cube 18+ years' experience in Semiconductor industry Image Consultant & Soft skills Trainer, SIDBI Head, solar business for Apollo power systems. Founder, DXC Technology.	Mr. Chandan Raj Mr. Suraj Jana (Alumni) Mr. Vinayaka Babu Mrs Nanda Tunga Mr Sunil Kumar Mr Darshan G C
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Details of Achievement

Date	Event	Award won		
2022-2023				
25/01/2023	SEEDBRAIN S 2.0 CHOSS Cambridge Institute of Technology	DOSTBIN-home based compost machine	1 st Prize of Rs 50,000 /-	
20/04/2023	National Level Project Competition, MSRIT Bangalore	DOSTBIN-home based compost machine	2 nd Prize of Rs. 1,00,000/-	
25/08/2022 to 26/08/2022	Smart India Hackathon IES College of Technology, Bhopal,	Blood Registry Using Blockchain, which leverages fundamental concepts of blockchain technology to ensure safe transfusion of blood	1 st Prize of Rs. 1,00,000/-	

	Smart India Hackathon Excel engineering college, Erode.	“Smart Education” for the project “Bringing the power of AI for the aid of teachers in classroom”	1 st Prize of Rs. 50,000/-	
	Smart India Hackathon BITS, Ranchi.	“IOT and Electronics” for “Tongue Controlled Wheelchair”	1 st Prize of Rs. 75,000/-	

List of Entrepreneurs of BMS Institute of Technology:

Table: 9.6.4 List of Entrepreneurs.

Sl. No	Name of Start-up	Nature of Start-up	Date of commencement
1	Askonce Doorstep Services Private Limited	Waterproofing service	08/10/2020
2	Chefio Private Limited	Business Services	19/08/2020
3	Helping Panda Services	Crowdfunding	01/04/2020
4	Heilen Meditech Private Limited	Manufacture of medical appliances and instruments, appliances for measuring, checking, testing, navigating and other purposes except optical instruments	25/12/2019
5	Mazon Technologies Private Limited	maintenance of websites of other firms/ creation of multimedia presentations for other firms, other computer related services	16/12/2019 www.mazon-app.com
6	Boilerplate Technologies Private Limited	computer related activities such as maintenance of websites of other firms/ creation of multimedia presentations for other firms.	24 /09/2019 www.boilerplate.in
7	Sertifydigicred Technologies Llp	Business and Consultancy Services	11/09/2019

8	Studiliteb Innovations Private Limited	Business activities	12/04/2019
9	Digipix Technologies	Software Development Training	6/2/2019 http://digipixtechnologies.com
10	Parkin Mobi Private Limited	Computer related activities like maintenance of websites of other firms/ creation of multimedia presentations for other firms etc.	19/12/2018
11	A.S.R Constructions	Structural design & analysis, Site inspection, Construction Purview	20/09/2018
12	Bharath Aditya	Business activities n.e.c.	19/09/2018 www.krisypapad.com
13	Sterling Media Labs	Udyog Aadhaar	20/08/2018
14	Zero Innovation Technology	Intelligent transport system services, Digital platform for transportation and road works, Smart apps for Solid waste management	05/07/2018 www.zeroinnovation.in
15	Tecidexa Services Private Limited	Buy the books and sell the books to the students at less price, donate books to NGO, to form dept. club	15/06/2018 https://www.tecidexa.in/
16	M/S Aasa Designs and Builders	Structural design & analysis, Site inspection, Construction Purview	23/05/2018
17	Technfogra Solutions	Web Development and Design	23/10/2017
18	J N Tech Solutions	leading Manufacturer, Wholesale Trader and Service Provider of Power Supply, Servo Drive, Vision System, Control Panel and many more	28/07/2017
19	Akshat It Solutions Private Limited	Computer related activities [for example maintenance of websites of other firms/ creation of multimedia presentations for other firms etc.]	05 /06/ 2017. www.akshatsolutions.net
20	M/S. Ekzen Robotics	Robotic System Integration, Robot teaching Ladder Development, Electrical Contracting	5/4/2017 www.ekzenrobotics.com
21	Belton Infotech	Maintenance of websites of other	19/01/2017

	Private Limited	firms/ creation of multimedia presentations for other firms	https :// www.linkedin. com/ in/ harshitvora 99/
22	Heymedy Healthtech Llp	Business Services	19/12/2016
23	Opencube Labs Llp	Business Activity and Consultancy	17/11/2016 http://ocl.space
24	Webcasted Llp	Computer and related activities	08/07/2016
25	S Jain Gupta	MCA provider a qualitative range of industrial products, Use of modern technology, industry standards, timely and quality deliveries	28/01/2016
26	Atlantis Erudition & Travel Services	Higher education [Includes post-secondary/senior secondary sub-degree level education that leads to university degree or equivalent.]	28/01/2016
27	Cocoapay Technologies Private Limited	Software publishing, consultancy, and supply	07/08/2015 www.cocoapay.com

Samples of the Media Article:

ಉದ್ಯಮಶೀಲತೆ ಪ್ರಗತಿ ಕುರಿತು ಕಾರ್ಯಾಗಾರ

Pramod Gowda / BMSIT

ಬಿಎಂಎಸ್‌ಐಟಿಯ ಇನ್‌ಫರ್ಮೇಷನ್ ಸೈನ್ಸ್ ಮತ್ತು ಕಂಪ್ಯೂಟರ್ ಸೈನ್ಸ್ ವಿಭಾಗದವರಿಂದ Entrepreneurship Development Cell ಕುರಿತು ಕಾರ್ಯಾಗಾರವು ನಡೆಯಿತು. ವಿಭಾಗದವರು ಹೇಗೆ ಭವಿಷ್ಯದಲ್ಲಿ ಉದ್ಯಮಿಯಾಗಿ ಪ್ರಗತಿ ಸಾಧಿಸಬಹುದು ಇದರ ಕಾರ್ಯತಂತ್ರಗಳು ಯಾವುವು ಎಂಬುದರ ಬಗ್ಗೆ ವಿಶೇಷ ಉಪನ್ಯಾಸ ನೀಡಲಾಯಿತು.

ಕಾರ್ಯಾಗಾರದಲ್ಲಿ ಅತಿಥಿ ಉಪನ್ಯಾಸಕರಾಗಿ ಬಂದಿದ್ದ ಶ್ರೀ ಭಾಸ್ಕರ್ ಮತ್ತು ಶ್ರೀ ವಿದ್ಯಾ ಅವರು 'ವಿದ್ಯಾರ್ಥಿಗಳು ಭವಿಷ್ಯದಲ್ಲಿ ಯಶಸ್ವಿ ಉದ್ಯಮಿಯಾಗಿ ಪ್ರಗತಿ ಸಾಧಿಸಬೇಕು. ಮುಂಬರುವ ಸವಾಲುಗಳನ್ನು ಎದುರಿಸಲು ನಾಯಕತ್ವದ ಗುಣಗಳನ್ನು ರೂಢಿಸಿಕೊಳ್ಳಬೇಕು. ಸಾಫ್ಟ್‌ವೇರ್ ಉದ್ಯಮದಲ್ಲಿ ಹೊಸ ದೃಷ್ಟಿಕೋನ ಮತ್ತು ವಿಧಾನಗಳನ್ನು ಅಳವಡಿಕೊಳ್ಳಬೇಕೆಂದು' ಎಂದು ಮಾಹಿತಿ ನೀಡಿದರು. ■



Entrepreneurship Conclave at BMSITM

Bengaluru: Panelists from various domains interacted with students at the Entrepreneurship Conclave organised at BMS Institute of Technology & Management, Yelahanka, in the city.

Gopinath Rao, Deputy Director, MSME, explained about various Central and State Government schemes available for entrepreneurs to facilitate loans and other amenities. He advised students to visit the MSME centre at IISC Bengaluru to obtain more information about start-ups, funding and creative work



of young students and industrialists. Sri Ravi Theja, founder of Unplan, delivered the keynote address. He came out with a few examples to demonstrate how small businesses could be brought into the e-commerce domain. Later, Sri Naveen P

Senna, co-founder of Orbis Edu Services, spoke about ways through which one could convert his ideas into a workable product or a service.



Later, Dr. Jagadish Vengala shared his success stories about mentoring new start ups.








9.7 Co- Curricular and Extra-curricular activities






(10)






I: Co- Curricular Activities: the details of the activities/ Achievements Conducted are given below.






Table: 9.7.1 Department wise list of co-curricular activities


Department: Civil Engineering				
Sl.no	Student Name	Achievement (Online Course)	Date	Photos
1.	Vikas C, Darshan J and Praveen Kumar D S	Jnana –Vijnana – Tantrajnan Mela -2020”	19 -02- 2020 and 20-02- 2020	
2.	Chandana N and Swamy	Performed KATHAK dance on the auspicious account of MAHASHIVARATHRI	20-04- 2020	

3	Chandana N Swamy	KATHAK for the festival "UTSAVA HABBA "	22-02-2020	
4	Avinash Nair, Nandan, Aditya Sharma, Adarsh R N	Additive Manufacturing of concrete: challenges and opportunities	04-01-2020	
5	B Raghavendra Rakesh M Pallavi S	Stabilization on expansive soil using sea shell powder and rubber powder	04-01-2020	
6	Shariq Fayaz,	Stabilization of subgrade sediment soil by using alccofine	30-01-2020 and 31-01-2020	
7	Siri.k.Gattimane, Shaantanu Chutoori Tarakeshwar Singh	III Semester presented a Paper on “A Study on Load And Settlement of Pile Under Vertical Loading” and won best paper award in Two-day National Conference on ADVANCES IN CIVIL ENGINEERING NCACE EWIT 2019, held at East West Institute of Technology, Bengaluru	03-10-2019 and 04-10-2019	 
8	Uday Bahragav, Safan, Rupak Balu, Aditya, Kavya and Deeksha	The students of VII Semester (9 NOS.) participated in technical seminar titled “Research Avenues and Practical Applications in Concrete Technology” conducted jointly by ICI-KBC & BMSCE held at BMSCE, Bengaluru	25-10-2019 and 26-10-2019	






Department: MCA				
Sl. No	Student Name	Achievement (Online Course)	Date	Photos
9	Ms. Varsha and team	III Semester MCA participated in the Independence Day Celebrations by performing a patriotic song	15-08-2019	
10	Mr. SuryaPrakash and team	Participated in the Independence Day Celebrations by performing a me.	15-08-2019	
Department: Electrical and Electronics Engineering				
Sl.no	Student Name	Achievement (Online Course)	Date	Photos
11	Siddarth K Ghodasara, Prashanth R, Bharath Bhaskar, Vineet Ranjan	Selected among top 10 teams to finish and won cash prizes in eYantra COVID -19 National Hackathon	20-04-2020	
12	Mohammad Adil Ansari	Won First prize in TCS Tech Bytes Quiz organised by the Board for IT Education Standards (BITES) and Tata Consultancy Services	5-03-2020	
14	Gautama Bharadwaj , Harikrishnan U, Navedya Ojha, Venu Bhargav	Presented their work on fuel cells in IISc Open day 2020	29-02-0020	



15	Siddarth K Ghodasara , Prashanth R, Bharath Bhaskar, Binoj T B	Presented a paper in ICASIC 2020 conference held at VIT Vellore and got published in Springer.	27-02-2020 and 28-02-2020	
16	Sudarshan Potdar	Participated in 63rd National Shooting Championship Competitions (NSCC) in Small Bore Rifle & Pistol events held at BHOPAL M.P	07-12-2020 To 04-01-2020	
17	Manohar D J	Won silver medal in 81 kg Inter collegiate, Inter Zonal/Single Zone Tournament/ Competition in VTU Interzone JUDO competition held at SJCIT	06-09-2019 to 07-09-2019	
18	Neha R, N Janani, Raghav K K Sudha M	Presented a paper with title “ Micro strip Array Antenna for 24GHz Automotive RADAR” in , International conference on Smart structures and Systems" -ICSSS 2020, at Saveetha Engineering College, Chennai awarded BEST PAPER Award	24-07-2020	
19	Vivek, Hemanth G, Bharathkumar S, M.D .Yasin Fasal	Presented a paper with title “ A Compact Reconfigurable UWB Antenna For Short-Range Wireless Applications” in , International conference on Smart structures and Systems" -ICSSS 2020, at Saveetha Engineering	24-07-2020	

		College, Chennai awarded BEST PAPER Award		
20	Shashank Srinvas, Aditya V Kulkarni, Prajwal P S Sudhanva Rao P.N	Have got KSCST Sanctioned Student Project for the project titled “Smart Learning System For Deaf And Dumb Using Hearing Aid And Mobile App”	06-03-2020	
21	Shashank Srinvas, Aditya V Kulkarni, Prajwal P S, Sudhanva Rao P N	Applied for PATENT for the Project Titled “Smart Learning System For Deaf And Dumb Using Hearing Aid And Mobile App”	06-03-2020	
22	Manjunath U, Prasunn, Nishit Rathi Prasanna Kumar	Have filed a provisionally PATENT titled “ Bone Conduction based full face helmet “ Patent Reference ID number :202041007423	29-02-2020 & 01-03-2020	
23	Manjunath U, Prasunn, Nishit Rathi Prasanna Kumar	Participated as Finalist in KPIT Grand Finale-2020 at Pune (KPIT top 30 finalist) for the project “ Bone Conduction Helmet”	29-02-2020 & 01-03-2020	
24	Manjunath U, Prasunn, Nishit Rathi, Prasanna Kumar	Participated in IICD_2019 “DST-TEXAS” & Selected and received a fund of \$200 worth components for the project titled “Bionic Arm” in 2019	2019	

Department: Electronics and Communication Engineering				
25	Spandana S	Received best outgoing student award from cognizant	May 2019	

Department: Information Science and Engineering				
Sl. No	Student Name	Achievement Online course	Date	Photos
26	Divyatha S Prabhu	Won first place and received a cash prize of 2500/- in National dance festival "Nrityanjali" a salutation to dance held in Kristu Jayanti College, Bangalore	20-02-2020	
27	Shivani Sharma	Won Third position in the online open mic "Theme-in a Crowd" held by Adamya	07-06-2020	
28	Shivani sharma	Won first position in the poetry section "EXPLORE TALENT" competition arranged by instagram page sanidhya	22-05-2020	
29	Shamanth Kumar Shetty	Won third position in NetBall tournament conducted by Karnataka Dasara association in Mysore	01-10-2019	
30	Shamanth kumar shetty	Secured the Runners-up place in Basket-Ball at Inter college zonal tournament conducted by VTU held at NMIT	16-09-2019	
31	Shivani sharma	won first position in the poetry section competition arranged by Adamya open mic competition	21-05-2020	

32	Shivani sharma	Won first position in the poetry section competition arranged by Adamya open mic competition "Collab4.0"	01-07-2020	
Department: Mechanical Engineering				
Sl. No	Student Name	Achievement (Online Course)	Date	Photos
33	Kaushik Balasundar Aby J Kittoor Akash S Nambiar	Participated in the Regional Finals, e-Yantra Ideas Competition (eYIC 2019-20) Regional Finals at PSG Institute of Technology and Applied Research, Coimbatore.	21-2-2020	
34	Kaushik Balasundar Aby J Kittoor, Akash S Nambiar	Participated in e- Yantra Robotics Competition IIT Bombay	10-3-2020	
35	Prateek Bali, Anupam, Ashuthosh, Chirayu and team of 12 members team	Team Motorheads", a student team of Department of Mechanical Engineering participated in a National Level Event Indian Karting Race (IKR 2020) held at Radharaman Institute of Technology and Sciences, Bhopal, Madhya Pradesh	21-1-2020	
36	Anupam, Ashutosh, Kevin Ram Kumar, Adithya Singh, Jayant Bhansali and Team	Participated in REEV (Range Extended Electric Vehicle) is a National Level Event in which students of Mechanical Engineering Department, BMSIT have designed and fabricated a Series Hybrid Urban Mobility Vehicle. The event was held at Meko Kartopia, Bengaluru	07-02-2020	

37	Kaushik, Balasundar, Aby J Kittoor, Akash S Nambiar	Semi-autonomous food and medicine delivery robot, Deployed at at Kodagu Institute of Medical Sciences (KIMS), Karnataka.	2020	
38	Abhishek S A Kaushik, Balasundar, Akash, Nambiar	Team has won 1st Place among 100+ teams, Paper presentation at National Level IEEE Student Conference (Kagada 2019) titled “Modelling, Analysis and Fabrication of a Single Propeller Multi-Terrain Spherical Drone”. This at Kagada 2019 held at UVCE, Bengaluru	21-10-2019	

Extracurricular Activities:

9.7.2 Details of activities conducted under NSS/NCC/Sports.

Sl. No	Activities	Person in charge	Report from 2022 – 2023
1	NSS	Shri. Shivakumar T	On 22.07.2022, Life skills Training series - 04 for AI & ML. 100+Students participated. On 29.07.2022, Life skills Training series - 05 for ETE. 90+Students participated.
2	NCC/ Sports Activity	Lt. Rani M S	On 22.07.2022: Norms and Policies for NCC Expenditure: A preliminary draft has been prepared in line with the state and central NCC policies
3	NSS Activity	Mr Shivakumara T	On 12.08.2022, Life skills Training series - 06 for ECE. 100+Students participated.
4	NCC & Cultural Committee	Lt. Rani M S/ Dr Sunanda Dixit	On 15.08.2022, 76th Independence Day was celebrated. Harghar Tiranga: As a part of Azadi ka Amruth Mahotsava
5	NCC Unit	Lt. Rani M S	On 12th August 2022, Lt. Rani M S attended the Associate NCC officers Conclave at Christ University, Bannerghatta, Bangalore. She was presented with 14 National Flags to be distributed for Har Ghar Tiranga.

6	Sports	Mr. Mallikarjuna Patil ANO Lt.Rani	Sports Training and selection Trials were scheduled from 20th October to 27th October 2022. All the events were carried as per the schedule.
7	Sports	Mr. Mallikarjun Patil Lt. Rani M S	BMSIT&M has won 2nd place in the VTU Bangalore North Division Kabaddi Tournament held at NCET
8	NCC	Lt. Rani M S	RDC: INTER BN MARCH PAST COMPETITION: The Inter Bn drill March Past Competition was held on 15th Oct 2022 for RDC at St Claret college Jalahalli. Around 25 cadets were selected to represent 39 KAR BN NCC level Among which BSUO. Akin Anto & CSUO. Rahul kumar were part of it. KERALA TREKING CAMP – OCT 2022: JUO. Mayur P successfully attended Boys Trekking Expedition (Kerala Trek) from 6 th to 13 th Oct 2022. Organised by Kerala Directorate. OFFICER RANK PIPING CEREMONY- 31 st OCTOBER 2022
9	NCC Unit	Lt. Rani M S	24.11.2022: INDUCTION PROGRAM NCC BMSIT&M Conducted orientation program for first year students, under the guidance of Lt. Rani M.S, BSUO. Akin Anto along with CSUO.
10	Sports	Mr. Mallikarjun Goud Patil/ Lt. Rani M S	Kabaddi (M) Team has participated in the VTU Bangalore North Division Inter-Collegiate Tournament-2022-23 was held on 4th and 5th Nov. 2022 at SJCIT Chikkaballapur.
11	NSS	Mr. Shivakumara T	02.01.2023: Visit to Old Age Home, Punaschethana Foundation, Lingadahalli, Bengaluru. Donated collected items (Cloths and winter wares) from Staff and students. Students also donated around Rs one thousand to the trust Attendees: 20 volunteers + Dean Student Welfare and NSS PO
12	Sports	Mr. Mallikarjun goud Patil	15.01.2023: Stock verification of sports department has been initiated and it is in process.

13	NCC	Lt. Rani M S	10.01.2023: 10 NCC cadets had participated in Dress rehearsal of Army Passing Out Parade in MEG Centre, Bangalore. 15.01.2023: Yogathan was held at Reva University and 15 cadets participated in the event.
14	NCC & Civil Defence Unit	Lt. Rani M S	18.01.2023: Free COVID-19 Vaccination Camp was organised by National Cadet Corps and Civil Defence Unit of BMSIT&M in association with BBMP Urban Primary Health Centre, Yelahanka. A total of 48 Covaxin and 159 Covishield doses were given to students, staff and their family.
15	NCC & Physical Education & Sports Department	Lt. Rani M S	20.01.2023: A Patriotic Run was organised by National Cadet Corps Unit of BMSIT&M along with Department of Sports, Civil Defence Corps in association with Central Reserve Police Force, Yelahanka at 6:30AM from BMSIT&M Campus to CRPF Campus and back.
16	NSS	Mr. Shiva Kumar T	20.01.2023: A talk of Life Skills accompanied by felicitation of Dr. Pradeep B S, Principal Investigator of Life Skill Program Design, Nimhans was organised by NSS.
17	Cultural Committee & Sports Department	Cultural Team & Sports Team	26.01.2023: 74 th Republic Day was celebrated at BMSIT&M premises which include flag hoisting, cultural events to uphold the patriotism. Principal, Vice Principal, BMSSA Director, Dean SW, Staff and students witnessed the event.
18	NCC	Lt. Rani M S	07.07.2023: The National Cadet Corps BMSIT&M welcomed the National Board of Accreditation (NBA) on their annual visit to BMSIT campus on 7 th July, 2023. 25.07.2023: Kargil Diwas conducted by Seshadripuram Institute of Commerce and Management.

			Ms Sahana, IV Sem, EEE participated in Drawing and painting competition. 29.07.2023 to 31.07.2023: Ms Pooja of IV sem CSE participated in Intergroup competition, All India Thal Sainik Camp, (IGC, AITSE) at Brindavan College. Selected for next level training at Mysore from 01.08.2023 to 10.08.2023.
19	Sports	Mr. Mallikarjuna Patil / Lt Rani M S	12.07.2023: Table Tennis Women team secured First Place in VTU North Division, which was held at SVIT and qualified to State level. 18.07.2023: Badminton (M&W) team participated at Brindavan College. 25.07.2023: Baseball Men Team participated in VTU State Level Competition at VTU, PG, Mysore Mr Sadanand V is appointed as Coach for Football as per institute norms.
20	NSS In association with YRC & NCC	Prof. Shiva Kumara T	21.07.2023: Health check-up was organised for the staff and students. 27.07.2023 & 28.07.2023: Blood Donation Awareness and Blood Donation Camp was organised by NSS in association with YRC and NCC. 372 units of blood donated to Lions Blood Bank.
21	SPARDOTSAHA	Mr. Mallikarjuna B Patil / Lt. Rani M S	08.05.2023: Physical Education and Sports department organised SPARTDOTSAHA-2023 Annual Intramural Sports competition on 08 th and 09 th May, 2023.
22	NSS Sports & NCC	Prof. Shiva Kumara/ Mr. Mallikarjuna B Patil/ Lt. Rani M S	Event Title: 9th International Yoga Day Date of Event: 21st June 2023 Venue: Amphitheatre, BMSIT&M Campus
23	NCC in association with NSS Youth Red Cross & Unnath Bharatiya Abhyan	Lt. Rani M S Dr. Chandrashekar	Plastic free Abiyaan was successfully conducted by NCC BMSIT&M in association with Youth Red Cross, NSS and Unnath Bharatiya Abhyan on 14 th July 2023.

		Prof. Shiva Kumara	
24	Sports Department	Mr. Mallikarjuna Patil B Lt. Rani M S	07.08.2023 & 08.08.2023: Our college Chess (M&W) team participated in Bangalore division chess Competition. 09.08.2023: College Swimming (M&W) team participated in VTU State level Swimming competition at Basavanagudi Swimming pool organised by MSRIT, Bangalore 21.08.2023: Participating in VTU State Level Inter-Collegiate Taekwondo (M&W) Competition at SIT, Tumkur 23.08.2023 & 24.08.2023: Participating in VTU Inter Collegiate Bangalore North Division Football (M) Tournament 2023-24 at SJCIT, Chikkaballapura
25	Sports Department	Mr. Mallikarjuna B Patil Lt. Rani M S	29.08.2023: On National Sports Day, BMSIT&M remembers the Major Dhyan Chand, the hockey wizard on his Birthday anniversary and played few games.
26	NCC	Lt. Rani M S	01.08.2023 – 10.08.2023: Corporal Pooja P is promoted as Senior Under Officer and rank piped by Officiating Commanding Officer of 39 Karnataka Battalion for her achievements in State Level Thal Sainik Camp in Map Reading.
27	Student Induction Program Sports and NCC/Civil Defence	Dean SW, Mr. Mallikarjuna B Patil & Lt. Rani M S	08.09.2023: Yoga and Physical Health was organised for Chemistry Cycle. Speaker: Dr Chandan Venue: Seminar Hall-1, Academic Block No. of Students attended: 77. 11.09.2023: Yoga and Physical Health was organised for Physics Cycle. Speaker: Dr Chandan Venue: Seminar Hall-1, Academic Block No. of Students attended: 135. 12.09.2023: Yoga and Physical Health was organised for Physics and Chemistry Cycle. Speaker: Dr Sudheendra Venue: Amphitheatre

			No. of Students attended: 117. 13.09.2023: Yoga and Physical Health was organised for Physics and Chemistry Cycle. Speaker: Mrs Chetana Srinivasa Venue: Seminar Hall-2, Academic Block No. of Students attended: 142.
28	Talk by Eminent Speaker by Armed services / Civil Servants	Dean SW, Mr.Mallikarjuna B Patil, Lt. Rani M S	14.09.2023: Dean Student welfare welcomed the students for the session on Talk by Eminent Speakers by Armed Services / Civil Servants and introduced the speakers of the day Major General Bhakuni. No. of Participants: 150 students from Physics and Chemistry Cycle
29	NSS, UBA & YRC	Prof. Shiva Kumara T Dr. Chandrashekar B	01.10.2023: In view of Mahatma Gandhi Jayanthi - Ek Tareekha Ek Ghanta - Swachhata Hi Seva 2023, this event was organized by NSS in association with YRC BMSIT&M. Students and Housekeeping staff were participated.

Table:9.7.3 Details of activities conducted under professional bodies.

Sl. No.	Activities	Person in charge	Report from 2022 – 2023
1	Institute of Electrical and Electronic Engineering (IEEE)	Dr. Anjan Krishnamurthy	On 10.03.2023, IEEE EXECOM, BMSIT&M had organised an event “The Hunger Gameson”. Total Number of Participants: 70 (15 IEEE and 55 non-IEEE members).
2	Institute of Electrical and Electronic Engineering (IEEE)	Dr. Anjan Krishnamurthy	On 21.07.2022, IEEE CS CHAPTER, BMSIT&M had organised a talk by Arnav Agarwal on the topic HOW TO LAND YOUR DREAM JOB, 180 students participated.
3	Institute of Electronics and Telecommunication Engineering (IETE)	Dr. Thejaswini S	On 16.7.2022, a talk on Hardware Computer Networks and Routers was arranged for 6th sem students. Senior Team Lead Mr. Narahari Murthy from CISCO Pvt Ltd addressed the students. 55 students from ETE participated.

4	Institute of Electrical and Electronic Engineering (IEEE)	Dr. Anjan Krishnamurthy	6 th Dec – 10 th Dec 2022: 5 days' National workshop on Practical Cyber Security forensic and Block chain.
5	Electoral Literacy Club (ELC)	Mr. Shivakumara	27.12.2022: 18+ years young voters registration status collected and sent to VTU regional office, Bengaluru (Both Soft and Hard copy)
6	National Cyber Safety & Security System (NCSSS)	Dr Arun Kumar B R	06.12.2022 – 10.12.2022: National Workshop conducted on Practical Cyber Security, Forensics and Blockchain Technology
7	Institute of Electronics and Telecommunication Engineering (IETE)	Mrs. Saritha I G	06.12.2022: Expert talk conducted on topic "How to survive an economic recession-Startup Finance Perspective" Speaker: Tarunkumar Mallappa
8	Institute of Electrical and Electronic Engineering (IEEE)	Dr. Anjan Krishnamurthy	10.03.2023: This event was devised by IEEE CS chapter in collaboration with Student Branch and ITS Chapter as a means of alleviating academic stress and promoting leisure among students.
9	Institute of Electrical and Electronic Engineering (IEEE), ITS Chapter and CSI Chapter	Dr. Anjan Krishnamurthy	26.05.2023: The "Git Quest" event offered participants a thrilling and educational experience.
10	Institute of Electrical and Electronic Engineering (IEEE)	Dr. Anjan Krishnamurthy	21-07-2023: The event commenced promptly at 11 am with an overwhelming attendance of 120 students, as all esteemed guests and dignitaries arrived on schedule.

Table:9.7.4. Details of activities conducted under Cultural club.

Sl. No.	Activities	Person in charge	Report from April 2022 – Jan 2023
1	VTU Cultural Fest	Dr. Sowmyashree M S Dr. Prashanth Athavale	On 29 th March – 1 st April 2023, students participated in Yuvothsava.
2	VTU Cultural Fest	Lt. Rani M S Mr. Manoj	On 28th, 29th & 30th July 2022, students participated in Prathibhotsava.
3	Cultural Fest	Dean SW	Independence Day celebration - 15 th August, 2022: It was decided to celebrate on a grand scale on account of Azadi ke Amruth Mahotasava.
4	Cultural Team	Dean SW	23.07.2022: MoU with Janapada Loka: A preliminary talk with Mr. Nanda Kumar in charge of Janapada Loka was held on 23.07.2022.
5	Cultural Club	Dr. Sunanda Dixit, Smt. Shobha, Dr. Manoj	An MOU with Karnataka Janapada Parishad was signed to encourage Folk Lore of Karnataka amidst staff and students of BMSIT&M. Karnataka Rajyotsava was celebrated on 3rd November 2022 and Kannada Sangha “Honnudi” was also inaugurated on the same day.
6	UTSAHA VAIBHAV 2023	Dr. Chethan A S	23.06.2023 & 24.06.2023: Utsaha Vaibhava is an Annual Techno Cultural Fest organised every year in association with BMS School of Architecture.
8	Cultural Team & NCC	Dr.Sowmyashree M S Lt Rani M S	15.08.2023: BMSIT&M and BMSSA jointly celebrated Independence Day flag hoisting followed by cultural events.
9	Music Club	Dr. Prashanth Athavale	18.08.2023: The first in the series of performances by students of BMSIT&M titled “NOTEworthy” was held on Friday 3:00 p.m.
10	Ganeshotsava 2023	Dean SW & Mr.Dwarakanath	18.09.2023-20.09.2023: On Ganesh Chaturthi, Ganeshotsava 2023 was celebrated for 3 days

			in our campus and Ganesh Visarjana was on 20th September 2023.
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Table:9.7.5. Details of activities conducted under AICTE.

Sl. No.	Activities	Person in charge	Report from April 2022 – Jan 2023
1	AICTE Activity Points	Dr. Annamma Abraham	On 20.07.2022, a meeting was conducted on at 11.45 am in the boardroom in the presence of Mrs. Radhika Pai and Mrs. Arnwaz from VidyaShilp Academy.
2	Rotract Club	Mrs. Tejaswini B J	On 10th Aug - 12th Aug, 2022, the Flood Relief Drive was organised in BMSIT. Books, Clothes, Sanitary Napkins, Ready to eat food and Food Grains were collected for distribution.
3	AICTE Activities Points	Dr. Annamma Abraham	a. Engagement of terms with BIAL: To carry out students' internships and to get AICTE activities points in the field of Renewable Energy and Data Base management. b. MOU with VCT planned in November 2022 for the students to serve in Government Adopted Schools of VCT.

Table:9.7.6. Details of activities conducted under Newsletters.

Sl. No.	Activities	Person in charge	Report from 2022 – 2023
1	Newsletter	Dr. Sathish kumar	Monthly
2	Manthana - 2022	Dr. Anjan Krishnamurthy	On 05.08.2022 - 50 copies of Manthana 2022 were received and distributed to all Departments.
4	Techsasransh - 2022	Dr. Sridevi	Techsaransh: compendium of abstracts of final year students project was printed and copies were distributed to all departments and office
5	Tech Sanchalana	Dr. Shobha Rani Dr. Tejeswini Ramesh	This annual magazine has been received and distributed to all departments.
6	Manthana 2023	Dr. Surekha K B, Dr. Geeta Patil	15.09.2023: Manthana 2023 was released on Engineer's Day. Hard copy distributed to all the departments and soft copy shared with all the HoDs, Faculty members and students.

Table:9.7.7. Details of activities conducted under Industry interaction.

Sl No.	Committee	Person in charge	Report from 2022 – 2023
1	Industry-Institute Interaction	Dr. C S Mala Dean SW	On 27th September 2022, a meeting with the CEO I2B Global company Mr. Kiran Rudrappa and his advisor Mr. Shashidhar (Former Additional Secretary of GOK, Industries and Commerce) with the Aero Club members involved in assembling the Drones for various applications, Dr. Raghunandan and Mr. Madhu along with the Principal took place..

Table:9.7.8. Details of activities conducted under institution level.

Sl No.	Committee	Person in charge	Report from 2022 – 2023
1	Aero Club	Mr. Madhu M C	The Drone show was arranged on 15th August by the students of the drone club.
2	Counselling	Mrs. Chethana Srinivas	Offline technique was utilized for counselling. Student 'Se' of AI/ML was counselled for 'Academic improvement' Student 'K' of AI/ML was counselled for 'Personal' and academic issues, Student V.J of MCA was counselled for academic improvement, utilizing methods of 'Study Skills' and 'Time Management'. 2 students for malpractice and 1 parent were counselled in the month of August 1 st to 15 th 2022.
3	AEC under Spices	Dr Prashanth Athavale	On 26.08.2022 between 1.30 pm and 2.30 pm an event took place, AET-2 for 2nd sem Students for Chemistry cycle, 410+ students Participated. Internal judges were present. Under IKS SPICES

4	Elocution Competition	Dr. Usha B A & Dr. Sowmyashree M S	04.11.2022: On the occasion of Vigilance Awareness Week a Debate Competition was organised on “Corruption Free India for a Developed Nation” in association with the Power Grid Corporation of India Limited.
5	Life skills	Mr. Shivakumara T	16.12.2022: Life skills training for MCA & ME, Total participants: 50 students, Resource person: Ms Janaki Mahesh Old age home is scheduled for Monday 2.1.2023
6	CICC	Dr. Sunanda Dixit	02.12.2022: In order to bring awareness of legal issues of women at workplace an interactive workshop was organised on topic Prevention of Sexual Harassment at Workplace (POSH) by the College Internal Complaint Committee (CICC) of BMSIT&M for all the Employees. The event convener was Dr. Sunanada Dixit, CICC Chair Person.
7	Proctoring System and Counselling report	Dr. Jojy/ Mrs. Chetana Srinivas	Under each proctor (assigned faculty) a maximum of 25 students are allocated. Proctoring of each Dept. is monitored by a team of deputy chief proctors and a chief proctor at the institutional level. Mrs. Chetana Srinivas, student counsellor visits BMSIT campus on Tuesday and Friday afternoon from 1:30 to 4:30 PM.
8	Access Denied - Cyber Security Club	Dr. Swetha M S	09.12.2022: The event hosted on titled ‘Recon - Get started with Cyber Security’ to raise awareness on Cyber Security, pique students' interest in the field, and provide them with Information to help them gets started. The speaker was VIJETH KL, 53 students participated.
9	Music Club	Dr. Prashanth Athavale	25.11.2022: Launch of Music Club was organised at Kutira, 120 students participated
10	E-Yantra Club	Dr. Rashmi	On 29.07.2022: An Industrial Visit was organised to DiFacto Robotics and Automation pvt ltd At Peenya, Bangalore. for 4 th Semester ECE and e-Yantra Robotics club members from other allied branches.

11	E-Yantra/ Robotics Club	Dr. Rashmi N	23.12.2022: 3 days' workshop "Hands on fire bird V Robot and AtMegha 2560".
12	Women Empowerment Cell	Dr. Usha B A	11.01.2023: Women Empowerment Cell of BMSIT&M in association with BMS Hospital Trust had organized "Free Medical Health Check-up Camp" for Staff/Students/House Keeping/Security and Garden Employees of BMSIT&M from 9:30am.
13	NDLI Club	Dr. Gopal Krishna & Mrs. Tejaswini B J	16.01.2023: BMSIT-NDLI Club in association with Department of Humanities & Social Science had organised a talk on Vivekananda's Vision – My Mission on the occasion of Swami Vivekananda Jayanthi by Disha Bharat at Academic Block 1 st Floor Seminar Hall. Around 100 students participated.
14	Dean SW	Dr. Sowmyashree M S Dr. Prashanth A Athavale Dr. Manoj H M	25.01.2023: National voter's day was observed at 2:00 pm in the 2 nd floor Seminar Hall, academic block.
15	ACCESS DENIED CLUB	Dr Swetha M S	04.05.2023: The cyber security club "Access Denied" organized "Null and Void" event consisting of a quiz and treasure hunt. Total number of participants: 140 Venue: ISE Seminar Hall.
16	FAREWELL 2023	Dean (SW)	12.05.2023: Farewell for 2023 of all the UG and PG final year students was organised in the Amphitheatre at 10.30am.
17	OIKOS (Eco Club)	Mr Venkatesh / Dr Rajesh Gopinath	As part of World Environment Day celebrations, OIKOS (Eco-club, BMSIT&M) has organized "NatHunt"; a Nature Treasure Hunt Competition based on the theme of 'Identify the Tree species', on 9th and 10th June 2023.

18	e-Yantra	Dr. Rashmi N	10.06.2023: The webinar is hosted by e-yantra coordinator Dr. Rashmi N, the session handled by Mr. Jerin Gregory Benny a support associate SAP Labs India. The 35 students attended the webinar through google meet.
19	Coding Club	Prof. Vinutha B	10.06.2023: The coding crib club organized "CodeSprint – Online Coding Competition". Platform: HackerRank Participants: 20 registered members from the CSE, ISE, and AI/ML departments at BMSIT College. Winners: 2 members
20	OIKOS (Eco Club)	Mr Venkatesh / Dr Rajesh Gopinath	09.06.2023 & 10.06.2023: As part of World Environment Day celebrations, OIKOS (Eco-club, BMSIT&M) has organized “NatCross”; a Nature Crossword Competition based on the theme of World Environment Day. Organised on 10th June 2023, more than 30 teams took part in the competition, with each team comprising of two student members.

PHOTOS RELATED TO THE ABOVE ACTIVITIES:



IEEE CS Chapter, BMSIT&M had organised a talk by Arnav Agarwal on the topic “**How to Land Your Dream Job**”.



Independence Day celebration - 15th August, 2022, Azadi ke Amruth Mahotasava



Industrial Visit: DiFacto Robotics and Automation Pvt Ltd, Peenya, Bangalore

Kannada Rajyotsava was celebrated on 3rd November 2022 and Kannada Sangha “Honnudi” was also inaugurated on the same day. Prof. Krishna Gowda was the chief guest of the day.





On 1st of November 2022, Flag hoisting was done in the campus

Elocution Competition: Vigilance Awareness Week a Debate Competition was organised on “Corruption Free India for a Developed Nation” in association with the Power Grid Corporation of India Limited.



College Internal Complaint Committee (CICC): To bring awareness of legal issues of women at workplace an interactive workshop was organised on topic **Prevention of Sexual Harassment at Workplace (POSH)**



INDUCTION PROGRAM: NCC BMSIT&M Conducted orientation program for first year students, under the guidance of Lt. Rani M.S, BSUO. Akin Anto along with CSUO.



Proctoring System and Counselling report:



Access Denied - Cyber Security Club: The event hosted on titled ‘Recon - Get started with Cyber Security’ to raise awareness on Cyber Security



Women Empowerment Cell: “Free Medical Health Check-up Camp” for Staff/Students/Housekeeping/Security and Garden Employees of BMSIT&M



National voter's day was observed at 2:00 pm in the 2nd floor Seminar Hall, academic block



74th Republic Day was celebrated at BMSIT&M premises



II - Club Event Details 2020-2021

I. No.	Date Time	Club Coordinator	No. of participants	Event	Remarks
1	27/9/2021 & 29/9/2021	Aero club Mr. Madhu M C / ME	30	Drone building and flying workshop	Completed
2	12/10/2021	IEEE Dr. Anjan Krishnamurthy/ CSE	30 External:	Inauguration of the IEEE ITS chapter	Completed
3	29/10/2021	E-Yantra Robotics club Mrs. Shruthi. J / CSE Mrs. Rashmi N / ECE	30	Orientation on Robotics Club	Completed
4	13/11/2021	National Service Scheme Mr. Shivakumara T /MCA	352 units of blood were collected	Voluntary Blood Donation in association with Lions Club	Completed
5	17/11/ 2021	SC/ST welfare cell	Sri Lakshmi Sagar HS	A workshop on SSP Registration on line for SC-ST Students organized by department of Social Welfare, GOK	Completed
6	29/11/2021	Indian Society for Technical Education Mr. H D Kattimani / EEE	60	Smart Greet Technologies Invited Speaker Dr. Prasad S Ranga (Company Name Quik Tech Talk)	Completed
7	03/12/2021	Gender Champion ship Cell	Mrs. Tejaswini R	Extempore	Completed
8	16/12/2021	Indian Society for Technical Education & IETE	Mr. H D Kattimani	Talk on Design Thinking and Innovation in Electronics and Telecommunication Engineering	Completed

9	16/12/2021	IETE & ISTE	Mrs. Tejaswini R	Talk on Design Thinking and Innovation in Electronics and Telecommunication Engineering	Completed
10	1/12/2021	Quiz Club/Dr.Usha B A Faculty Coordinator	40	One event held in the Month of Dec 2021(Quiz conducted for Fresher's Students)	Completed
11	1/01/2022	Indian Society for Technical Education Mr. H D Kattimani / EEE	26	Artificial Intelligence in IOT applications Invited speaker Mr. Santhosh Kumar M (MGIRED) Bangalore	Completed
12	11/2/2022	Indian Society for Technical Education Mr. H D Kattimani / EEE	34	Quiz on Fundamentals of Thermal Sciences.	Completed

III- Sports:

Sports Participation Report for the year 2021-22

Sl. No	Game	Tournament/ Competition	Date		Result / Remarks
			From	to	
1	Volleyball (M)	BSN memorial BMSCE for Staff	19/02/21	20/02/21	Winners
2	Constructed international standard wooden flooring Badminton court in new lab block				
3	Badminton (M&W)	BSN memorial BMSSA for staff	08/10/21	09/10/21	Runners
4	Organised VTU Bengaluru North Zone Inter Collegiate Badminton (M&W) Tournament for the year 2021-22				
5	Badminton (M&W)	VTU B'luru N Zone	15/11/21	16/11/21	(M) team 2 nd place (W) lost in Quarters
6	Badminton (M)	VTU Inter Zone	19/11/21	20/11/21	Quarter-finals
7	Table Tennis (W)	BMSCE Kreedotsav	22/11/21	25/11/21	Secured 2 nd place
8	Table Tennis (M&W)	VTU B'luru N Zone	24/11/21	25/11/21	(M&W) Winners

9	Table Tennis (M&W)	VTU Inter Zone	27/11/21	28/11/21	(W) Bronze (M) Quarters
10	Volleyball (M)	VTU B'luru N Zone	29/11/21	30/11/21	Lost in 2 nd round
11	Volleyball (W)	VTU B'luru Zone	29/11/21	30/11/21	Lost in 1 st round
12	Kabaddi (M)	VTU B'luru N Zone	15/12/21	16/12/21	Lost in Semi finals
13	Basketball (M)	VTU B'luru N Zone	17/12/21	18/12/21	Runners
14	Basketball (M)	VTU Inter Zone	19/12/21	20/12/21	Quarters
15	Football (M)	VTU B'luru N Zone	27/12/21	28/12/21	1 st Round

BMSIT&M Volleyball (M) Team Secured 1st Place in BS Narayan Memorial Tournament Organized by BMSCE



**BMSIT&M Badminton (M&W) Teams participated in BS Narayan Memorial Tournament Organized by BMSSA:
Secured 1st and 2nd Place in Open Mixed Doubles and
3rd Place in Below 40 Years Men's Category.**



Badminton (Men) Team Secured 2nd Place in VTU Bengaluru North-Zone Inter-Collegiate Tournament 2021-22 was organized by BMSIT&M, Bengaluru



Table Tennis (W) Team Secured 3rd Place in BMS Kreedotsav Inter-Collegiate Tournament 2021-22 Organised by BMSCE, Basavanagudi, Bengaluru.



Table Tennis (Men) Team Secured 1st Place in VTU Bengaluru North-Zone Inter-Collegiate Tournament 2021-22 was organized by SVIT, Bengaluru.



Table Tennis (W) Team Secured 1st Place in VTU Bengaluru North-Zone Inter-Collegiate Tournament 2021-22 was organized by SVIT, Bengaluru.



Table Tennis (W) Team Secured 3rd Place in VTU Inter-Zone Inter-Collegiate Tournament 2021-22 was organized by RVCE, Bengaluru.



BMSIT&M Table tennis player Ms Shweta J of III ISE, last from left to right in standing row was selected for VTU team to participate in South Zone Inter University Table tennis (W) Championship was held at Amet University Chennai (TN).



VTU Table tennis team

Sports Participation Report for the year 2019-20

Sl. No	Game	Tournament/ Competition	Date		Result / Remarks
			From	to	
1	Kho-Kho (M)	VTU B'luru N Zone	01/03/19	02/03/19	Semi-finals
2	Volleyball (M)	VTU B'luru N Zone	09/03/19	10/03/19	Semi-finals
3	Cricket (M)	VTU B'luru N Zone	11/03/19	20/03/19	Runners
4	Football (M)	VTU B'luru N Zone	21/03/19	22/03/19	Participated
5	Cricket (M)	VTU Inter Zone	08/04/19	17/04/19	Participated
6	Ball Badminton (M)	VTU B'luru Zone	25/04/19	---	Participated
7	Kabaddi (M)	VTU B'luru N Zone	29/04/19	30/04/19	Semi-finals
8	Netball (M) Karnataka State senior team	Federation Cup @ Pnjb	28/05/19	31/05/19	Participated
9	Shooting (M) player	State Level 10M Rifle	26/07/19	04/08/19	Bronze
10	Shooting (M) Karnataka State Junior team	South Zone Nationals	23/08/19	30/08/19	Qualified for Nationals
11	Badminton (M)	VTU B'luru N Zone	24/08/19	25/08/19	Runners
12	Badminton (W)	VTU B'luru N Zone			Semi-finals
13	Badminton (M)	VTU B'luru N Zone	27/08/19	29/08/19	Participated
14	Wrestling (M)	VTU Single Zone	06/09/19	07/09/19	Participated
15	Judo (M)	VTU Single Zone	06/09/19	07/09/19	Silver in 81 Kg
16	Yoga (M)	VTU Single Zone	13/09/19	14/09/19	Participated
17	Basketball (M)	VTU B'luru N Zone	16/09/19	17/09/19	Runners
18	Swimming (M)	VTU Single Zone	18/09/19	---	Participated
19	Tennis (M)	VTU B'luru Zone	23/09/19	24/09/19	Participated
20	Basketball (M)	VTU B'luru N Zone	26/09/19	28/09/19	Participated

21	Basketball (M)	BMS Kreedotsava	01/10/19	04/10/19	Runners
22	Chess (W)				Runners
23	Football (M)				Participated
24	Table Tennis (M)				Participated
25	Table Tennis (W)				Semi-finals
26	Volleyball (M)				Participated
27	Volleyball (W)				Semi-finals
28	Throwball (M)				Participated
29	Throwball (W)				Participated
30	Netball (M) player	Dasara State Level	30/09/19	05/10/19	Bronze
31	Taekwondo (M)	VTU Single Zone	17/10/19	18/10/19	Silver in 78 kg
32	Taekwondo (W)				Bronze in 58 kg
33	Athletics (M)	VTU Single Zone	21/10/19	25/10/19	Participated
34	Athletics (W)				
35	Table Tennis (M)	VTU B'luru N Zone	19/11/19	20/11/19	Runners
36	Table Tennis (W)				Semi-finals
37	Throwball (W)	VTU B'luru N Zone	22/11/19	23/11/19	Quarters
38	Shooting (M) Karnataka State Junior team	Junior Nationals held @ <u>Bhopal M.P.</u>	17.12.19	04.01.20	Participated
39	Netball (M) player, Represented VTU team	In All India Inter versity, At Calicut University Kl.	06/03/20	09/03/20	Qualifying round

Team Achievements:

BMSIT&M Cricket Team Secured 2nd Place in VTU Bengaluru North Zone Inter Collegiate Tournament for the year 2019-20 was held at SJCIT on 11th to 20th March 2019.



Cricket (M) team at the Tournament venue, with Runners up Trophy

Badminton (M) team secured 2nd place in VTU Bengaluru North Zone Inter Collegiate Badminton (M) Tournament was held at NMIT Bengaluru on 24th & 25th August 2019



Badminton (M) team at the Tournament venue

- Basketball (M) team secured 2nd place in VTU Bengaluru North Zone Inter Collegiate Basketball (M) Tournament was held at NMIT Bengaluru on 16th & 17th Sept. 2019



Basketball (M) team at the Tournament venue, with Runners up Trophy

- Table Tennis (M) team secured 2nd place in VTU Bengaluru North Zone Inter Collegiate Table Tennis (M) Tournament was held at NMIT Bengaluru on 24th & 25th August 2019



Table Tennis (M) team at the Tournament venue, with Runners up Trophy

- Basketball (M) & Chess (W) teams secured 2nd place in BMS ‘KREEDOTSAV’ the Inter Collegiate Tournaments were held at BMSCE Campus Bengaluru on 1st to 4th Oct. 2019



Basketball (M) team at the Tournament venue, with Runners up Trophy

Individual Achievement:

- Shooting (M) team player Mr. Sudarshan Potdar 5th Sem/ TCE, Has secured Bronze Medal in State Level 10M Rifle (NR) Shooting Championship (Individual)* Held at SAI Shooting Range Bengaluru from 26th July to 4th Aug. 2019.
- Has secured 378 score in -177 Peep Sight Air Rifle (NR) Championship for 10 Mts Junior Men was held at Muttom Thodupuzha Idukki Kerala from 23rd to 30th August 2019 and qualified for Junior Nationals.



Mr. Sudarshan Potdar at the venue of events

- Netball (M) team player Mr. Shamanth Kumar Shetty, of 3rd Sem, ISE had Represented Karnataka state team in the 13th South Zone Senior National Netball (M) Championship was held at Vijayawada Andhra Pradesh from 13th to 15th Sept. 2019 and the said team secured Bronze medal.



Mr. Shamanth Kumar Shetty

- Judo (M) Team Player Mr. Manohar D J of 7th Sem/ TCE, secured Silver Medal in below – 81 kg weight category. in VTU Single Zone Judo Competition was held at SJCIT Chikkaballapur on 6th to 7th September 2019.



Mr. Manohar D J

- Taekwondo (M) Team Player Mr. Gaurav Sethia, of 3rd Sem/ CSE, secured Silver Medal in Under – 78kg weight category in VTU Single Zone Taekwondo competition was held at GAT, Bengaluru on 17th & 18th October 2019.



Mr. Gaurav Sethia

- Taekwondo (M) Team Player Mr. Umar Afthab 3rd Sem/ EEE, secured Bronze Medal in Under – 58kg weight category in VTU Single Zone Taekwondo competition was held at GAT, Bengaluru on 17th & 18th October 2019.



Mr. Umar Afthab

- Shooting (M) team player Mr. Sudarshan Potdar 5th Sem/ TCE, has participated in 10M Rifle Junior 63rd National Shooting Championship Competitions (NSCC) in Small Bore Rifle & Pistol Events held at Bhopal M.P. from 17.12.2019 to 04.01.2020.



Mr. Sudarshan Potdar

Sports Participation Report for the year 2018-19

Sl. No	Game	Tournament/ Competition	Date		Result /
			From	to	Remarks
1	Football (M)	VTU B'luru N Zone	20/02/18	21/02/18	Semi-finals
2	Cross Country (M)	VTU Single Zone	27/02/18	28/02/18	Participated
3	Cross Country (W)				
4	Volleyball (M)	VTU B'luru N Zone	02/03/18	03/03/18	Semi-finals
5	Cricket (M)	VTU B'luru N Zone	06/03/18	12/03/18	WINNERS
6	Chess (M)	VTU B'luru Zone	16/03/18	17/03/18	Participated
7	Chess (W)				
8	Cricket (M)	VTU Inter Zone	20/03/18	24/03/18	RUNNERS
9	Yoga (M)	VTU Single Zone	27/03/18	28/03/18	Participated
10	Yoga (W)				
11	Kho-Kho (M)	VTU B'luru N Zone	06/04/18	07/04/18	Semi-finals
12	Ball Badminton (M)	VTU B'luru Zone	13/04/18	14/04/18	Participated
13	Ball Badminton (W)				
14	Badminton (M)	VTU B'luru N Zone	27/08/18	---	RUNNERS
15	Badminton (W)	VTU B'luru N Zone	27/08/18	---	WINNERS
16	Swimming (M)	VTU Single Zone	03/09/18	---	Participated
17	Table Tennis (M)	VTU B'luru Zone	03/09/18	04/09/18	Participated
18	Table Tennis (W)				
19	Taekwondo (M)	VTU Single Zone	10/09/18	11/09/18	SILVER
20	Basketball (M)	VTU B'luru N Zone	14/09/18	14/09/18	Semi-finals
21	Softball (M)	VTU B'luru Zone	04/10/18	05/10/18	Participated
22	Our college player represented VTU Basketball (M) team in South Zone Inter University@ TN.				
23	Wrestling (M)	VTU Single Zone	15/10/18	17/10/18	Participated
24	Judo (M)	VTU Single Zone	15/10/18	17/10/18	GOLD
25	Athletics (M)	VTU Single Zone	26/10/18	29/10/18	Participated
26	Athletics (W)				
27	Our college player represented Karnataka State Netball (M) team in Junior Nationals @ Pnjb.				
28	Our college player represented VTU Cricket (M) team in South Zone Inter University @ Krtk.				
29	Our college player represented VTU Netball (M) team in All India Inter University @ TN.				
30	Our college player represented Karnataka State Netball (M) team in Federation Cup @ Pnjb.				

SPORTS ACHIEVEMENTS FOR THE YEAR 2018-19

- Cricket (M) team secured **1st place in VTU Bengaluru North Zone Inter Collegiate Cricket (M) Tournament** was held at RLJIT and secured **2nd place in the VTU Championship-2018-19**



- Badminton (M) team secured **2nd place in VTU Bengaluru North Zone Inter Collegiate Badminton (M) Tournament** & qualified for VTU Inter Zone -2018-19



- Badminton (W) team secured **1st place in VTU Bengaluru North Zone Inter Collegiate Badminton (W) Tournament** & qualified for VTU Inter Zone -2018-19



- Taekwondo (M) Team Player **Mr G R Gowtham Krishna 1st Sem/ CSE**, secured **Silver Medal** in Under – 68kg weight category in VTU Taekwondo competition on 11th & 12th September 2018.



- Netball (M) team player **Mr. Shamanth Kumar Shetty, of I Sem, ISE** had secured **Silver medal** in the State level Dasara Sports Meet in Netball (M) Tournament, was held at Chamundivihar Indoor stadium, Mysore on 12th to 16th October 2018
- Netball (M) team player **Mr. Shamanth Kumar Shetty, of I Sem, ISE** had Represented Karnataka state team in the Junior (M) Netball Nationals, was held at Chandigarh, Punjab on 12th to 16th January 2019 and he secured **Silver medal**.
- And Represented VTU Netball (M) team to participated in the All India Inter University Netball (M) Tournament was held at Tamil Nadu Physical Education and Sports University, Chennai (TN) from 20th to 28th February 2019



Shamanth and his team posing with trophy along with dignitaries at Mysuru Stadium.

- Judo (M) Team Player **Mr. Manohar D J of 5th Sem, TCE**, secured **Gold Medal** in below – 81 kg weight category. in **VTU Judo competition** from 15th to 17th October 2018



- **Basketball (M) team player Mr. KUNAL MISHRA, of VII Sem, ME** had Represented VTU Basketball team to participated in South Zone Inter University Basketball (M) Tournament from 22nd to 26th October 2018 at SRM University, Kattankulathur, Chennai (TN)



- **Cricket (M) team player Mr. Anirudda Arvind, of VII Sem, ME** had Represented VTU Cricket (M) team to participate in the South Zone Inter University Cricket (M) Tournament was held at JNNCE Shivamogga, Organized by Visvesvaraya Technological University, Belagavi from 14th to 24th January 2019.

IV-NCC:

Achievements for the year 2020-21

Sl. No.	Student	Achievement
1	CSUO. Deeksha Sethi	Republic Day Camp-2021, Rajpath NCC Girls Contingent, PM's Rally 2021, All India Best Cadet (SWA) – Silver, CM Commendation Card.
2.	CSUO. Rishab S Rokhade	DG NCC Medallion
3.	B.SUO. Pranav Shakthi	Promoted to Battalion Adjutant, Ek Bharat Shreshtha Bharat Camp.
4.	B.Sgt. Shri Harsha Prasad	Promoted to Battalion Provost Sergeant, Selected at Group level Pre-RDC.
5.	CSM. Adityan A Cpl. Sujatha Cpl. Savarnik Tiwari	Ek Bharat Shreshtha Bharat Camp.

NCC ACTIVITIES FOR THE YEAR 2020-21		
Sl. No.	EVENT	DATE
1	Battalion Ranks Appointments	30.12.2021
2	Combined Annual Training Cadre (B Cert)	27.12.2021 31.12.2021
3	Combined Annual Training Cadre (C Cert)	24.12.2021 31.12.2021
4	Swarnim Vijay Diwas	16.12.2021
5	Homage to Martyrs of Chopper Crash	11.12.2021
6	Constitution Day	29.11.2021
7	Rank Piping Ceremony 2021	18.11.2021
8	Blood Donation Camp	13.11.2021
9	Pre- Republic Day Camp – I	19.10.2021 28.10.2021
10	Rank Piping Ceremony 2021	18.10.2021
11	Plastic Awareness Rally 2021	08 .10.2021
12	Fit India Freedom Run 2.0 – 5km Azaadi Run 2021	15.08.2021 20.08 2021
13	One Student One Tree - Tree Plantation Drive	15.08.2021
14	Independence Day 2021	15.08.2021
15	SSLC Examination Student Screening	19.07.2021 22.07.2021
16	Free COVID-19 Vaccination Camp	30.6.2021 5.07.2021 7.07.2021
17	Webinar on COVID-19 Quick Response	20.6.2021 4.7.2021 11.7.2021
18	Online COVID-19 Awareness Month	12.06.2021 18.07.2021
19	International Yoga Day 2021	21.06.2021
20	NCC for Statues Activity	01.03.2021
21	‘C’ Certificate Examination 2021	27.02.2021 28.02.2021
22	‘B’ Certificate Examination 2021	20.02.2021 21.2.2021
23	Republic Day Celebration 2021	26.01.2021
24	Combined Annual Training Camp-II	18.01.2021 20.01.2021

25	Combined Annual Training Camp-I	18.01.2021 20.01.2021
26	Rank Piping Ceremony 2021	17.01.2021
27	Exercise NCC Yogdaan – NCC to fight pandemic	2020 -2021
28	Organized the BBMP COVID RTPCR test to the college staff and students	14.11.2020 17.11.2020 4.01.2021 7.01.2021 11.01.2021 12.01.2021
29	Organized Webinar on “Effective Life Management during post COVID-19”	27.11.2020
30	Online Quiz/Awareness program on “Spit Free India Movement”	24.11.2020 27.11.2020
31	Swachh Bharat Abhiyan	02.10.2020
32	Independence Day Parade 2020	15.08.2020
33	International Yoga Day	21.07.2020
34	Integrated Government online NCC Training programme	10.06.2020

NCC ACTIVITIES FOR THE YEAR 2019-20		
1	C-Certificate Exam 2020	23/02/2020
2	B-Certificate Exam 2020	16/02/2020
3	Republic Day Parade 2020	26/01/2020
4	Organised the motivational talk on joining the Armed forces by Rear Admiral G.Srinivasan	08/11/2019
5	Rally on Plastic Usage and Recycle in collaboration with Anargha foundation	02/10/2019
6	Independence Day Parade 2019	15/08/2019
7	Plantation drive-One Student One Tree 2019	15/08/2019
8	24 cadets have attended the Combined Annual Training Camp (CATC) for 10 days, at NCC Academy Hosahalli, Bengaluru.	02/08/2019

NCC ACTIVITIES FOR THE YEAR 2018-19		
1	Organised the invited talk on SSB by Major Gen. Bhakuni VSM*	03/05/2019
2	Cadets participated in Marathon to highlight “NCC-ROLE IN NATION BUILDING”	28/04/2019
3	Lokha Sabha Election Awareness 2019	15/04/2019
4	C-Certificate Exam 2019	24/02/2019

5	B-Certificate Exam 2019	17/02/2019
6	BMSIT&M pays Homage to Pulwama Martyrs	20/02/2019
7	BMSITM NCC unit welcomes the NBA Committee Members	05/02/2019
8	Republic Day Parade	26/01/2019
9	Cancer Awareness Program and Rally at Avalahalli Street	07/12/2018
10	Awareness program on Armed Force Flag Day	07/12/2018
11	Celebration of Surgical Strike Day	29/10/2018
12	24 cadets have attended the Combined Annual Training Camp (CATC) for 10 days, at Christ University, Bengaluru.	22/10/2018
13	Independence Day Parade 2018	15/08/2018

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





COMBINED ANNUAL TRAINING CADRE (B CERT) – 27 to 31 DEC 2021

Eleven Second year NCC cadets of our college successfully completed the Combined Annual Training Cadre held at St. Vincent Pallotti High School from 27th Jan to 31st Dec 2021. The camp curriculum included foot drill, rifle drill, map reading, weapon training and basics of field & battle crafts.





COMBINED ANNUAL TRAINING CADRE (C CERT) – 24 to 31 DEC 2021

Eighteen Third year NCC cadets of our college successfully completed the Combined Annual Training Cadre held at St. Vincent Pallotti Degree College from 24th Jan to 31st Dec 2021. The camp curriculum included foot drill, rifle drill, map reading, weapon training and basics of field & battle crafts.



SWARNIM VIJAY DIWAS – 16 DEC 2021

NCC BMSIT&M celebrated the 'Swarnim Vijay Diwas' observing the Golden Jubilee of India's victory in Indo-Pak War, 1971 and liberation of Bangladesh. The event was graced by Commanding Officer Col. S K Singh, 39 Kar bn NCC.

The Indo-Pakistan War of 1971 had lasted for 13 days, as the world saw the unprecedented surrender of over 93,00 Pakistani troops to the Indian Army who ensured independence to 75 million people of Bangladesh. It was also the largest military surrender after World War II. Cadets paid tribute to the brave Indian soldiers, sailors & air warriors and their families who ensured the victory in the 1971 war, saying that the country will always be indebted to their sacrifice.





Homage to Martyrs of Chopper Crash – 11 Dec. 2021

The National Cadet Corps Unit, 39 Kar Bn NCC along with all faculty, staff and students of BMSIT&M paid homage to the Chief of Defence Staff Gen. Bipin Rawat, his wife Mrs. Madhulika Rawat and 11 brave defence personnel who lost their lives in the unfortunate chopper crash in Nilgiris dist. of Tamil Nadu.

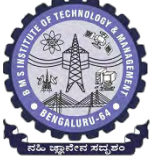


National Service Scheme (NSS) Unit

Summary:

Sl. No.	Events Organized	Date of Event	Number of Volunteers / Beneficiaries
Academic Year: 2021-22			
1	Online Quiz – “India our Nation” In view of Azadi Ka Amrit Mahotsav - 75th Independence Day Celebration – online Quiz event	14 -15, August 2021	03/ 232 beneficiaries including faculties, students and public.
2	Free Covid-19 Vaccination Camp in association with BBMP, UPHC	29-09-2021	28 / Staff & students were benefitted.
3	Awareness campaign on “Safe Blood Donation”	12-11-2021	05 / 1000+ students
4	Voluntary Blood Donation Camp	13-11-2021	50 / 352 units of blood donated, approximately saves 1000 patients of kidney cancer hospital
5	Children Day Celebration with Vidyagokula & Antara Ganga Orphanage	14-11-2021	20 / 50 orphanage children and psychologically challenged people benefitted.
6	One Week Life Skills Training Workshop Attended by NSS PO	14-02-2022 to 19-02-2022	Undergone training in 10 Life skills held at NIMHANS Epidemiology department, Bangalore
Academic Year: 2020-21			
1	Covid-19 Awareness Campaign	29-06-2020	05 / 05 Villagers got benefitted
2	Volunteers Visit: Orphanage & Old age Home, Mussange Mane, Kolar	26-03-2021	05 / Orphans and old age peoples benefitted.
3	An Online Event “Refresh Scape” An Event to Children	14-06-2021 to 18-06-2021	25 children, 10 faculties, 5 parents are benefitted from this event
Academic Year: 2019-20			
1	NSS - International Yoga Day	21 st July 2019	50 volunteers and in house Staff

2	NSS-Voluntary Blood Donation Camp	29 th August 2019	550 Volunteers and Kidwai - children Cancer Patients – 502 units of blood samples donated It saves approximately the life of 1500 people.
3	NSS -Cauvery Calling	30 th August 2019	30 Volunteers and Public
4	NSS -Kidwai Cancer Hospital Visit	30 th August 2019	10 Volunteer students
5	NSS - Ayurveda Medical Camp (under the initiative of FIT India)	27 th September 2019	165 staff is benefited from this event
6	NSS -Swatch Bharath – Plastic Free City	2 nd October 2020	50 student Volunteers and public
7	NSS -Children Day Celebration at Orphanage & Child Adoption Centre	14 th November 2019	50 student Volunteers and 25 Paraspara orphans
8	NSS -Yoga for 21 days	1st to 6th June 2020	35 in house staff
9	NSS - International Yoga Day Celebration	30 th June 2020	10 staffs are benefited
10	NSS - Online Quiz conduction on “International Drug Abuse and traffic illicit	23 rd July to 25 th July 2020	82 participants benefited
Academic Year: 2018-19			
1	NSS - Campus cleaning program	24 th August 2018	Students and Staff
2	NSS - Tree Plantation program	12 th September 2018	Public
3	NSS - Special NSS Camp	9 th to 15 th July 2018	Kadburu Village People, Gauribidanur Swatch Bharat Summer Internship [SBSI] Program. More than 30 volunteers created awareness in classes I to VII. All the students of the Govt. School took part in the Rally against open defecation, better hygiene, and a CLEAN village



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ

(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Under VTU)

Avalahalli Doddaballapur Main Road Bengaluru - 560064

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CRITERION - 10

Vision: Emerge as center of learning in the field of information science & engineering with technical competency to serve the society.

Mission: To provide excellent learning environment through balanced curriculum, best teaching methods, innovation, mentoring and industry institute interaction.

Criterion - 10

Governance, Institutional Support and Financial Resources

Assessment Period

2020-21, 2021-2022, 2022-2023 & CAY: 2023-2024

CRITERION-10 **GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES** **(120)**

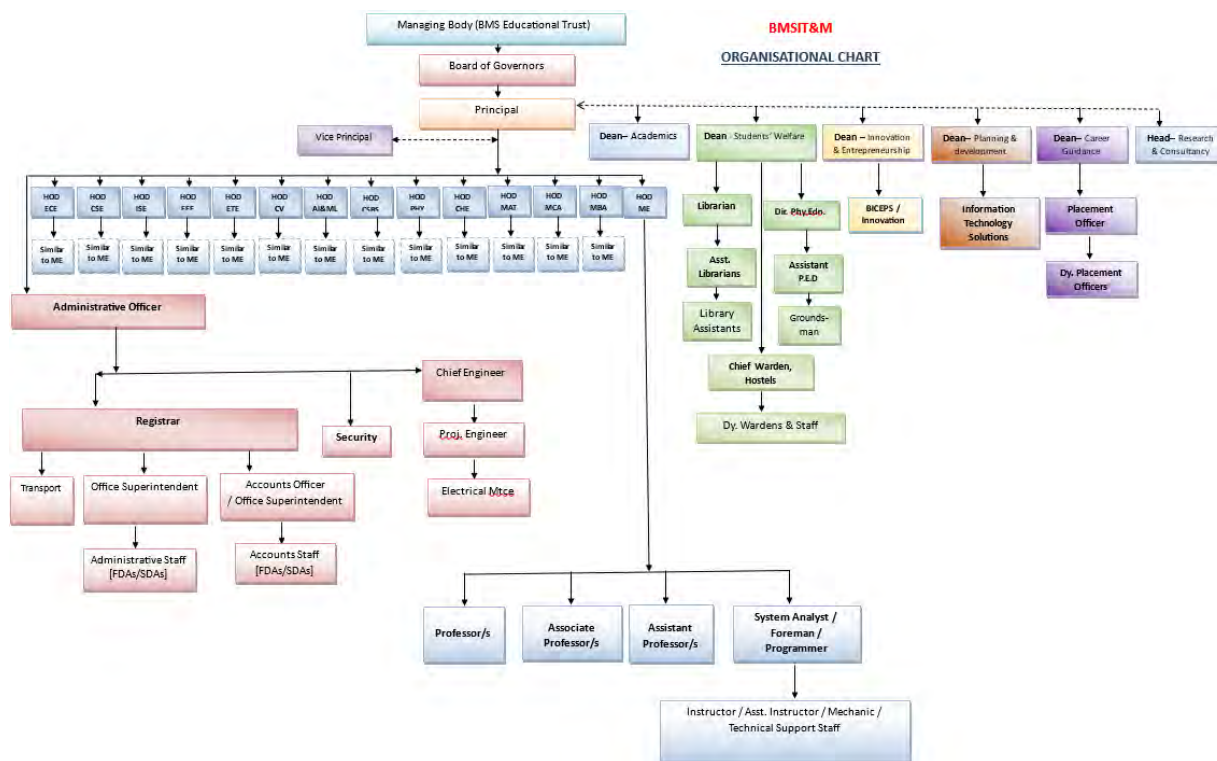
10.1 Organization, Governance and Transparency **(40)**

10.1.1 State the Vision and Mission of the Institute (5)

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

10.1.2. Governing body, Administrative Setup, functions of various bodies, service rules, procedures, recruitment, and promotional policies (10)

The Institute was started in the year 2002 and it offers nine Undergraduate Programs, four Postgraduate Programs as MCA, MBA, M. Tech in Computer Science and Cyber Security, and ten research centers offering doctoral Programs. The entire administration overseen by the Board of Governors (BoG). However, considering the varied courses and voluminous student strength, various committees / academic bodies / boards have been established to oversee activities, assess requirements, and take appropriate decisions towards the smooth and efficient administration.



10.1.2.1 Governing Bodies

- a. Council of Trustees (COT)
- b. Board of Governors (BOG)
- c. Finance committee (FC)
- d. Academic Council (AC)
- e. Board of Studies (BOS)
- f. Board of Examiners (BOE)
- g. Other Committees

a) Council of Trustees (CoT)

The Council of Trustees of the BMS Educational Trust comprises of the following members (Trustees):

1. Dr. B S Ragini Narayan W/o Late B S Narayan, Chairperson, BMSET, Donor Trustee and Member Secretary, BMSET
2. Dr. P Dayananda Pai Chairman, Century Groups, Life Trustee BMSET, Chairman BOG, BMSCE
3. Sri. Aviram Sharma Trustee BMSET, Chairman, BOG, BMSIT&M & BMSCL
4. Sri. Ravi Venkatesam Trustee BMSET, Chairman, BOG, BMSSA
5. Commissioner Department of Collegiate Education, Govt. of Karnataka Ex-Officio Trustee (Govt. Nominee)

The functions and responsibilities of the Council of Trustees are shown under:

1. Scrutinize and approve the proposals initiated by the institute with or without modification.
2. Make regulations regarding admission, sports, extra-curricular activities, maintenance, etc.
3. Recommend / advise the BOG on proposals for institution of new programs of study and other academic matters.
4. Recommend / advice regarding institution of scholarships, fellowships, prizes and medals etc.
5. Perform such other functions as may be assigned by the Government Body.
6. Allocate budget / arrange funds for various developmental initiatives and major capital expenditures.
7. Drawing of the Strategic Plan for the institute and monitoring its implementation.
8. Working out and implementation of the Master Plan for the entire campus.
9. Derive policies for all facilities and welfare measures for the staff and students.
10. Arrange and approve various CSR (Corporate Social Responsibilities).
11. Creation of Good Governance policy and monitor its adaptation.

b) 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 execution of its programs, approves the budgetary allocation towards infrastructure, staffing pattern, research and development etc.

The Board of Governors (BOG) of BMSIT&M: As on 01 Feb 2023	
Name	Role
1. Sri. Aviram Sharma, Trustee BMSET Chairman, BOG, BMSIT&M	Chairman
2. Dr. B S Ragini Narayan W/o Late Sri. B S Narayan Chairperson, Donor Trustee & Member Secretary, BMSET	Member
3. Dr. P Dayananda Pai Chairman, Century Groups, Life Trustee BMSET, Chairman BOG, BMSCE	Member
4. Sri. Ravi Venkatesam Trustee BMSET Chairman BMSSA	Member
5. Dr. S K Saidapur Former Vice-Chancellor, Karnataka university Vice-Chairman, KSHEC.	Member
6. Dr. Unnat Pandit Controller General of Patents, Designs and Trade Marks Mumbai, Govt of India	Special Invitee
7. Mr. Kiran D M CEO, ONGC Foundation New Delhi	Member
8. Dr. P Binu, Dept. of Mechanical Engineering Sree Narayana Gurukul College of Engineering and Technology, Kolenchery, Ernakulam.	Member (UGC Nominee)
9. Dr. N C Shivaprakash Professor (Retd) Instrumentation and Applied Physics, Indian Institute of Science, Bengaluru	Member (VTU Nominee)
10. Dr. Mohan Babu G N Principal, BMSIT&M	Member Secretary

Member Secretary, BOG	
Commissioner Directorate of Collegiate Education Govt. of Karnataka Trustee, BMSET	Member
Director of Technical Education Government of Karnataka	Member
Regional Officer All India Council for Technical Education South-Western Regional Office, Bengaluru	Member (AICTE Nominee)

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 few faculty representatives to be present in the meeting.

Year	Meeting No. Date	No. of BOG members attended
2023	46 / 11-09-2023	10/10
2023	45 / 15-05-2023	8/10
2023	44 / 13-01-2023	7/10
2022	43 / 17-08-2022	8/10
	42 / 11-03-2022	8/10
2021	41 / 28-09-2021	8/10
	40 / 03-02-2021	8/10
2020	39 / 28-10-2020	9/10
	38 / 10-07-2020	9/10
	37 / 14-02-2020	8/10

c) 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.

- 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 below:

Sl. No.	Name of member	Affiliation	Designation
1	Dr. Mohan Babu G N	Principal, BMSIT&M	Chairman
2	Sri. Prakash Rao	Sr. Finance Manager, Member, BOG	Member
3	Mr. Arun R	Finance Officer	Member
4	Dr. Ambika R., Dean – SW	Senior most faculty	Member

The dates of the meeting of the Finance Committee are as below:

Meeting No.	Date of meeting	No. of members attended
12	03-08-2023	6
11	07-01-2023	5
10	08-02-2022	7
09	12-12-2020	7
08	20-12-2019	6
07	18-02-2019	7

d) Academic Council (AC)

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 Boards of studies of various departments to maintain high academic standards in their educational programs. It provides the necessary autonomy to the various departments, approves 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 otherwise there is a special need. It is accountable to the BOG of the institute.

The composition of the Academic council:

Sl. No.	Name of the member	Affiliation	Role
1.	Dr. Mohan Babu G.N.	Principal, BMSIT&M	Chairman
Experts from outside representing Alumni, Industry, R & D			
2.	Dr. P Punitha	Independent Consultant, Former Senior Managing Consultant, IBM Pvt. Ltd., Bangalore	Member

3.	Dr. Srinivas Padmanabhan	Entrepreneur, Associate Former Vice President at Infosys Bangalore.	Member
4.	Mr. B R Indushekar	Head, Operations & Development, Volvo Construction Equipment, Bangalore.	Member
5.	Mr. Pushpak Prakash	Founder & Managing Director of Pushpak group, Bangalore	Member
Three nominees of the VTU			
6.	Dr. Dinesh S V	Principal, Siddaganga Institute of Technology, Tumkur	Member
7.	Dr. Rana Pratap Reddy	Principal, Global Academy of Technology, Bangalore	Member
8.	Dr. Krishnamurthy G N	Principal, BNM Institute of Technology, Bangalore	Member
Heads of various Departments			
9.	Dr. Jayadeva G S	Electronics and Communication Engineering	Member
10.	Dr. Govindaraju H K	Mechanical Engineering	Member
11.	Dr. Thippeswamy G	Computer Science and Engineering & M.Tech in Computer Science & Engineering	Member
12.	Dr. Manjunath T N	Information Science and Engineering & M. Tech in Cyber Security	Member
13.	Dr. Prashanth A. Athavale	Electrical and Electronics Engineering	Member
14.	Dr. Mallikarjuna Gowda C P	Electronics and Telecommunication Engineering	Member
15.	Dr. Rajkumar H N	Civil Engineering	Member
16.	Dr. Anupama H S	Artificial Intelligence and Machine Learning	Member
17.	Dr. M Sridevi	Master of Computer Applications	Member
18.	Dr. Lokesh	Physics	Member
19.	Dr. Jyothi C Hebbar	Chemistry	Member
20.	Dr. Karabi Sikdar	Mathematics	Member
21.	Dr. Balu L	Master of Business Administration	Member

Faculty representation (senior teachers of BMSIT&M)			
22.	Dr. Anil G N	Vice Principal, BMSIT&M	Member
23.	Dr. Satish Kumar K M	Dean Academics, BMSIT&M	Member
24.	Dr. Shobha Rani	Associate Professor, ECE	Member
25.	Dr. Shoba M	Associate Professor, ISE	Member
26.	Dr. Nagabhushan S V	Associate Professor, CSE	Member
27.	Dr. Banuprakash R	Assistant Professor, ETE	Member
28.	Mrs. Shimna Manoharan	Assistant Professor, Civil Engg.	Member
29.	Dr. Hanumanthraju M C	Prof. & CoE of BMSIT&M	Member
Member Secretary			
30.	Dr. Thippeswamy G	Professor, CSE	Member Secretary

e) Board Of Studies (BOS)

The Board of Studies is constituted for each department separately or if feasible for a cluster of departments (For example: Computer Science & Engg, Information Science & Engg and Artificial Intelligence & Machine Learning and Master of Computer Applications). The BOS meets once in 6 months unless it is necessitated by an emergency. The BOS is responsible for keeping tab on the developments in the external world, and development/revision of curriculum to be abreast with them. It performs its functions within the framework set by the Academic council and proposes any changes needed in the curricular content, delivery, assessment and evaluation systems for deliberation and approval by the Academic council. The constitution BOS for various departments of BMSIT&M is in progress. The general composition of the BOS is as shown in the table.

Composition of Boards of Studies at various Departments

Sl. No.	Person	Designation
1.	Head of the Department	Chairman
2.	Faculty – Specialization 1	Member
3.	Faculty – Specialization 2	Member
4.	Faculty – Specialization 3	Member
5.	Faculty – Specialization 4	Member
6.	Faculty – Specialization 5	Member
7.	Expert 1	Member
8.	Expert 2	Member
9.	VTU Nominee	Member

10.	Industry – Placement	Member
11.	Alumni – Senior Person	Member
12.	Others: To be co-opted	Invitees

f) Board of Examiners (BOE)

Assessment and evaluation are an integral part of academic process. Given that the institute has adapted an innovative curriculum for the new batch of students, 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 autonomous system. It discharges the responsibility of conduction and overseeing both Continuous Internal Evaluation (CIE) and Semester End Examination (SEE), evaluation of student responses, publication of results, maintenance of all examination related documents and submission of periodic reports to higher and regulatory authorities. The organization structure of examination section is shown in Fig. 1. The examination section will coordinate with the Board of Examiners (BoE) of every department for the smooth conduction 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 improvement if needed.

BoE is responsible for the assessment and evaluation methods used in the scrutiny of CIE and SEE for their appropriateness to measure the learning outcomes expected of the course.

Composition of Boards of Examiners at various Departments

Sl. No.	Person	Designation
1.	Head of the Department	Chairman
2.	Faculty – Specialization 1	Member
3.	Faculty – Specialization 2	Member
4.	Faculty – Specialization 3	Member
5.	External Expert 1	Member
6.	External Expert 2	Member
7.	Invitee	Member

g) Other Committees

Apart from the above statutory committees, the following statutory committees are also in place as per AICTE Norms.

1. Committee for AICTE Activity Point Program
2. Anti-ragging Committee
3. College Internal Complaint Committee (CICC)

4. Central Monitoring Cum Counselling Committee
5. Disability Resource Cell
6. Ek Bharath Shresta Bharath Committee
7. First year Induction Program Committee
8. Gender Championship Cell
9. Grievance Redressal Cell
10. Internal Quality Assurance Cell (IQAC)
11. SC/ST Cell
12. Unnath Bharath Abhiyan
13. Women Empowerment Cell (WEC)

10.1.2.2 Service Rules and Procedures: Rules /Regulations on the roles and responsibility of Faculty Members are clearly defined and approved in the 19th BOG dated: 22.08.2014. The same is made available on the website of BMSIT&M :

<https://bmsit.ac.in/public/assets/pdf/proceedings/MANAGEMENT%20NORMS%20FOR%20STAFF.pdf>

10.1.2.3 Recruitment and Promotion Policies

- a) 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 twice in a year at the beginning of each of the semesters. The Chairman, BOG, will serve as the Chairman of the BOA and Principal, BMSIT&M as the Member Secretary, and invited subject experts, VTU and AICTE 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.

- b) Promotions:** After the implementation of 6th pay commission scales, the AICTE prescribed a system called 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. There are five stages for the career advancement of teachers (Stage-1 to Stage-5).

The following are the list of the faculty members promoted under CAS System

List of Eligible Faculty Under CAS-2018					
Computer of Science and Engineering					
Sl. No.	Name	Promoted to the stage	Designation	Present AGP	Sanctioned AGP
1	Dr. Anil G N	S5	Professor	9000	10000
Mechanical Engineering					
1	Dr. Satish Kumar K M	S5	Professor	9000	10000
2	Dr. Suresh N	S5	Professor	9000	10000
Electronics and Telecommunication Engineering					
1	Dr. Seema Singh	S5	Professor	9000	10000
Information Science and Engineering					
1	Dr. Pushpa S K	S5	Professor	9000	10000
Electronics and Communication Engineering					
1	Dr. Ambika R	S5	Professor	9000	10000
2	Dr. Mala C S	S5	Professor	9000	10000
Mathematics					
1	Dr. Jojoy Joseph Idicula	S5	Professor	9000	10000
2	Dr. Chethan A S	S5	Professor	9000	10000
3	Dr. Karabi Sikdar	S5	Professor	9000	10000
TOTAL: 10					

List of Eligible Faculty Under CAS-Assessment Year 2020-21					
Computer of Science and Engineering					
Sl. No.	Name	Promoted to the stage	Designation	Present AGP	Sanctioned AGP
1	Ashwini N	S2	Assistant Professor	6000.00	7000.00
2	Muneswara M S	S2	Assistant Professor	6000.00	7000.00
3	Shruthi J	S3	Assistant Professor	6000.00	8000.00
4	Vishakha Yadav	S2	Assistant Professor	6000.00	7000.00
5	Durga Devi	S2	Assistant Professor	6000.00	7000.00
6	Vidya R	S2	Assistant Professor	6000.00	7000.00
7	Mari Kirthima	S2	Assistant Professor	6000.00	7000.00
8	Ambika G N	S2	Assistant Professor	6000.00	7000.00
9	Rajesh N V	S2	Assistant Professor	6000.00	7000.00
10	Dr. Radhika K R	S2	Assistant Professor	6000.00	7000.00
Electronics and Communication Engineering					
1	Rashmi N	S2	Assistant Professor	6000.00	7000.00
2	Jagannatha K B	S2	Assistant Professor	6000.00	7000.00
3	Sabina R	S2	Assistant Professor	6000.00	7000.00
Electronics and Telecommunication Engineering					
1	Banuprakash R	S3	Assistant Professor	6000.00	8000.00
2	Siddiq Iqbal	S2	Assistant Professor	6000.00	7000.00
3	Saritha I G	S2	Assistant Professor	6000.00	7000.00
4	Thejaswini S	S2	Assistant Professor	6000.00	7000.00
5	Sowmyashree M S	S2	Assistant Professor	6000.00	7000.00
6	Sumathi M S	S2	Assistant Professor	6000.00	7000.00
Information Science and Engineering					
1	Gireesh Babu	S2	Assistant Professor	6000.00	7000.00
2	Shanthi D L	S2	Assistant Professor	6000.00	7000.00
Electrical and Electronics Engineering					
1	Manjunath Babu	S2	Assistant Professor	6000.00	7000.00
Physics					
1	Yashaswini	S2	Assistant Professor	6000.00	7000.00
2	Dr. Daruka Prasad	S2	Assistant Professor	6000.00	7000.00
Master of Computer Applications					
1	Dwarakanath G. V	S2	Assistant Professor	6000.00	7000.00
2	Mutyala Sridevi	S2	Assistant Professor	6000.00	7000.00
3	Dr. Sudarsanam. P	S2	Assistant Professor	6000.00	7000.00
Chemistry					
1	Bincy Praveen	S2	Assistant Professor	6000.00	7000.00
TOTAL: 28					

List of Eligible Faculty Under CAS-2021-22					
Computer of Science and Engineering					
Sl. No.	Name	Promoted to the stage	Designation	Present AGP	Sanctioned AGP
1	Anand R	S2	Assistant Professor	6000.00	7000.00
Mechanical Engineering					
1	Madhu M C	S2	Assistant Professor	6000.00	7000.00
2	Dr. Keerthi Kumar N	S2	Assistant Professor	6000.00	7000.00
Civil Engineering					
1	Shobha R	S2	Assistant Professor	6000.00	7000.00
Electronics and Telecommunication Engineering					
1	Raghunandan G H	S2	Assistant Professor	6000.00	7000.00
Information Science and Engineering					
1	Swetha M S	S2	Assistant Professor	6000.00	7000.00
Electrical and Electronics Engineering					
1	Ozwin Dominic Dsouza	S2	Assistant Professor	6000.00	7000.00
2	Dr. Prashanth N A	S2	Assistant Professor	6000.00	7000.00
3	Shilpa G	S2	Assistant Professor	6000.00	7000.00
4	Babu Naik G	S2	Assistant Professor	6000.00	7000.00
Physics					
1	Ashwini K R	S2	Assistant Professor	6000.00	7000.00
Master of Computer Applications					
1	Shivakumara T	S2	Assistant Professor	6000.00	7000.00
Chemistry					
1	Swetha G A	S2	Assistant Professor	6000.00	7000.00
TOTAL: 13					

List of Eligible Faculty Under CAS - 2022-23					
SI No	Name	Department	Stage Promoted	Present AGP	New AGP
1.	Mrs. Mahalakshmi S	ISE	Assistant Professor S1-S3	6000.00	8000.00
2.	Dr. Vinutha K	ISE	Assistant Professor S1-S2	6000.00	7000.00
3.	Dr. Kiran M D	ME	Assistant Professor SI-52	6000.00	7000.00
4.	Dr. Vinod B R	CV	Assistant Professor SI-52	6000.00	7000.00
5.	Mrs. Archana K	CV	Assistant Professor SI-52	6000.00	7000.00

10.1.3 Decentralization of working and grievance redressal mechanism (10)

a) Decentralization in working: The Management of BMST&M believes in delegating authority and responsibility among its officials involved in decision making at various capacities. At the institute level, Principal is the head of the institution to look after the day-to-day functions. The faculty members are actively involved in decision making process. As part of the Department Staff Council, the faculty members provide their inputs on academic related matters. All the Heads of the departments are members of the Council of HoDs with the Principal as its Chairman. Many senior and capable faculty members occupy pivotal administrative positions like Vice-Principal, Dean Academics, Dean Student Welfare, Dean External Relations, Placement Officer, Hostel Wardens, Controller of Examination, etc. and are also members of various decision-making administrative bodies. Their suggestions are valued and considered.

The faculty members are also deputed to various administrative training programs to enable them to take-up administrative responsibilities which the management might like to entrust.

Sl. No.	Name of the Faculty Members	Role
1	Dr. Anil G N, Prof, Dept of CSE	Vice - Principal
2	Dr. Satishkumar K M, Prof, Dept of ME	Dean, Academics
3	Dr. Ambika R, Prof, Dept. of ECE	Dean, Student Welfare
4	Dr. P Ganesh, Prof., MCA	Dean, Planning and Development
5	Dr. T N Manjunath, Prof, Dept of ISE	Dean, Career Guidance

6	Dr. Seema Singh, Prof, Dept of ETE	Dean, Innovation and Entrepreneurship
7	Dr. Bharathi Malakreddy A, Prof. Dept. of AI&ML	Head, Research and Consultancy
8	Dr. M C Hanumantharaju, Prof, Dept of ECE	Controller of Examinations

There are 65 committees working effectively under these key functionaries.

b) Grievance Redressal System

i) Grievance Redressal Cell

1. Date of Formation : Originally constituted - 08/03/2011, Reconstituted - 07/08/2017
2. Statutory Body : AICTE
3. Coordinators :

Dr. Mohan Babu G.N. Principal	Chairman
Dr. Thippeswamy G, Professor	Coordinator
Concerned Head/s of departments	Members
Mr. Devendra Kumar S AO	Member

4. Frequency of Meeting: Based on Need
5. 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:

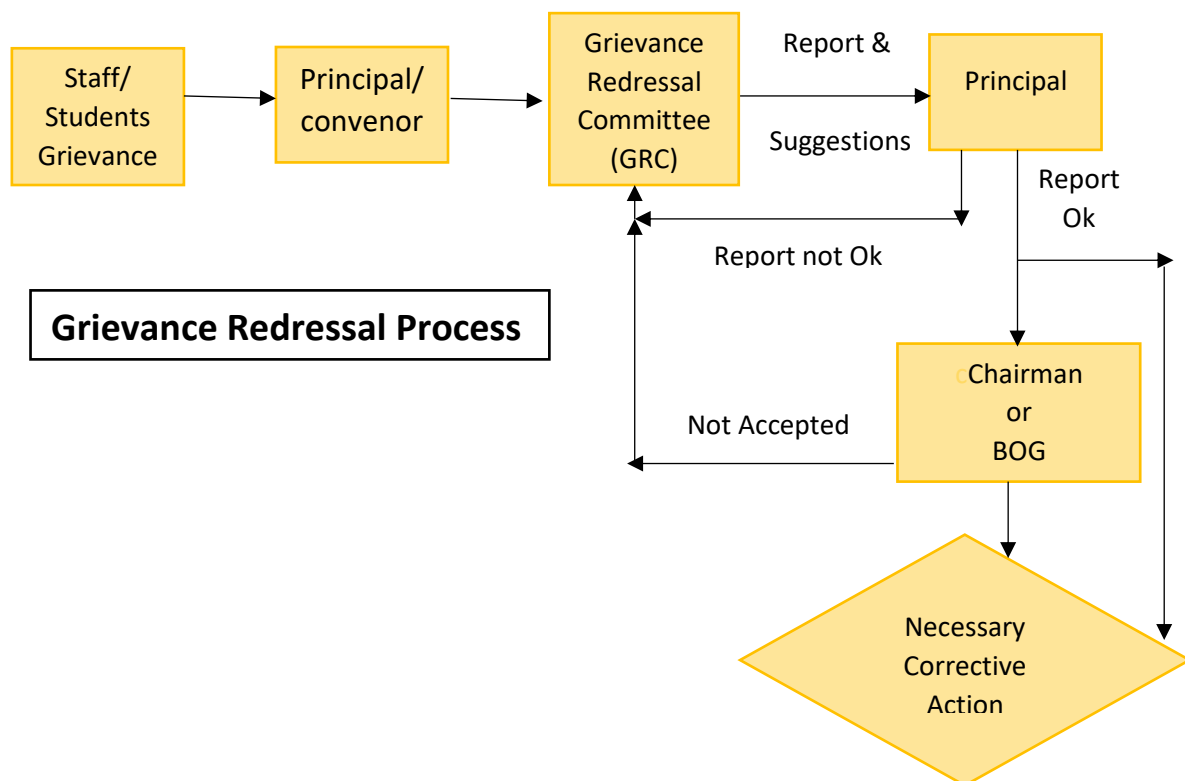
- The term of the committee is for two years and shall continue until reconstituted.
- Meeting will be conducted as the need arises
- Quorum for hearing shall be one of the members of the constituted committee.

Roles and Responsibilities:

- 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:

- 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) Anti-Ragging Committee

1. Date of Formation : 2013
2. Statutory body : AICTE
3. Frequency of Meeting: Monthly once. Any incidents reported / noticed will be addressed separately in the hostel / college level.

4. 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.

5. Anti-ragging Monitoring Committee:

- | | |
|---|---------------------|
| a. Dr. Mohan Babu G N – Principal | : Chief Coordinator |
| b. Dr. Anil G N – Vice Principal | : Chief Coordinator |
| c. Dr. Raju Hazare – Chief Warden | : Coordinator |
| d. Mr. Devendra Kumar S – AO | : Member |
| e. Dr. Jagannatha K B – Deputy Warden | : Member |
| f. Dr. Daruka Prasad B – Deputy Warden | : Member |
| g. Dr. Thejaswini S. Shilpa – Deputy Warden,
Girls' hostel | : Member |
| h. Mr. T N Praveen – I/c of Day Scholars | : Member |

6. Responsibilities:

- To monitor the activities of the anti-ragging squads and regarding the incidents of ragging, the problems faced by wardens and other officials, etc.
- 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.
- 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.
- The Monitoring Committee shall also review the efforts made by institutions to publicize anti-ragging measures, soliciting of affidavits from parents/guardians and from students, each academic year, to abstain from ragging activities.

iii) Anti-Ragging Squad

This Committee is nominated by the Head of The Institution representing various members of the Campus Community like faculty, hostel wardens, technical staff and other administrative staff. Dean student welfare will serve as the main coordinator.

Responsibilities:

- To maintain vigil, oversight and patrolling functions and shall remain mobile, alert and active at all time
- To make surprise visit to the on 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. Date of Formation: 13th Aug 2016
2. Statutory body: AICTE
3. Coordinators:
 - Dr. Brinda K Varma, Advocate, External Member
 - Dr. Geeta Patil, Associate Professor, Member
 - Mrs. Shilpa G, Assistant Professor, Member
 - Smt. Shakuntala J, Clerk, Member
 - Ms. Shailvathi. R Clerk, Member
 - Mr. Vasappa, Registrar, Member
 - Student members
 - Frequency of Meeting: 6 Months
4. 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 women employees and students and Redressal of Grievances in Technical Institutions), Internal Complaint Committee (ICC) has been formed in BMSIT&M to prevent sexual harassment of woman at workplace.

Internal Complaint Committee sensitizes the female faculty members and students on the prevention and prohibition of sexual harassment of woman at workplace. According to the Supreme Court's order, Sexual Harassment if any unwelcome:

- Physical contact and advances
- Demand or request for sexual favours
- Sexually coloured remarks
- Display of pornographic content in any form
- Any other unwelcome physical, verbal and non-verbal conduct of a sexual nature.

- In keeping with the Supreme Court guidelines, BMSIT&M established ICC against sexual harassment and atrocities against women at the workplace.

5. Roles and Responsibilities:

- To promote awareness about sexual harassment through educational initiatives that encourages and fosters a dignified and safe environment for women on campus.
- To provide a neutral, confidential, and supportive environment for the campus community who may have been sexually harassed.
- To ensure fair and timely resolution of complaints about sexual harassment.
- To provide information regarding counselling and support services on the campus.
- To ensure that students, faculty and staff are provided with current and comprehensive information on sexual harassment and assault.

10.1.4 Delegation of Financial Powers (10)

All the financial transactions are strictly monitored and governed by the financial powers.

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 Principal jointly with the Vice Principal, can sign the cheques up to Rs.3,00,000/- and the cheques for payments above Rs.3,00,000/- are to be signed jointly by the Chairman and the Principal. All the matters related to finance are routed through the Senior Manager (Finance-1 and Director Admin) before being placed for approval of the Chairman, BOG.

A few samples of utilization of financial powers are shown below for the last three years:

Demonstration of the utilisation of financial powers during each year 2019-20					
S. No	Nature of Work	Value	Amount in RS	Sanctioned /Approved By	Reference
1	Cheque No: 073072 Being supply, installation, testing & commissioning of 5 KVA online UPS one number and with batteries installed at 3rd floor ETE Library room	Less than 2,00,000	1,10,000	Principal	Debit Voucher 1028 Dtd 18.10.2019 dtd06.02.2020

2	Cheque No: 075245 Being procurement of Installing Panasonic KXNS300 Hybrid Exchange & IP Phones	More than 2,00,000	4,59,269	Chairman	Debit Voucher No 247 dtd06.02.2020
Demonstration of the utilisation of financial powers during each year 2020-21					
S. No	Nature of Work	Value	Amount in RS	Sanctioned /Approved By	Reference
1	Cheque No: 077828 being supply of 12v ,65AH, SMF Exide battery at MCA dept.	Less than 2,00,000	1,58,537	Principal	Debit Voucher No 531 Dtd 23.10.2020
2	Cheque No. 079540 being providing 15 -Nos of Casio projector and accessories vide invoice no: SLNC/74/20-21 Dt: 18.12.2020	More than 2,00,000	8,60,000	Chairman	Debit Voucher No 0151 Dtd 04.02.2021

Demonstration of the utilisation of financial powers during each year 2021-22					
Sl. No.	Nature of Work	Value	Amount in RS	Sanctioned /Approved By	Ref.
1	Ch No. 295696 / being procurement of furniture at Humanities & social sciences section. Inv. No. 106 dt. 9.11.2021.	Less than 2,00,000	1,52,275/-	Principal	Debit Voucher No 803 Dtd 01.12.2021
2	Ch No :917753 Supply of 70 nos computer systems (i5 35nos & i7 35nos) to MCA & ECE dept Invoice No :106694/ ITBR2122 Dtd:10.03.2022	More than 2,00,000	38,86,082/-	Chairman	Debit Voucher No 00209 Dtd 30 .03.2022

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Demonstration of the utilisation of financial powers during each year 2022-23

Sl. No.	Nature of Work	Value	Amount in RS	Sanctioned /Approved By	Ref.
1	Ch. No. 876484 / T/w supply of electrical items at maintenance works at BMSIT&M campus vide Inv. No. 1134 / 16.11.2022.	Less Than 3,00,000	71,643/-	Principal	Debit Voucher No 1256 Dtd 12.12.2022
2	Ch. No. 689286: Towards Procurement of 75nos desktops HP Elite Tower Desktop 260W -Base unit RCTO12 Gen i7 & I5 Invoice No:113398/ ITBR2223, Dtd:08.11.2022	More Than 3,00,000	54,76,721/-	Chairman	Debit Voucher No 00160 Dtd 06.12.2022

Demonstration of the utilization of financial powers during each year 2023-24

Sl. No.	Nature of Work	Value	Amount in RS	Sanctioned /Approved By	Ref.
1	Ch No :906546 Payment t/w replacement of chair hand rest, roller, blinds and false ceiling at 1st floor seminar hall academic block Invoice No :682 Dtd :04.09.2023 Rs 2,80,000/-(sd @5% - 11,866/- and TDS @1% - 2,373/-)	Less Than 3,00,000	2,65,761/-	Principal	Debit Voucher No.871 Dtd: 26.09.2023
2	Ch No :285800 Towards 6th RA bill related to construction of 4th floor civil lab block at BMSIT&M Campus Invoice NO :14/2023-24 Dtd:17.07.2023 Rs 96,77,028/-(SD@5%- 4,80,056/-TDS@2%- 1,92,023/-, Mobilisation Adv-9,60,113/-, Elec- 20,112/-)	More Than 3,00,000	96,77,028/-	Chairman	Debit Voucher No 00066 Dtd: 27.07.2023

Heads of the Departments are provided with interest amount extended with advances for miscellaneous / petty expenses on a case-by-case basis for specific purposes. All payments are made predominantly by cheques / fund transfer hence the institute does not have any cash transactions. All the receipts are through Indian Bank whose branch is available within the campus.

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.

10.1.5 Transparency and availability of correct/unambiguous information in public domain (5)

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>.

Through the website: <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> and Mandatory Disclosure are also made available on the website: <https://bmsit.ac.in/public/assets/pdf/MandatoryDisclosure07-10-2020.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 internet.

10.2 Budget Allocation Utilization and Public Accounting at Institute Level (30)

Table B10.2a-1: CFY 2023-24*

				Amount in Lakhs			
Total Income Rs. 7225.03				Actual Expenditure Rs. 3615.37		Total No of Students 3924	
Fee	Govt	Grants	*Other Sources	Recurring including Salaries	Non-Recurring	Special Projects / Any other Specify	Expenditure per student
6454.78	-	3.90	766.35	2537.45	1077.92	-	0.92

* On going year expenses and income taken up to 03/10/2023.

Table B10.2a-2: CFYm1 2022-23

		Amount in Lakhs	
Total Income Rs. 6274.32		Actual Expenditure Rs. 7313.26	Total No of Students 3919

Fee	Govt	Grants	*Other Sources	Recurring including Salaries	Non-Recurring	Special Projects / Any other Specify	Expenditure per student
5260.68	-	36.47	977.17	5424.45	1888.81	-	1.87

Table B10.2a-3 CFYm2 2021-22

Amount in Lakhs

Total Income Rs. 5757.71				Actual Expenditure Rs. 5665.16		Total No of Students 3859	
Fee	Govt	Grants	*Other Sources	Recurring including Salaries	Non-Recurring	Special Projects / Any other Specify	Expenditure per student
5040.06	-	20.61	697.04	4513.76	1151.40	-	1.47

Table B10.2a-4 CFYm3 2020-21

Amount in Lakhs

Total Income Rs. 5123.62 (1)				Actual Expenditure Rs. 4519.89		Total No of Students 3751	
Fee	Govt	Grants	*Other Sources	Recurring including Salaries	Non-Recurring	Special Projects / Any other Specify	Expenditure per student
4515.82	-	15.57	592.22	3814.86	705.03	-	1.21 (0)

* Other Sources include Miscellaneous Fees, Transportation Fees, Interest on FDs, Registration fees of Workshops and FDPs

Table B10.2b Summary of Institute Expenses

Amount in Lakhs

Items	Budgeted Expense 2023-24	*Actual Expense 2023-24	Budgeted Expense 2022-23	Actual Expense 2022-23	Budgeted Expense 2021-22	Actual Expense 2021-22	Budgeted Expense 2020-21	Actual Expense 2020-21
Infrastructure Built-Up	1220.96	836.35	920.12	1468.51	904.07	751.20	713.00	527.16
Software	17.00	16.85	17.00	16.85	26.00	24.90	16.00	15.93
Library	45.40	0.99	45.32	32.13	31.06	20.81	21.41	16.09
Laboratory equipment	385.29	223.73	472.19	371.31	370.47	354.50	238.66	145.84
Teaching and non-teaching staff salary	4688.45	2174.75	4065.76	3870.83	3164.00	3275.54	2815.60	2772.64
Maintenance and spares	815.33	247.63	560.55	1143.06	628.36	1083.78	633.48	888.73
Lab Consumables	292.26	4.70	288.83	225.49	42.17	28.27	27.58	17.17
Training & Travel	12.50	19.85	88.88	28.25	44.97	15.80	86.00	36.29
Miscellaneous Expenses*(College Transport)	149.95	34.68	147.25	110.82	124.00	66.09	102.83	52.88
Others Specify (Medical)	41.66	51.50	39.91	39.19	34.85	38.59	32.72	35.90

Insurance for students)								
Research Expenses (including PBL)	30.00	4.32	41.00	6.81	14.50	5.69	16.40	11.24
Total	7698.80	3615.37 (5)	6686.80 (1)	7313.26 (5)	5384.45	5665.16 (7)	4703.68	4519.88 (7)

* On going year expenses and income taken up to 03/10/2023.

10.2.1 Adequacy of budget allocation (10)

The budget for the institute is estimated and prepared sufficiently in advance after collecting the requirements from all the departments. The requirements are reviewed by the Principal and the Finance Officer before placing the draft budget before the Board of Governors for approval. Normally the budget for the next financial year is approved in the BOG meeting held in the month of March.

The budget is being prepared based on the developmental activities proposed, new programs proposed, staff requirement, increase in DA rates, escalation of prices of all materials and service.

The Total Expenses for the Financial years 2023-24* & 2020-2021 are within the estimated/approved budgets and hence the budget allocation has been quite adequate.

The Total Expenses for the Financial years 2021-22 and 2022-23 have exceeded the budget as new infrastructure were added in the department of CSE, ECE, ETE, EEE, CV, ISE and ME to accommodate increase in intake. The excess of expenses has been approved by competent authority.

10.2.2 Utilization of allocated funds (15)

Table showing utilization of Budget (Institute)

Financial Year	Budgeted	Actual Expenditure	Percentage of Utilization (%)
2023-24*	7698.80	3615.37	47%
2022-23	6686.80	7313.26	109%
2021-22	5384.45	5665.16	105%
2020-21	4703.68	4519.88	96%

* On going year expenses and income taken up to 03/10/2023.

Though adequate budget was allocated, the expenditure on all the aspects have been strictly governed by the justifications and procedures laid down by the management. The budget utilization with respect to establishment charges (Salary component of the staff) have been quite satisfactory and there is an increase in the year 2023-24* due to revision of pay scale (6th pay to 7th pay scale) & in 2021-22 due to increase in DA whereas the utilization towards

capital expenditure like buildings and infrastructure has exceeded the budget in 2022-23 due to new infrastructure being added in the department of CSE, ECE, ETE, EEE, CV and ME & ISE to accommodate increase in intake and requirements as per syllabus.

10.2.3 Availability of the audited Statements on the Institute's website (5)

Yes, the audited balance sheet is made available on the website:
<https://bmsit.ac.in/proceedings>

10.3 Budget Allocation and Utilization (30)

For the Department of ISE

Table B .10. 3 -1 CFY 2023-24*

Amount in Lakhs

Total Budget Rs. 1587.66		Actual Expenditure Rs. 747.40		Total No of Students 896
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per student
344.11	1243.55	222.85	524.55	0.83

* On going year expenses and income taken up to 03/10/2023.

Table B .10. 3 -2 CFYm1 2022-23

Amount in Lakhs

Total Budget Rs. 1395.67		Actual Expenditure Rs. 1376.28		Total No of Students 852
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per student
303.61	1092.06	367.57	1008.71	1.62

Table B .10. 3 -3 CFYm2 2021-22

Amount in Lakhs

Total Budget Rs. 1080.10		Actual Expenditure Rs. 937.64		Total No of Students 793
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per student
267.12	812.98	228.13	709.51	1.18

Table B .10. 3 -4 CFYm3 2020-21

Amount in Lakhs

Total Budget Rs 598.61		Actual Expenditure Rs. 621.56		Total No of Students 654
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per student
135.55	463.06	109.30	512.25	0.95

Table B .10. 3 -b Summary of ISE Expenses

Amount in Lakhs

Items	Budgeted Expense 2023-24	*Actual Expense 2023-24	Budgeted Expense 2022-23	Actual Expense 2022-23	Budgeted Expense 2021-22	Actual Expense 2021-22	Budgeted Expense 2020-21	Actual Expense 2020-21
Infrastructure Built-Up	251.79	172.91	192.05	311.99	181.36	154.37	99.66	91.94
Software	3.51	3.48	3.55	1.82	5.22	5.12	2.24	2.78
Library	9.36	0.20	9.46	6.99	6.23	4.28	2.99	2.81
Laboratory equipment	79.46	46.25	98.55	46.78	74.32	64.37	30.66	11.78
Teaching and non-teaching staff salary	966.86	449.60	848.60	675.21	634.70	455.14	336.51	331.37
Maintenance and spares	168.14	51.20	117.00	246.66	126.05	222.71	88.55	154.99
Lab Consumables	60.27	0.97	60.28	48.60	8.46	5.81	3.85	3.00
Training & Travel	2.58	4.10	18.55	4.89	9.02	3.25	12.02	6.33
Miscellaneous Expenses*(College Transport)	30.92	7.17	30.73	24.10	24.87	13.58	14.37	9.22
Others Specify (Medical Insurance for students)	8.59	10.57	8.33	8.52	6.96	7.93	5.47	6.00
Research Expenses (including PBL)	6.19	0.93	8.56	0.73	2.91	1.10	2.29	1.34
Total	1587.66 (7)	747.40 (38)	1395.67 (6)	1376.28 (9)	1080.10	937.64 (6)	598.61	621.56

* On going year expenses and income taken up to 03/10/2023.

10.3.1 Adequacy of budget allocation (10)**Adequacy of Budget for ISE**

The budget for the department is estimated and prepared sufficiently in advance after collecting the requirements from all the laboratories keeping in view the change in syllabus, addition proposed, increase in intake if any etc. The requirements are reviewed by the HOD, Principal and then by the Senior Finance Officer before placing the draft budget before the Board of Governors for approval. Normally the budget for the next financial year is approved in the BOG meeting held in the month of March.

The Total Expenses for the Financial year 2023-24*, 2022-23 & 2021-22 are within the estimated/approved budgets and hence the budget allocation has been quite adequate.

The Total Expense for the Financial year 2020-21 has exceeded the budget as Maintenance & Salaries have increased in the department of ISE to accommodate increase in student & faculty strength and requirement of equipment as per university syllabus.

The management has sanctioned all the finance needed for recurring and nonrecurring expenditure for the department. No room was given to compromise on the requirements of equipment / stipulated by the University syllabus.

10.3.2 Utilization of allocated funds in ISE (20)

Table showing utilization of Budget of ISE

Financial Year	Budgeted Expenditure	Actual Expenditure	Percentage Of Utilization (%)
2023-24*	1587.66	747.40	47.08%
2022-23	1395.67	1376.28	98.61%
2021-22	1080.10	937.64	86.81%
2020-21	598.61	621.56	103.83%

Though adequate budget was allocated, the expenditure on all the aspects have been strictly governed by the justifications and procedures laid down by the management. The utilization towards revenue expenditure has been quite satisfactory.

10.4 Library and Internet (20)

Zero Deficiency Report: Yes, absolutely the institution has received zero deficiency for all the assessment years.

➤ Relevance of available Learning Resources including E-Resources:

Library Area:

- The library has a total plinth area of 1712 sq. mt.
- It is housed in BSN block on the Ground and First Floor.
- The ground floor is occupied with Stack area, Circulation Counter, OPAC Systems, Photocopying section, Processing section, server room, Data Handbook section and Librarian's Chamber.

- The first floor is occupied with Reference stack area with provision for reading, Discussion rooms, Bound Volume section, Digital Library, Reference Desk, Learned Journals, Technical and General Magazines section, Newspaper Reading area, Personal Reading area and Internet browsing centre.

Salient Features of the Library:

- ✓ The library has been automated right from day one.
- ✓ All the items in the library have been barcoded.
- ✓ The library uses one of the world-famous Open-Source Library Integrated Management Software - **Koha 21.11.05 version**.
- ✓ For e-book management and conversion, we are using another Open-Source Software – **Calibre 6.11.0 version**
- ✓ The library resources have been organized using Dewey Decimal Classification (DDC) 22/e.
- ✓ The library website can be accessed on the internet using the web address <http://14.97.166.101> with any device like Mobile, Tablet, Laptop etc., that supports web browsing.
- ✓ Email alerts are being sent to checkouts, check-ins, advance overdue notice, fine receipts etc.
- ✓ E-resources are available on remote access also,
 - using device authentication to access IEEE packages (subscribed by the institution)
 - using login credentials to access other packages such as Elsevier, Springer, Taylor & Francis, ProQuest, Emerald etc.

10.4.1 Quality of Learning Resources (Hard/Soft) (10)

- Books to the library are added giving first preference to the Text and Reference Books given in the prescribed syllabi.
- Current editions of the books are being procured on demand from faculty, research scholars and students.
- Before the beginning of the semester, the library consolidates the list of titles recommended in the prescribed syllabi (VTU and Autonomous) for the ensuing semesters and the same would be sent to all the concerned branches along with the availability of number of copies and the approximate number of students from one or more number of branches studying the same titles. The list will be circulated among the faculty of each department for further review and recommendation of any other titles required for teaching, learning, projects, and the research work undertaken. Finally, dully approved list from the concerned HoDs will be considered for processing.

- We concentrate on procuring only books published by standard publishers such as McGraw Hill, Pearson, CRC, Springer, CUP etc. We do not encourage students to Digests / Scanners etc.
- Now-a-days, preference is given to e-books rather than print books.

Library Infrastructure:

Period	Books		Journals		e-Books
	Titles	Volumes	Print	Online	
Grand Total as on 03rd Oct 2023	14,917	62,214	102	8,668	42,975
01-8-2023 to 03-10-2023	198	802	102	8,668	42,975
01-8-2022 to 31-07-2023	351	3541	102	8,138	42,975
01-8-2021 to 31-07-2022	674	1,736	97	7,544	14,500
01-8-2020 to 31-07-2021	270	303	97	3,644	14,500
01-8-2019 to 31-07-2020	404	2,215	97	1,893	14,500

e-Resources:

Particulars	Packages	No of Titles
e-Books Subscription from BMSIT&M	Cambridge University Press	94
	Pearson	80
	ProQuest LLC	25,000
e-Books VTU e-Consortium	Taylor and Francis	4,950
	Packt	5,002
	McGraw Hill	505
	Elsevier/Science Direct	436
	New Age International	220
	Mint Books	3,469
	Others	3,219
Total		42,975

Particulars	Packages	No of Titles
e-Journals Subscription from BMSIT&M	IEEE ASPP & POP All (Subscription from BMSIT&M @ ₹10,17,845/- for Calendar year 2023)	1,983
e-Journals VTU e-Consortium	Springer	690
	Taylor and Francis	585
	Emerald	212
	ProQuest (VTU Consortium)	4,900
	Elsevier Science Direct	298
	Knimbus (Remote Access Service)	1,00,000+
Total		8,668

Particulars	Packages	No of Titles
Others	ProQuest – Case Studies & Business Cases	15,000
	ProQuest – Dissertations	55,000
	ProQuest – News	100
	ProQuest – Videos	21,000
	ProQuest – Magazines	2,500
	ProQuest – Scholarly Journals	2,600
	ProQuest – Market, Country & Industry Reports	1,000
	NPTEL – Videos	29,774
	NPTEL – Web Courses	15,928
Total		1,42,902

Budget & its utilization_ Books:

Period	Sanctioned budget for Books in Lakhs UG & PG	Utilization in Lakhs
01-8-2022 to 31-07-2023	₹20.50	₹12.41
01-8-2021 to 31-07-2022	₹11.43	₹12.92
01-8-2020 to 31-07-2021	₹10.01	₹0.15
01-8-2019 to 31-07-2020	₹13.00	₹11.29
01-8-2018 to 31-07-2019	₹25.00	₹18.75

Budget & its utilization_ Print Journals:

Period	Sanctioned budget for Print Journals in Lakhs UG & PG	Utilization in Lakhs
01-8-2022 to 31-07-2023	₹04.67	₹04.75
01-8-2021 to 31-07-2022	₹03.58	₹04.17
01-8-2020 to 31-07-2021	₹05.00	₹04.12
01-8-2019 to 31-07-2020	₹04.30	₹04.11
01-8-2018 to 31-07-2019	₹03.85	₹04.08

e-books & Online Journals:

Period	Subscription Charges	Particulars	Amount in Lakhs
01-8-2022 to 31-07-2023	₹02 Lakh	VTU e-consortium Annual Membership fee	₹02.00
		e-Consortium fee from Students & Research Scholars	₹21.27
		Subscription to IEEE ASPP & POP-ALL	₹10.17
		Subscription to ProQuest LLC e-Books (MBA)	₹09.75
01-8-2021 to 31-07-2022	₹02 Lakh	VTU e-consortium Annual Membership fee	₹02.00
		e-Consortium fee from Students & Research Scholars	₹26.73
		Subscription to IEEEASPP&POP-ALL	₹09.03
01-8-2020 to 31-07-2021	₹01 Lakh	VTU e-consortium Annual Membership fee	₹01.00
		e-Consortium fee from Students & Research Scholars	₹29.40
		Subscription to IEEE ASPP & POP-ALL	₹11.69
01-8-2019 to 31-07-2020	₹01 Lakh	VTU e-consortium Annual Membership fee	₹01.00
		e-Consortium fee from Students & Research Scholars	₹24.61
		Subscription to IEEE–IEL Online	₹07.14
01-8-2018 to 31-07-2019	₹01 Lakh	VTU e-consortium Annual Membership fee	₹01.00
		e-Consortium fee from Students & Research Scholars	₹20.43

Library Usage Circulation, Reference Section & e-Resources:

Period	Circulation Transactions Average per day	Reference Visitors Average per day	Online Resources
01-8-2022 to 31-07-2023	136	196	23,131
01-8-2021 to 31-07-2022	154	138	19,106
01-8-2020 to 31-07-2021	65	68	15,137
01-8-2019 to 31-07-2020	215	233	18,650
1-08-2018 to 31-07-2019	306	133	12,086

➤ Accessibility to Students:

- Student can access the library website on <http://172.16.0.40> which is available on intranet and on <http://14.97.166.101> on the internet.
- [The library has adapted open access to its collection.](#)
- Online Public Access Catalogue (OPAC) systems are available in the library which can be used by the users to check the availability of any item they are interested in and its shelving location, which helps them reach the place of location.
- Following help guides have been provided adequately to locate the items of one's interest:
 - Shelf Numbers
 - Bay Guides
 - Shelf Lists
 - Title Lists
 - All the items have been shelved strictly according to DDC 22/e.
- Remote Access to e-resources can be obtained by:
 - Authenticating the device for IEEE Packages.
 - Login credentials are used to access e-resources provided by VTU e-consortium through MapMyAccess platform.

➤ **Support to students for self-learning activities**

- There are 20 multi-media systems with headset on the first floor BSN Block supported by dedicated Server – System x3650 M4 and a storage server with 15 TB dedicated to NPTEL resources.
- Library has procured 29,774 videos and 15,928 web courses from IIT Madras and have been archived in a dedicated storage device with 15TB and hosted on local area network that helps readers access the information on their mobile itself and, they can copy the resources from the library for viewing at their home.
- We have achieved **Do-It-Yourself** (DIY) series which helps students for self-learning.
- GMAT, GRE, GATE, TOFEL etc., books are available for students to take competitive exams.
- In addition to the above, the following services are being provided by the library:
 - Circulation including Book Bank and SC/ST Book Bank facility.

Borrower Privileges:

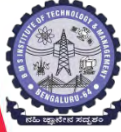
Category	Privileges	Duration
Faculties	8 books	1 month
Staff	02	
Student-General	3 books	2 weeks
Students-Book Bank	3+2 books	2weeks; 1 semester
Student- SC/ST	3+2 books	2weeks; 1 semester

- 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.
- VTU question bank hosted on library web site.
- Photocopying Service.
- Resource sharing (Inter-Library-Loan) through DELNET.
- Membership with British Council Library
-

10. 4.2 Internet Service Details (10)

BMSIT&M has high speed internet facility, and the details are as shown in the table:

Sl.No.	Particulars	Remarks
1.	Name of The Internet Service Provider	Tata Tele Business Services, Sify Technologies.
2.	Available Bandwidth	350 TTSL+350 SIFY= 700 Mbps.
3.	WI-FI Availability	180 Enterprise Level Access Points.
4.	Internet Access in Labs, Classrooms, Library and Office of the All the Departments:	Yes Available, through WI_FI And LAN (User Shared)
5.	Security arrangement Firewall, Content Antivirus, Intrusion Prevention	Fortinet Fortigate 500 EUTM (Firewall) For All Types of Filtering (Web Filter, Anti-Virus, Social Sites Etc.)



ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ
(ವಿ.ಟಿ.ಯು. ಅಡಿಯಲ್ಲಿನ ಸ್ವಾಯತ್ತ ಸಂಸ್ಥೆ)

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