#### Autonomous Institute, Affiliated to VTU

MINUTES OF THE MEETING OF NAAC IQAC CORE COMMITTEE HELD ON 31.08.2024



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#### NAAC-INTERNAL QUALITY ASSURANCE CELL [IQAC]

# MINUTES OF THE MEETING OF NAAC IQAC CORE COMMITTEE HELD ON 31.08.2024 [SATURDAY] AT 11.00 AM IN THE BOARD ROOM OF THE COLLEGE

1	Dr.Bheemsha Arya Principal, BMSCE	Chairperson
2	Wg Cdr R A Raghavan (R) Director, BMSET	Management Representative-Member
3	Mr.A J Jayaprakash Tata Consultancy Services	Representing Alumni-Member
4	Mr. N Muralikrishna Hewlett Packard Enterprise	Representing Industry-Member
5	Mr. Mohan Kumar, Wipro Limited, Bengaluru	Representing Employer-Member
6	Dr. D.Sheshachalam Vice Principal (Admn)	Member
7	Dr. L.Ravikumar Vice Principal (Academic)	Member
8	Dr. H.S.Jagadeesh, Director, ICD	Member
9	Dr. M.N.Mamatha, Dean (First Year BE)	Member
10	Dr. H.N.Suma Dean (Innovation)	Member
11	Dr. H.S.Guruprasad, Professor-IS	Member
12	Dr. B.Ravishankar, COE	Member
13	Dr. Abhishek Appaji, Head-R & D	Member
14	Dr.J.Sharana Basavaraj Dean-Placements	Member
15	Sri.N.Nagarathna Deputy Librarian	Member
16	Sri. N Praveen Technical Staff-ME	Member
17	Mr.Thousif Pasha Student-MBA	Student-Member
18	Mr.Ananta Naga Rajesh – Student-CSE	Student-Member
19	Ms. Stuthi Srisha Student-CSE(DS)	Student-Member
20	Dr.Mangala Keshava, Professor-CV	Advisor
21	Dr.Shambhavi B R, Chief Co-ordinator, IQAC	Convener

#### **Leave of Absence**

1	Dr.Tejaswini Ananth Kumar,	Representing Society - Member
	Founder, Adamya Chetana Foundation	
2	Lt.Shivakumaraswamy G V	Member
	Assistant Director, PED	

At the outset, Dr.Bheemsha Arya, Principal, BMSCE & Chairperson, IQAC extended a warm welcome to all the members of the IQAC Core Committee.

The Principal welcomed Wg Cdr R.A. Raghavan Director, BMSET, Dr.H.S.Jagadeesh, Director-ICD, distinguished external members representing Alumni, Industry, Employer, Deans, Professors, senior functionaries, unit-heads, student representatives and invitees.



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The Principal appreciated the tireless efforts of IQAC team headed by Dr.Shambhavi and well supported by all the stakeholders in achieving the pre-qualification by NAAC. The Principal also thanked Dr.Mangala Keshava, Advisor for her guidance and support towards IQAC activities at all times. The Principal expressed his deepest gratitude for the unwavering support and guidance provided by the management throughout the NAAC accreditation process. The Principal also solicited continued co-operation and support of the IQAC Core-Committee members to enable the institution successfully facilitate the ensuing peer team visit.

The Principal requested Dr.Shambhavi, Chief Co-ordinator, IQAC to take up the agenda for discussion and also present a summary of the IQAC activities/initiatives leading to the institution achieving the Pre-qualification in NAAC Cycle III accreditation

1. Confirmation of the minutes of the previous meeting of NAAC IQAC core committee held on 04.06.2022.

The Minutes of the previous meeting of the NAAC IQAC Core-Committee held on 04.06.2022 was confirmed. [Copy of the minutes of the previous meeting of NAAC IQAC Core Committee held on 04.06.2022 is attached in **Annexure I**].

2. Address by Principal, BMSCE – Summary of Key Initiatives and institutional accomplishments since the previous IQAC core committee meeting.

The Principal, BMSCE made a brief summary on the key accomplishments and strategic initiatives undertaken since the previous IQAC Core Committee Meeting held on 04.06.2022. [Please find attached herewith a copy of the principal's presentation, which provide overview of accomplishments and strategic initiatives during this period - **Annexure II**].



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3. A brief report by Chief Coordinator, IQAC regarding NAAC cycle III accreditation process, activities, submission of SSR, prequalification, grading and others.

The Chief Co-ordinator, IQAC made a detailed presentation regarding the NAAC Cycle III accreditation process, activities leading to pre-qualification and on the Pre-visit preparedness for NAAC Peer Team and other essential measures necessary for successful accreditation process. The Chief co-ordinator further informed that support of benign management and collaborative effects and dedication of all stakeholder have enabled the institution successfully achieve the pre-qualification. A copy of the presentation delivered by the Chief Coordinator, IQAC is provided in attachment - **Annexure III.** 

## 4. Compliance report on the previous NAAC peer team observations

The Chief Co-ordinator, IQAC informed the members that the Peer Team visited the institution on 23.03.2019 and 24.03.2019 and conducted assessment towards Cycle II accreditation of NAAC and provided few recommendations based on their evaluation. The institution needs to demonstrate during the ensuing visit how it has addressed these recommendations. Accordingly, the compliance report on the major observations has been prepared by the IQAC. A copy of the draft compliance report was shared with the members with a request to provide their suggestions for improvement if any through mail to <a href="majorage-iquality-iqua

#### 5. Role of IQAC core-committee during the peer team visit

The Chief Co-ordinator, IQAC informed the members that as mandated by NAAC, the Institution provided the following three probable dates for the peer team visit. The response from NAAC in this regard is awaited.

19-20, September 2024

03-04, October 2024

24-25, October 2024



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As per schedule prescribed by NAAC, the Peer team during the course of the visit, shall have interaction with the members of IQAC Core-Committee. The interaction is likely to happen on the first day of the Peer team visit. The Chief-Coordinator, IQAC informed the members that the interaction will typically focus on understanding the institution's quality initiatives, processes, and outcomes. Apart from ascertaining the role and functioning of IQAC, the interaction is likely to focus on the specific areas of expertise of each member. The active participation and support of all the members were solicited.

In the deliberations that followed, the following suggestions were shared.

- Mr. N Muralikrishna suggested integration of Sustainable Development Goals (SDGs) in the course content to equip the students to address the pressing challenges facing the world.
   Mr.Muralikrishna also suggested that the institute should collaborate with industries explore the possibility of securing joint patents.
- Sri.A.J.Jayaprakash opined on laying more emphasis on computational mathematical modelling and its applications.
- Sri.Praveen N suggested implementation of application-oriented mathematics as add on to regular curriculum for higher semesters
- Mr. Mohan Kumar stressed on the need to develop strong digital literacy skills among the MBA students.
- The Controller of Examinations [CoE] suggested to have a brief video to showcase the functioning and activities of IQAC.
- The student representatives opined to have more peer-to-peer learning opportunities.

Dr.D.Sheshachalam thanked the members for their presence and participation in the deliberations and sharing their valuable suggestions

Dr.L.Ravikumar, Vice-Principal [Academics] proposed the vote of thanks. He solicited the support and co-operation of all the IQAC Core-Committee members and stakeholders during the ensuing peer team visit and associated activities.

Chief-Coordinator, IQAC

Principal & Chairperson

#### Annexure-I

Minutes of the Meeting of the IQAC Core Committee held on 04.06.2022



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## MINUTES OF THE MEETING OF THE NAAC IQAC CORE COMMITTEE HELD ON 04.06.2022 AT 11.00 AM IN THE BOARD ROOM OF THE COLLEGE.

SNO	Name	Designation
1	Sri. Aviram Sharma	Trustee, BMSET
2	Dr.S.Muralidhara, Principal, BMSCE	Chairperson
3	Dr.Suresh Ramaswwamy Reddy Vice Principal (Admn.)	Member
4	Dr.Tejaswini Ananth Kumar, Founder Adamya Chetana Foundation	Representing Society-Member
5	Mr.A.J.Jayaprakash, Tata Consultancy Service	Representing Alumni-Member
6	Mr.N.Muralikrishna, HP Enterprises	Representing Industry-Member
7	Mr.Mohan Kumar, Wipro Limited, Bengaluru	Representing Employer-Member
8	Dr.R.V.Ranganath, Professor-CV	Invitee
9	Dr.B.Kanmani, Dean (Academic)	Member
10	Dr K.J.Rathan Raj, Dean (Student Affairs)	Member
11	Dr.M.N.Mamatha Dean (First Year BE)	Member
12	Dr.H.N.Suma, Dean (Innovation)	Member
13	Dr.D.Seshachalam, Professor-EC - Member	Member
14	Dr.H.S.Guruprasad, Professor-IS - Member	Member
15	Dr.M.V.Murugendrappa	Rep.COE-Member
16	Dr.Abhishek Appaji, ICRD	Member
17	Dr.J Sharana Basavaraj	Rep.PO-Member
18	Sri.N.Nagarathna	Rep-Librarian - Member
19	Dr.M.Shivarama Reddy, PED	Member
20	Sri.N.Praveen, Technical Staff-ME	Member
21	Mr. Sumedh D. Karanth, Student-ME	Student- Member
22	Mr. Mohit Raj Bhurat, Student-ME	Student-Member
23	Ms. Neetha S, Student-CE	Student-Member
24	Ms. Mamatha L, Student - CH	Student-Member
25	Dr.Mangala Keshava, Advisor-IQAC-NAAC	Advisor
26	Dr.Shambhavi B.R., Chief Co-ordinator	Convener

#### Leave of absence:

SNo	Name & Designation	Designation
1	Dr. Bheemsha Arya, Vice Principal (Aca)	Member
2	Dr. H.S.Jagadeesh, Director, ICD	Member

At the outset, Dr.S.Muralidhara, Principal & Chairperson, IQAC extended a warm welcome to Sri.Aviram Sharma, Hon'ble Trustee, BMSET and all the members & invitees of the newly constituted NAAC IQAC Core Committee.

The Principal welcomed the distinguished external members representing Society, Alumni, Industry and Employer and emphasised that he looks forward to their valuable inputs and guidance in the institution achieving maximum goals of quality sustenance and enhancement both in academic and administrative performance. The Principal also placed on record his appreciation of the active contribution made by the outgoing members.





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The Principal welcomed Madam Dr.Tejaswini Ananthkumar, Chairperson, Adamya Chetana Foundation and recipient of Rajyostava award in the Committee. The Principal informed that following the principles of Anna-Akshara-Aarogya, the foundation under Madam Dr.Tejaswini Ananthkumar has been doing yeomen service towards societal causes and green initiatives. The BMSCE has entered into MOU with Adamya Chetana Foundation on 04.06.2022 to achieve the following aims and objectives.

#### The Purpose

- The Institute wishes to inculcate social awareness and practical knowledge among its personnel viz students and staff more specifically in the aspects of green lifestyle, environment, food, health and culture.
- 2. In particular, this MOU is intended to engage & educate the personnel of the Institute in ACF's various socially relevant projects and activities as below:

#### Green Lifestyle, Environmental and social awareness initiatives such as:

- a) Participating in Tree Plantation and maintenance drives
- b) Eco-system Care about Environment
- c) Plastic-free lifestyle campaigns
- d) Take up the problems and grievances related to identified Gram Panchayats, try to solve the problems as far as possible and also take up the issues with appropriate authorities for redressal of grievances.
- e) Preparation of Posters and E-posters for social awareness programs (poster designing, slogan framing, short write ups) & other educational material
- f) The ACF shall guide the BMSET Hostels in Solid Waste Management with an aim to achieve **Zero Waste Hostels**"

The Principal then made a brief summary of the institutional achievements since the previous IQAC Core Committee (21.09.2019) and also listed some of the key initiatives planned/proposed for the next academic year. A copy of the Presentation is provided in attachment (Annexure I).

The Principal requested Dr.Shambhavi B.R, Chief Coordinator & Convener, IQAC to present a brief summary of the IQAC activities/initiatives and also take up the agenda for discussion immediately thereafter.

Dr.Shambhavi B.R, Chief Coordinator & Convener, IQAC extended a cordial welcome to Sri.Aviram Sharma, Hon'ble Trustee, BMSET and all the invitees & members. The Chief-Co-ordinator, IQAC thanked the Management budgetary sanctions approved for the year 2022-23 to the tune of Rs.53.60 Lakhs in consideration of the proposal presented by the IQAC. The details are provided hereunder

	Total	53.60 Lakhs
5	Computers	00.60 Lakhs
4	Common Room Facility	10.00 Lakhs
3	Bio Gas Plant	10.00 Lakhs
2	Digital Media Centre	18.00 Lakhs
1	Upgradation of Gym Facility	15.00 Lakhs





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The Chief-Co-ordinator then made a brief presentation on the following points:

- a) Aims & Objectives of NAAC
- b) Overview of NAAC accreditation Process
- c) Key points of Self Study Report (SSR)
- d) Institutional NAAC accreditation Journey so far
- e) Key Initiatives / Contributions by IQAC
- f) BMSCE IQAC Initiatives and activities towards NAAC (Cycle III) Preparedness

A copy of the Presentation is provided in attachment (Annexure II).

# 1. CONFIRMATION OF THE MINUTES OF THE PREVIOUS MEETING OF NAAC IQAC CORE COMMITTEE HELD ON 21.09.2019

The Minutes of the previous meeting of the NAAC IQAC Core-Committee held on 21.06.2019 was confirmed. (Copy of the Minutes of the previous meeting of NAAC IQAC Core Committee meeting held on 21.06.2019 is attached in **Annexure III**)

#### 2. ACTIONS TO BE TAKEN ON PREVIOUS NAAC RECOMMENDATIONS

The Chief Co-ordinator, IQAC informed the members that the NAAC peer team during their visit (Cycle II on 24.03.2019 and 25.03.2019), made some recommendations based on criterion-wise and overall analysis and also made some specific suggestions. Notable improvements have been achieved on many of the observations during the past three years. The Chief Co-ordinator requested the members to note their specific suggestions for improvement on the following observations:

- To initiate Foreign Collaborations and programmes
- Generate IRG through corporate training programmes
- Attracting Core Engineering company for placements catering to all domains and internationally reputed companies for campus placements
- To address community-oriented problems through technology.
- · To generate patents and its commercialization.
- Strengthen Alumni Connect and generate more funds
- Enhance Innovation, Entrepreneurship and Incubation facilities and activities
- To attract more industries for collaborations for MoUs by Continuous enhancement of Industry- Institute partnership.
- Design and Develop the courses and programs as per the requirement of Industry
- 1) Madam Dr.Tejaswini Ananthkumar, Chairperson, Adamya Chetana Foundation informed the members that though we ideally need seven trees for one person, we now have one tree for seven persons in the city. The foundation aims to achieve atleast one tree for every person. Madam Dr.Tejaswini Ananthkumar appreciated the contribution of student representatives towards green initiatives, rural connect and water conservation initiatives. Madam further assured to assist in identifying community-oriented problems, solutions for which can be addressed through technology by student teams ably mentored by faculty members.





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- 2) Dr.R.V.Ranganath, Professor-CV suggested to identify and form expert faculty groups to impart training to corporates. Dr.R.V.Ranganath also suggested to benchmark our institution with top ranked institutions to enable us to meet the corporate training demands. Dr.R.V.Ranganath further informed that owing government regulations, the institute is restricted from pursuing student-exchange and twinning programmes with foreign universities.
- 3) Mr.A.J.Jayaprakash, TCS informed that companies like L&T, ABB and others are hiring engineers from IT background only. Moreover, the graduates from core branches (Non-IT) also seem to prefer software/coding jobs. Mr.A.J.Jayaprakash suggested to digitally equip the students of core branches in cutting-edge computational technologies as value add to their regular core programme with an aim to ease their placement pursuits.
- 4) Mr.N.Muralikrishna, HP Enterprises suggested to have more industry engagements through FDPs on cutting edge technologies like Edge Computing, Cyber Security, Cloud Computing etc. Mr.N.Muralikrishna appreciated the institutional industry connect initiative in the form of Phase Shift. He also suggested to encourage the students to take up more real time projects.
- 5) Mr.Mohan Kumar, Wipro Limited informed that the preference is shifting from coreengineering to digitally enabled core-engineering. Mr.Mohan Kumar further suggested introduction of multi-disciplinary courses.
- 6) Dr.H.N.Suma, Dean-Innovations informed that measures towards developing international collaborations has been initiated. Initially collaborations are aimed towards getting internships for the students. Collaborations towards project and product development are also being explored.
- 7) With regards to foreign collaborations and programmes, Dr.B.Kanmani, Dean-Academics informed it is an added advantage that being a Tier-1 Institution, BMSCE is eligible for the recognition of the programs by other signatory countries of the Washington Accord.
- 8) Dr.M.N.Mamatha Dean (First Year BE) informed that one student has received Grants from ERASMUS. Erasmus+ is the European Union Program in the fields of education, training, youth and sport.
- 9) Dr.Abhishek Appaji, ICRD informed the members that sufficient progress has been achieved in terms of collaboration with foreign institutes. BMSCE has collaboration/MOU with Maastricht University, Netherlands, Gotenburg University, Sweden, Indo US Collaboration for Engineering Education (IUCEE) and others to name a few.
- 10) The student representatives expressed their overall satisfaction about the academic and infrastructural facilities at the College. The students suggested having one common area for students across disciplines to discuss regarding diverse perspective and multi-disciplinary and inter-disciplinary learning and research topics. While on the subject, the Vice-Principal (Admn) opined to explore such a possibility with the management.





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The Vice-Principal (Admn) suggested that sub-committees be formed with an aim to meet the following objectives

- a) Initiatives related to industry interaction with specific aim to enhance industry institute interaction in terms of MOUs and generating IRG through corporate training.
- To review the progress achieved by various depts/units against the milestones and goals suggested by IQAC under various metrics.

The Vice-Principal (Admn) thanked the members for their presence and participation in the deliberations and sharing their valuable suggestions.

The meeting concluded with thanks to the Chair.

Chief Co-ORDINATOR, IQAC
Chief Coordinator-IQAC

B.M.S. College of Engineering Bengaluru - 560 019 PRINCIPAL Principal

B.M.S. College of Engineering
Bangalore - 560 019





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#### **ANNEXURE II**

Presentation by Principal on the accomplishments and Strategic initiatives undertaken since the previous IQAC Core Committee

Meeting held on 04.06.2022



# B.M.S. COLLEGE OF ENGINEERING

Autonomous Institute, Affiliated to VTU

# Hearty Welcome to NAAC IQAC Core Committee

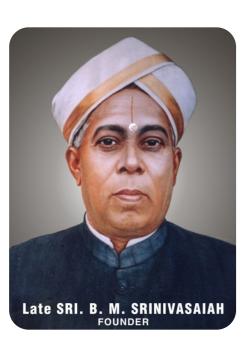
Key Initiatives and Accomplishments since the previous IQAC Meeting held on 4<sup>th</sup> June 2022

31st Aug, 2024

## **FOUNDERS**



# Visionaries and Philanthropists

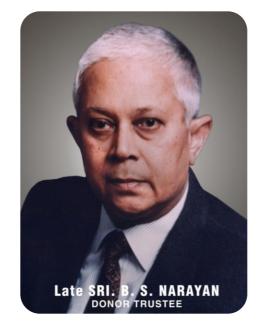


The College was founded by Late Sri Businayana Mukundadas Sreenivasaiah (BMS)

A great Philanthropist & Visionary

Ideals for which he stood, continues to inspire his inheritors

Honoured with Raja Karya Prasaktha by the then Maharaja of Mysore in the year 1946



The dynamic and enterprising son of the Founder Sri B. S. Narayan took over the reigns of the College after the demise of the founder

Instrumental in introducing 9 UG and 9 PG programs both in conventional and emerging areas

Established International Cooperation Division in 1979

Partnered with the Melton Foundation, USA in 1991 for Cross Cultural Learning with Students from USA, Germany, Chile, China and Ghana



# **ADMISSION STATUS**

IIC Drogrammas	202	2023-24		2022-23		21-22
UG Programmes	Intake	Admitted	Intake	Admitted	Intake	Admitted
Total	2037	2036	1797	1768	1440	1312
% of Admission	99.	95%	98.38%		91.11%	

DC Dyognammas	2023-24		2022-23		2021-22	
PG Programmes	Intake	Admitted	Intake	Admitted	Intake	Admitted
Total	444	412	426	328	426	355
% of Admission	92.	92.79% 77%		83.	33%	

	Research Sc	Ph.D.			
Approved research centers	Full Time	Part Time	NDF	QIP	Awarded (2022-2024)
Total	09	68	02	11	83

#### **Key Initiatives and Accomplishments since 2022-23**



- 12 UG Programmes and 10 PG (M.Tech, MBA & MCA) programmes were accredited by NBA, New Delhi.
- NAAC Cycle III Accreditation: The Institution successfully achieved the status of pre-qualification under NAAC Cycle III on 11.07.2024.
- The following **04 Undergraduate programmes** were started with an intake of 60
  - a) Artificial Intelligence and Data Science
  - b) Computer Science & Engineering (Data Science)
  - c) Computers Science & Engineering [IoT and Cyber Security]
  - d) Computer Science & Business Systems
- Board of Governors [BoG] meetingswere held on

	September 2022									
30	31	1	2	3	4	5				
6	7	8	9	10	11	12				
13	14	15	16	17	18	19				
20	21	22	23	24	25	26				
27	28	29	30	31	1	2				

February 2023										
		1	2	3	4	5				
6	7	8	9	10	11	12				
13	14	15	16	17	18	19				
20	21	22	23	24	25	26				
27	28	29	30	31						

October 2023										
30	31	1	2	3	4	5				
6	7	8	9	10	11	12				
13	14	15	16	17	18	19				
20	21	22	23	24	25	26				
27	28	29	30	31	1	2				

	February 2024									
		1	2	3	4	5				
6	7	8	9	10	11	12				
13	14	15	16	17	18	19				
20	21	22	23	24	25	26				
27	28	29	30	31						

3 4	1 5
3 4	1 5
10 1	1 12
17 1	8 19
24 2	5 26
31	
1	17 1 24 2

- The Department of MCA was recognised as research centre from the Academic Year 2022-23
- The Revised Good Governance Document & Revised Research and Development & IPR Policy were approved by the Board of Governors [BoG]



#### **Key Initiatives and Accomplishments since 2022-23**



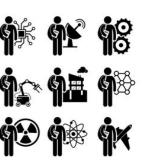
The Institution attained the **prestigious ISO 14001:2015 certification** for its Environmental Management System which has evidenced the institutional commitment towards sustainability, ecoconscious practices and environmental responsibility

• Meetings of the Academic Council were held on 18.04.2022, 12.08.2022, 22.07.2023, 29.09.2023, 03.02.2024, 28.06.2024.



• VTU LIC Committee visited the institution on 21.07.2022, 12.07.2023 and 05.03.2024 granted affiliation to UG, PG Programmes and Research Centres.

- A total of **85 new faculty** members were recruited and **138 faculty** members were extended the benefit of Career Advancement Scheme (CAS) since 04.06.2022
- The Internet bandwidth enhanced from 1.5 GBPS to 2.9 GPBS.





#### **RESEARCH OUTCOMES SINCE 2022-23**

- 33 Research Projects worth 473.77 Lakhs were secured through sponsored research projects from external agencies.
- 196 Consultancy projects worth 148 Lakhs were secured through external agencies.
- The Board approved the grant of Seed Money of Rs.2 lakhs per research project for young faculty under FRPS (Faculty Research Promotion Scheme). A **Seed money of Rs.78.80 Lakhs** have been disbursed towards 44 research projects since 2022-23.
- 54 research scholars awarded Doctoral Degree through BMSCE Research Centres.
- 24 Patents granted, 13 Patents published
- **Publication Statistics** since 2019:

Sl. No	Source	Number of Publications	Number of Citations
1.	Scopus	1574	6835
2.	Web of Science	850	4509

# COLLEGE OF MORE

#### **MAJOR EVENTS**



The Graduation Day for award of Degree for the batch of 2020, 2021, 2022 & 2023 was held on 22.07.2022, 23.07.2022,15.07.2023 & 25.05.2024 respectively



BMSCE is one among 100 colleges in the Country awarded 5G use case Laboratory by Government of India and Department of Telecommunication



The annual Industry-connect technical symposium 'Phase Shift' was conducted on 25th & 26th November 2022 and 23rd & 24th December 2023. The symposium hosted a plethora of seminars, workshops, competitions and multidisciplinary events collaborated with industries. The symposium attracted more than 4000 students from other institutions and 6000 plus BMSCE students.



The UTSAV was conducted during 27.05.2022 and 26.05.2023



Prathibhotsava: VTU Fest was hosted by the College during 29-31 of July 2022. The students of various institutions across the state participated in the event

#### **MAJOR EVENTS**





Sahayoga – Industry Connect Meet: was conducted on 02.06.2023 & 31.05.2024 The annual event attracted more than 100 industry/employers. Feedback from employers on learning abilities, adaptability, curriculum, training needs were obtained

BIG Foundation, A Section-8 Company promoted by BMS Educational Trust which provides platform for innovation, incubation, research, consultancy and entrepreneurship was inaugurated on 23.04.2024





The Workshop on National Skill Development Corporation Programme was organised on 04.03.2024. The VTU Skill coordinators of various colleges under VTU in Bengaluru and Mysore Region participated in the Workshop. The workshop was presided by Dr. S. Vidyashankar Hon'ble Vice-Chancellor, VTU, Belagavi

BMSCE in collaboration with University of Washington, Seattle conducted study abroad programme from 3rd January to 10th March 2024. The 15 Credit Course was offered for 20 students of Washington University

### **Staff Welfare Measures**



- ❖ The Festival Advance to employees enhanced from Rs.10,000/- to Rs.25,000/-
- ❖ The education aid to child of non-teaching staff enhanced from Rs.10000/- to Rs.15,000/- Per Annum.
- ❖ Extension of the Voluntary Provident Fund Scheme to the Employees working under Management Cadre.
- ❖ Extension of maternity leave from 135 days to 180 days (Also extended to adopted mothers).

### **Merit-cum-means Scholarships to students**

- ❖ The merit-cum-means scholarship amount for students enhanced from Rs.10,000 to Rs.20,000. Total of 344 meritorious students were benefitted during the past two years.
- ❖ Commencing from 2022-23, the benefit of 02 merit scholarships was also extended for differently abled students

### **Extension Activities**



• 77 Green Sunday (Plantation Drives) conducted in association with Adamya Chetana Foundation











• Adopted Srinagar Government School, Bangalore during 2023. Apart from providing educational infrastructure, training sessions for students are being conducted regularly.









Wall Murals Computer Lab Renovated Ceiling Proper Ventilation



Mank Mou



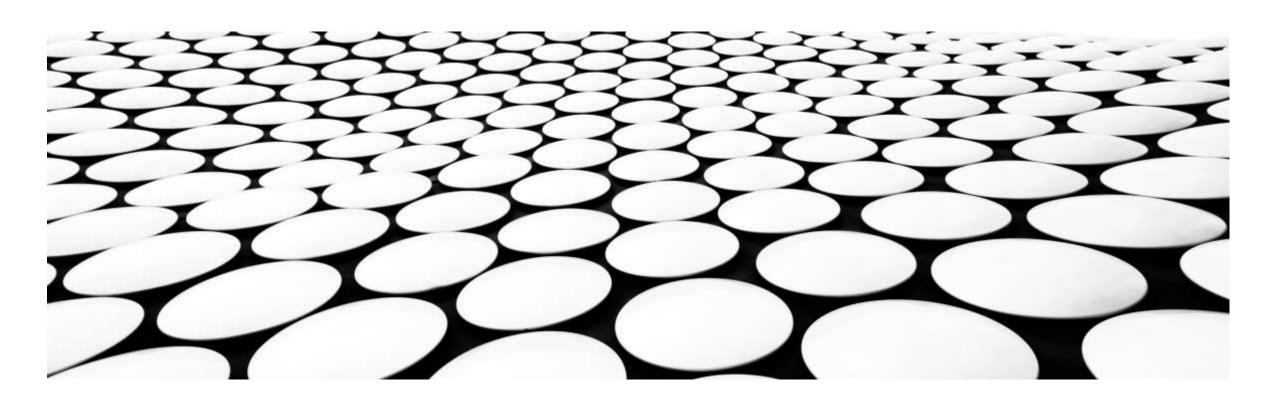
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#### **ANNEXURE III**

Report by Chief Co-ordinator, IQAC regarding NAAC Cycle III accreditation process, activities, submission of SSR Pre-qualification, grading



# Report on NAAC Cycle III Accreditation



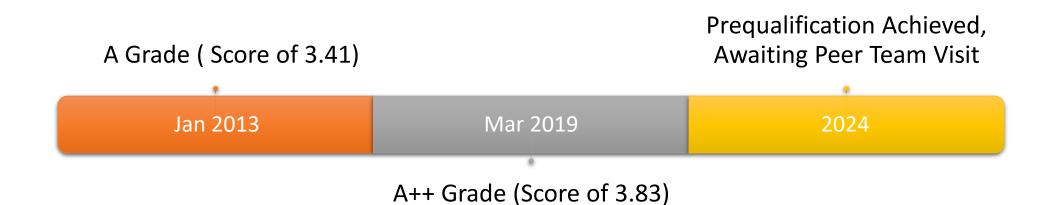


# National Assessment & Accreditation Council

- 1. Comprehensive assessment of Institution's quality standards
- 2. Provides platform to know its strengths, weakness and opportunity through an informed review process
- 3. Encourages institute to initiate modern methods of teaching-learning and research
- 4. Accreditation of top grade enables graded autonomy, funding opportunities, open new programs, student mobility, foreign collaborations and more
- 5. The grant/extension of autonomy to the institution by the UGC for the period of 10 years (2022-2023 to 2031-2032) is one of the major benefits derived out of NAAC Accreditation



# Our NAAC accreditation Journey so far



Cycle I	Accredited by NAAC with highest grade of A with CGPA of 3.41/4.00 valid from 05.01.2013 to 04.01.2018
Cycle II	Accredited by NAAC with highest grade of A++ with a CGPA of 3.83/4.00 valid from 28.03.2019 to 28.03.2024
Cycle III	The institution achieved pre-qualification on 11.07.2024



### **Overview of NAAC Accreditation Process**

The accreditation process (applicable from 1st Jan 2023) is objective and digitized

Submit Institutional Information for Quality Assessment (IIQA) online

Acceptance of IIQA by NAAC

The institution will be asked to submit the Self Study Report (SSR) within 45 days.

SSR will be subjected to Data Validation and Verification (DVV) process. On achieving a score of at least 30% in QnM, the institution will be declared as pre-qualified.

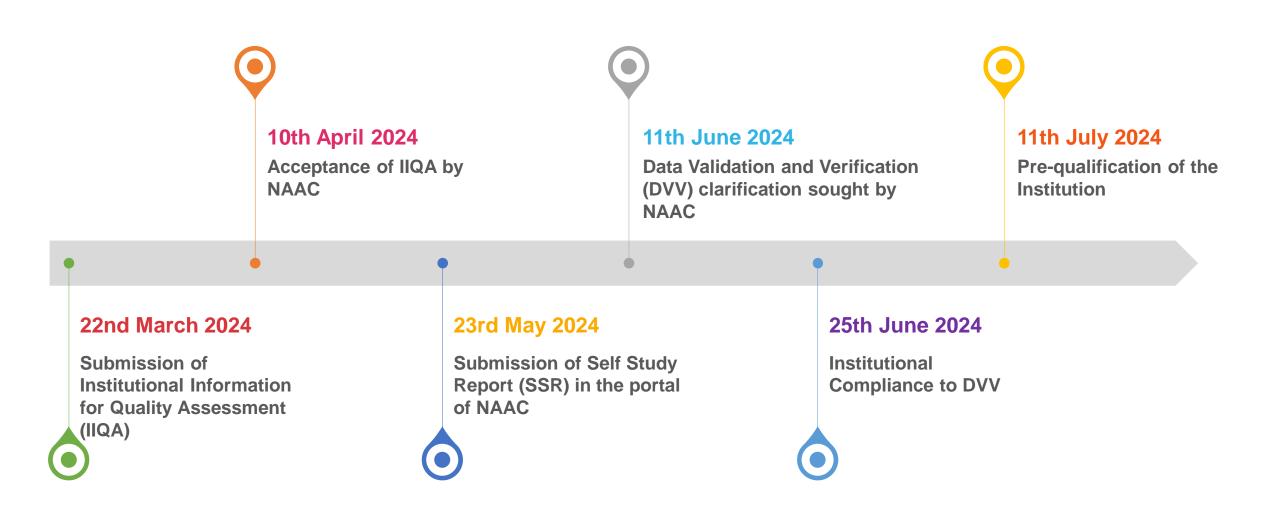
The institution shall proceed for Peer Team Visit. NAAC will disclose the details of PTV three days before the visit

> CGPA is calculated based on SGS, Peer Team Report and SSS. Final Assessment is on a Four-point scale

**Process Diagram** 

# THE OF EGG

# Sequence Of Events - Attaining Pre-qualification From NAAC





# **NAAC Grades and Accreditation Status**

CGPA	Letter Grade	Status
3.51-4.00	A++	Accredited
3.26-3.50	A+	Accredited
3.01-3.25	А	Accredited
2.76-3.00	B++	Accredited
2.51-2.75	B+	Accredited
2.01-2.50	В	Accredited
1.51-2.00	С	Accredited
≤ 1.50	D	Not Accredited

# **Key Areas of Assessment**

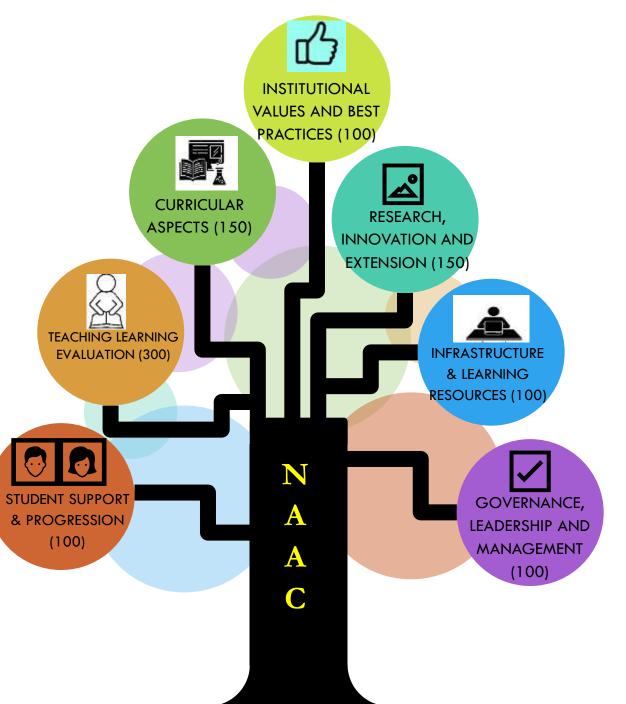


- Governance (Organization, Policies And Procedures)
- Curriculum Enrichment
- Teaching-learning Mechanisms and Internal Evaluation
- NEP Implementation
- Infrastructure Support & Augmentation
- Faculty (Empowerment Strategies), Staff
   Qualification & Welfare Measures
- Outcomes in terms of Research & Innovation
- Initiatives towards resource Mobilization

- Student Support and Progression
- Management Organisational Structure with specific reference to decentralization
- Financial Management and Transparency
- Feedback System
- Departmental Evaluation
- Electoral Literacy Club
- Green Initiatives & ISR
- Best Practices & Distinctiveness
- Executive Summary



THE SEVEN CRITERIA OF
SELF STUDY REPORT
(SSR)





### **KEY POINTS OF SSR**

- Under each criteria, key indicators are identified
- The key indicators are further delineated as metrics which elicit responses from the institution
- Metrics are either Qualitative  $(Q_1M)$  or Quantitative  $(Q_NM)$



# **ASSESSMENT STAGES/COMPONENTS**



- Online Evaluation About 70%
   (Quantitative Metrics- MS Excel Sheet)
- Peer Judgement About 30%
   (Qualitative Metrics MS Word Format)
- Student Satisfaction Survey- 50 Weightage (Metric 2.7.1)

### **KEY DOCUMENTS**

- Manual for Self-Study Report for Autonomous Colleges
- Standard Operating Procedure (SOP) preparation of SSR
- **Templates** with respect to the QnM (quantitative metrics-data template)



# IQAC @ BMSCE

Vision	To ensure overall development and excellence by implementing quality standards in all academic and administrative activities of the institution		
Mission	<ul> <li>To develop benchmarks for quality parameters leading to constant improvement</li> <li>To implement and monitor various academic and administrative programs</li> <li>Conduct regular assessments to ensure that the institution meets the established</li> </ul>		
	quality standards		

# **Role of IQAC**



- NAAC Accreditation: Preparation and Submission of Self-Study-Report of NAAC
- ullet Organise / document programs, activities, and initiatives that contribute to quality improvement
- Conducting regular internal and external academic audits
- Submission of Annual Quality Assurance Report [AQAR] to NAAC through online portal
- Propose augmentation in digital and physical infrastructure
- Establish benchmarks for various academic and administrative activities and ensure its attainment
- Stakeholders' feedback and its analysis
- Foster collaborations with other institutions, industry partners, and research organizations to enhance opportunities for faculty and students.
- Promote continuous improvement in academic and administrative performance
- Disseminate information on various quality parameters and best practices



# IQAC: Nodal Agency to co-ordinate Mandatory Quality-related Activities/Reports

- National Assessment And Accreditation Council AQAR and associated Activities
- VTU Local Inquiry Committee (Grant Of Affiliation)
- All India Council for Technical Education (AICTE) Extension of Approval
- National Board Of Accreditation (NBA-institutional Data And Supporting Documents)
- All India Survey On Higher Education (AISHE)
- Compliances to Government & Non-government Agencies





- To strengthen IQAC activities, one faculty from each department is appointed as IQAC coordinators.
- The Department Coordinators collect and compile data related to departmental activities and provide periodic reports to IQAC in the format prescribed
- The IQAC develops a comprehensive annual plan of activities (both at the institution and department level) identifying the key areas. The Departmental coordinators facilitate conduction of such activities within the set timelines.



B.M.S. COLLEGE OF ENGINEERING

ISO 14001:2015

### Infrastructure Augmentation





E-Studio in 1st Floor, Platinum Jubilee Block





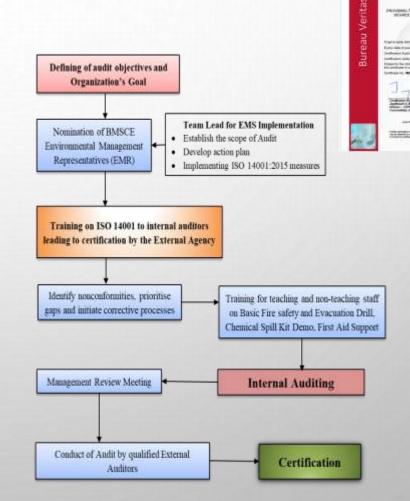
Multi-Gym, Sports Complex



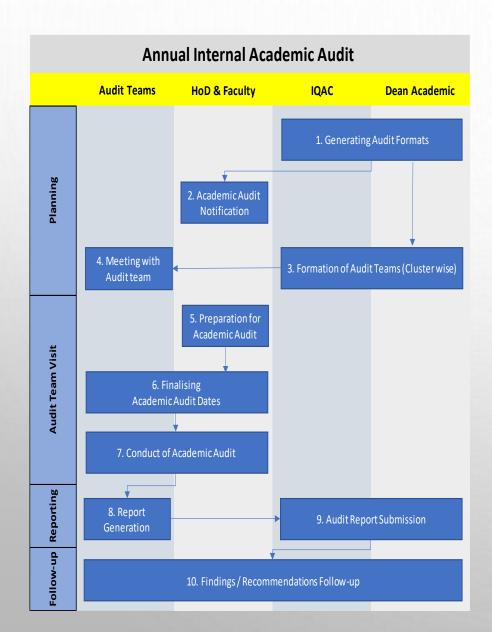


Ladies Lounge, Ground Floor, Platinum Jubilee Block

ISO 14001: 2015 certification







### **External Academic Audit**

The External peer team comprising of three distinguished academicians conducted Audit on 26.02.2024. Audit facilitated by IQAC

Stage I	Nomination of three distinguished academicians as External Auditors by University	
Stage II	Departments submit duly-filled self-evaluation documents to the IQAC. The reports presented to the external auditors	
Stage III	Audit areas: curriculum design, syllabus content and coverage, CIE & SEE evaluation, quality of question papers, budget, NBA & NAAC Accreditation, MOUs, Industry support initiatives, Faculty achievement, research outcomes, project evaluation, student co-curricular and extracurricular achievements, best practices and others.	
Stage IV	Institutional Presentation, onsite visit, review of documents and processes	
Stage V	Evaluation and report writing	
Stage VI	The audit report sent to the University, UGC & Department of higher education and also published on College website	
Stage VII	The observations of the external audit team placed for consideration and review of the Board of Governors (BoG)	



AQAR Submission

Assessment Year	AQAR submitted on
2018-19	2 <sup>nd</sup> Nov 2020
2019-20	28 <sup>th</sup> Aug 2021
2020-21	12 <sup>th</sup> May 2022
2021-22	29th July 2023

National level Seminar conducted on *Digital Transformations under NEP 2020* on 15<sup>th</sup> July 2022



Dr.Balasubramanya Murthy



Dr. K. Rajanikanth



Dr. Sanjay Agrawal



Dr. H S Guruprasad



Dr. Iven Jose







### Outcomes against set-benchmarks during 2022-23





for Non-

Teaching staff

Development

**Programmes** 



• Establishment of Teaching Learning Centre



Address by Prof. Vedula



Hands-on session on Canvas



Talk on Indian Patent



**OBE Awareness Workshop** 



AICTE - Adobe Express Workshop



Seminar on Robo Yatra

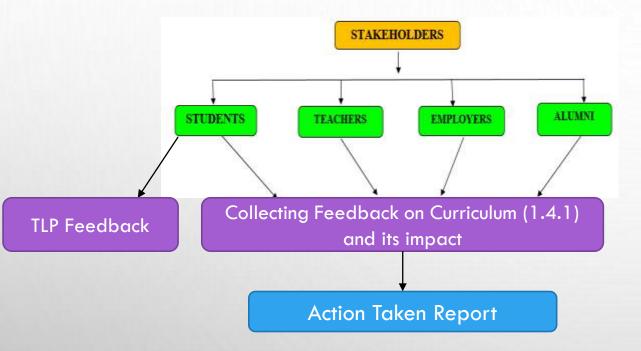
- Gender Audit (conducted on 23<sup>rd</sup> June 2023 in association with BMSCE Women's Cell)
- Aims and Objectives
  - 1.To ascertain the gender balance in the institution
  - 2.To assess the impact of the gender equity policies adopted by the college
  - 3.To identify and propose gender equity measures (if any)

The Annual Gender audit Committee for the year 2022-23 was headed by Smt. M. P. Omkareshwari, Joint Commissioner for Transport, GoK and also comprised of internal faculty, staff and student representatives.





### Feedback Collection and its analysis



### **Establishing Policy Documents**

- Revised Governance Document
- Institutional Research Policy Document
- Management Norms for Staff
- Recruitment norms
- Green Procurement policy
- Anti-ragging policy (adherence to AICTE & UGC norms)
- Gender equity policy
- Scholarship & freeship policy
- Differently abled policy (Policy for persons with disabilities)
- Student grievance redressal policy
- Code of conduct and campus discipline
- College internal Complaints Committee (CICC) Policy as per AICTE Regulation)
- Green campus and plastic free campus policy
- e-Governance Policy

### IQAC activities since achieving pre-qualification by NAAC



- Internal Committee nominated by the Principal conducted Mock visit of the Departments to Review the Departmental PPT and listed documents
- Preparedness of Central Facilities: Review of Skill Labs, Library, Hostels, Physical Education & Sports
- Constitution of Internal Review Committee: Finalization of Departmental Presentation
- Visit to Administrative Units/Office: Organising documents/files and staff preparedness including communication and co-ordination
- Check-list regarding departmental and laboratory preparedness shared with the Departments. The list highlighted the preparedness of the Laboratory, classroom and infrastructure facilities and the role of faculty, students and scholars during the course of the visit
- Interaction with chairpersons and members of various statutory and non-statutory committee

### **NAAC Peer Team Visit Schedule**



### Probable dates of Peer Team Visit: 19-20 Sept 2024 OR 03-04 Oct 2024 OR 24-25 Oct 2024

Time	Day 1 Schedule
09:00 To 09:45	Presentation by the Head of the Institution
09:45 To 10:30	Focus on Cr I : Curricular Aspects ✓ Meeting & Interaction with HOD's
10:30 To 12:15	Focus on Cr II : Teaching-Learning & Evaluation  ✓ Visit to Departments
12:15 To 13:00	Focus on Cr III : Research, Innovation & Extension  ✓ Visit to Labs & Incubation centres
14:00 To 14:15	Focus on Cr IV : Infrastructure & Learning Resources  ✓ Visit to Library, Sports, Gym, Computer Centres etc,
14:45 To 16:15	Focus on Cr V : Student Support & Progression  ✓ Visit to Placement Cell, Language Lab etc,
16:45 To 17:15	Focus on Cr VI : Governance, Leadership & Management  ✓ Meeting with IQAC Core Committee & IQAC Coordinators in the IQAC Board Room
17:15 To 18:00	Cultural programmes by Students
19:00 To 20:30	Team Discussion at the place of stay

Time	Day 2 Schedule
09:00 To 09:45	Focus on Cr VII : Institutional Values & Best Practices  ✓ Review of physical facilities
09:45 To 12:15	Report writing, Checking documentary evidences
12:15 To 13:00	Discussion with Head of the Institution and IQAC Coordinators on outstanding issues
14:00 To 15:00	Report writing
15:00 To 16:00	Sharing the Peer Team Report with Head of the Institution
16:00 To 17:00	Finalizing the Peer Team Report
17:00 To 17:30	Exit Meeting



Thank you



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### **ANNEXURE IV**

Approved Compliance Report of Previous NAAC Peer Team Observations



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THE NAAC PEER TEAM VISIT ON CYCLE II INSTITUTIONAL ACCREDITATION WAS CONDUCTED ON 23.03.2019 AND 24.03.2019. THE COMPLIANCE AND ACTION TAKEN REPORT IN RESPONSE TO THE NAAC PEER TEAM REPORT RECOMMENDATIONS IS ENUMERATED HEREUNDER:

#### 1) Try to get deemed University Status

The government of Karnataka through notification EO.NO.ED/172/URC/2023 dated 13<sup>th</sup> Dec 2023 has accorded approval to establish Private University in the name and style of – THE BMS UNIVERSITY.

2) Faculty may be further encouraged to practice more advanced ICT enabled teaching-learning methods including e-learning resources.

BMSCE faculty are adopting advanced ICT enabled Teaching learning methods like virtual labs, flipped classroom, developing interactive educational videos, active learning, computational thinking, usage of simulations etc in their course delivery methods.

Some of the measures and initiatives implemented to encourage the adoption of advanced ICT-enabled teaching-learning methods are.

**Establishment of e-Studio Facility:** To enable faculty create high quality digital content including lectures, tutorials and demonstrations, BMSCE established state-of-the-art e-studio with cutting-edge audio-visual facility. Students have the opportunity to revisit recorded content, enabling personalized learning that caters to individual needs. Advanced mixing equipment and editing software tailored for e-content development have been augmented. The facility was created at a total cost of 25 lakhs at a total area of 99 sqm. The studio has high-resolution cameras, professional grade microphones, advanced lighting system and immersive audio-visual effects. The facility was inaugurated by Dr.B.S.Ragini Narayan, Hon'ble Donor Trustee & Chairperson, BMSET on 03.05.2023.

**ICT Infrastructure:** Robust ICT infrastructure, including high-speed internet connectivity, multimedia-equipped classrooms, and access to e-learning platforms has been established. There are currently 116 ICT enabled classrooms. Most classrooms also have interactive display boards, providing an innovative way to share information, facilitate demonstrations and discussions.

**Professional Development:** The Teaching Learning Centre (TLC) was established during Sept 2022 with an aim to support faculty in enhancing their teaching skills and orient the faculty to integrate various Innovative teaching techniques. The TLC regularly organises workshops and training sessions on innovative training methods. The Centre also promotes deputation of faculty to certification programs on TLP, Course design and delivery, creating dynamic classroom, harnessing the power of Technology and effective assessment



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**Digital intervention during the pandemic:** The college was involved in rapid adoption of technology and digital transformation during pandemic. Conduction of online classes using platforms like WebEx, Google Meet, Zoom, Skype, Google Classroom used as the LMS were some of the other tools engaged. Laboratory sessions were recorded and hosted on the institute YouTube channel. MHRD virtual labs were used to complement the learning process. Library resources were made available on the institute website. Internal tests and project evaluation were conducted in online mode.

### 3) Academic audit and Peer team evaluation by external experts may be undertaken.

In adherence to the VTU communication dated 10.11.2021, the IQAC (Autonomous) Cell was constituted as per UGC guidelines. The objective of the Cell is to review all aspects of academic performance with specific reference to implementation of autonomy. The prescribed composition includes internal members (faculty/students/non-teaching staff) and three external members nominated by the University. The institution through communication dated 09.12.2021 sought university nomination for the Cell. In response, the VTU through communication dated 10.11.2023 nominated three external expert members on the Cell. The nomination of the members is for a period of three years. The external peer review shall be conducted at least once in a year.

The meeting of the internal members was conducted on 31.01.2024 and external peer team review was conducted on 26.02.2024.

#### The Process adopted:

- 1. The departments submitted the duly-filled self-evaluation document (as per format prescribed by IQAC) to IQAC office.
- 2. The departmental self-evaluation reports were presented to the external auditors.
- 3. The external peer team finalised the audit formats.
- 4. The external audit covered curriculum design, syllabus content and coverage, CIE & SEE evaluation, quality of question papers, budget, NBA & NAAC Accreditation, MOUs, Industry support initiatives, faculty achievements, project evaluation, student co-curricular and extracurricular achievements, best practices and others.
- 5. The audit report was sent to the University/UGC/Department of higher education and also put on the website of the College.
- 6. The BoG in its meeting held on 12.06.2024 reviewed the external peer team report and noted its recommendations.



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### 4) Design and develop the courses and programs as per the requirement of Industry 4.0

To address the needs of Industry 4.0 and equip students with the knowledge, skills, and competencies, the institution has adopted skill-based [technical skills and employability skills] approach. Here are some key elements of the strategies adopted to create an ecosystem to bridge the gap between institute and industry and preparing our students to take up the challenges of industry 4.0

- Curriculum revision considers alignment with Industry 4.0. Students apply
  emerging technologies such as Internet of Things (IoT), Artificial Intelligence
  (AI), big data analytics, and automation systems leading to technological
  integration and real-time data analysis, predictive maintenance, and
  autonomous decision-making. Concepts like digital twins, virtual models of
  physical assets are also included in the curriculum.
- New cutting-edge programmes in Artificial Intelligence & Data Sciences, Computer Science & Engineering (Internet of Things & Cyber Security including Block Chain Technology, Computer Science & Engineering (Data Science) and Computer Science and Business Systems were introduced during the assessment period. The programmes cover key technologies and concepts to meet Industry 4.0.
- The industry professionals who are part of academic advisory boards collaborate to develop curricula that reflect current technological trends and future needs.
- As part of International Society of Automation, Bengaluru Chapter, BMSCE students participated in the Educational Series in digital transformation in Industries. More than 500 BMSCE students participated in the lectures conduced for a duration of 06 months and were awarded certificates.
- Industry internship helps students gain hands-on experience in industry settings.
- The activities conducted as part of the MoUs with industry include research projects, industry visits and industrial training. Industry professionals deliver guest lectures, conduct workshops focussed on delivering industry relevant skills and emerging technologies
- Workshops and seminars essential for bridging the gap between institute and industry especially in the context of Industry 4.0 are regularly organised.
- Industry professionals handle regular courses and provide practical and updated know-how to students
- Industry experts are invited to evaluate the student projects in tandem with both educational and industry standards.



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### 5) More encouragement to students to opt for MOOCs courses. Their progress needs to be monitored on a regular basis.

The MOOCs provides students access to diverse learning opportunities, enhancing their skills, and fostering a culture of continuous learning and self-improvement.

- Integration into Curriculum: MOOCs (Massive Open Online Courses) was integrated into the curriculum during 2018-19 with an aim to enhance the educational opportunities for students. Students of final year or pre-final year completed MOOC course on online platforms like NPTEL/ SWAYAM/ Coursera/ edX/ Udemy etc.,
- 2. During the assessment years i.e. from 2018-19 to 2022-23, a total of 2642 students have successfully completed MOOC.
- 3. Collaboration with MOOC providers: BMSCE partnered with MOOC providers like Coursera and edX, during pandemic when there was a strong need to facilitate online learning.
  - Under edX, students and faculties had access to 138 courses from top universities and industries. Each student/faculty enrolled for one Coursera course from the pool of 3600+ available courses, by registering with their respective BMSCE mail ID. Faculty and students were benefited by this and more than 1800 certifications were completed. During Feb 2023, the institute registered as SWAYAM/NPTEL Local chapter with the ID 5661.
- 4. Nomination of MOOC Coordinator: For the AY 2024-25, institutional nominated Dr.Balachandra, Faculty, TCE as the MOOC coordinator with an aim to facilitate Honours degree and Minor degree for BE graduates under VTU MOOC program.
- 6) The Curriculum has to be designed in a way to accommodate mandatory industry internship as well as interdisciplinary courses and research internship preferably in an overseas university by allocating some credits for the same

Industry Internships in the Curriculum: The mandatory industry internship has been included in the curriculum as a credited course. In the Syllabus revision for UG 2019 batch, every even semester included a one-credit course named 'Seminar based on Internship'

In the subsequent revision of UG NEP syllabus, three internships totalling to 4 credits was incorporated. This was approved in the AC Meeting #20 conducted on 12th Aug 2022. Further the AC Meeting #23 conducted on 28th June 2024 approved 06 credits towards the internship course to be obtained by every UG student during 8th semester. All PG programs have a mandatory industrial internship to be completed during their final two semesters. The credit range allotted for internship during PG program is 6 to 10. Both industrial and research internships are accepted with most industrial internships being facilitated by the placement department of the institute. During the assessment years, a total of 5076 students completed industry internships.



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**Research Internship in abroad University:** The institute also supports students seeking internships from abroad. To name a few, Mr. Shubham, UG student in Computer Science and Engineering secured the MITACS research internship at Dalhousie University, Canada from May-July 2019. Ms. Ramya Ramesh, a UG student in Computer Science and Engineering successfully completed MITACS Globalink research internship from Université de Montréal during Dec 2022.

**Interdisciplinary courses:** Open electives are offered under both UG and PG programs to foster interdisciplinary knowledge and allow students to explore course beyond their primary field of study and gain diverse perspectives. Open electives totalling to 9 credits are offered in thrust areas including Sciences, Law and Management. In addition, courses on emerging Technology are also offered.

## 7) Efforts and mechanisms to be worked out to attract high quality faculty to bring in conceptual based learning with research and applied orientation

Faculty are the cornerstone of academic excellence and play a pivotal role in shaping the learning experiences of our students. The Board of Appointments [BoA] nominated by BOG ensures that the recruitment process is done in transparent manner adhering to the recruitment norms. The BoA selects high-quality faculty with good academic record, research credentials, and effective teaching skills. The institution also has an effective performance appraisal system. The High retention rate of faculty can be attributed to the numerous research promotion measures and extensive staff welfare measures. During the assessment period a total of 130 qualified faculty members were recruited out of which 67 faculty possess doctoral degree qualification. During the assessment period, a total of 18 faculty members were deputed for PhD under QIP program to premier institutions. During the assessment period, a total of 115 faculty members acquired their PhD. Presently 68 % faculty possess PhD qualification.

**Recruitment Procedure**: The Board of Appointments (BOA) nominated by BOG is headed by the Chairperson, BMS Educational Trust. The faculty at different cadres are recruited in transparent manner adhering to the recruitment norms of the college. The external experts are part of scrutiny Committee wherein the candidates are shortlisted in the order of merit. They are also part of interview/screening committee and final interview and selection process by Board of Appointments.

The institution believes that transparent and comprehensive recruitment process and retention measures ensures in attracting and retaining good faculties.



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### 8) Special focus may be given to aggressively and strategically push innovation and entrepreneurship agenda among staff and students

The activities of Research & Development (R&D), IP Cell, Propel Labs, Centers of Excellence, Institution Innovation Cell (IIC) and B M Sreenivasaiah Innovators Guild (BIG) Foundation have helped create a strong innovation ecosystem in the institution. Awareness meets, workshops, seminars and guest lectures on Entrepreneurship are organized. Students are provided opportunities to directly interact with outstanding entrepreneurs excelling in their field. Product service Training is provided for creating awareness on marketing the products.

- Financial support for patent advise and filing: The institution facilitates faculty and students to file IPR by providing a consultant/ IP attorney and paying the government and professional fees. The expenses towards filing new patent/copyright after the grant is borne by the institution. 29 patents were published and 17 patents were granted during the assessment period.
- IPR Support measures: The filled-out Invention Disclosure form (IDF) is submitted to the R&D office. This in-turn is forwarded to Karnataka State Council for Science and Technology (KSCST), IISc Bengaluru for novelty search. This is based on the existing MoU with KSCST and the BMSCE IPR Cell. The recommendation of the KSCST is forwarded to the Patent authority firm for filing the patent application in expedited mode. The patent attorney firm takes care of the filing expedited trial, response to the First Examination Report (FER), Hearing, trial, etc in concurrence with the inventors and R&D Centre. Once a patent is published/granted the possibility of commercial exploitation of the patents or technology transfer is explored on a case-by-case basis.
- To encourage Peer Learning and promote curiosity in innovation, design and develop phototypes, the institution has developed cutting-edge Propel labs in Robotics, Aerospace, 3D Printing, Automotive and BSN Fatigue Laboratory. Centre of Excellence in Photovoltaic systems, IoT, Polymer composites, Nano materials and Displays, NVIDIA-DGX A 100 Lab have created opportunities for students to work with faculty researchers/mentors and broaden their horizon into research and innovation potentials. The institution has also developed skill laboratories with an aim to provide the students the opportunity of practical application of their innovative skills.
- The Institution Innovation Cell (IIC) has been constituted as per Innovation Council, Ministry of Education, Govt. of India. The IIC addresses the challenge of building innovation and entrepreneurship ecosystem. It has received 4-star certification from the Innovation Cell of Ministry of Education for the year 2020-21 as per the certificate issued on 1st March 2022. The cell conducts start-up awareness activities such as motivational talks, workshops, field visits and regular annual idea competitions. Over 90 events conducted from Sept 2019 till date have been evaluated by Innovation Council, MoE.
- BMSCE has been sanctioned 5G Use-Case Lab from Department of Telecommunication, Government of India.
- BIG Foundation is a Section-8 company promoted by BMS Educational Trust provides platform for product development & commercialization; augment R&D capabilities. The share capital of the foundation is 50 lakhs through 5 Promoters. The report of BiG Foundation activities is attached herewith.



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### 9) The Institute may go for MoUs with premier academic institutions for innovative teaching learning methods and research.

The institution has Memorandum of Understanding (MoU) and linkages with various reputed academic institutions both in India and abroad. Joint Research Projects, student exchange programme, access to resources, internship and placements, industry projects, enhanced learning opportunities are some of the major thrust areas. During the assessment period, the institution achieved MOU with Washington University, University of Arkansas, USA, Vision Science Research, Malaysia, CeNSE, IISc, CMTI, Bengaluru, Indian Institute of Tropical Meteorology, Pune, Kidwai Memorial Institute of Oncology, Bengaluru, Bengaluru Nirmithi Kendra, National Highway Authority India, Government Dental College and Research Institute. The linkages have significantly enhanced the academic and research outcomes and mobility of students.

BMSCE is a member of IUCEE [Indo Universal Collaboration for Engineering Education consortium]. The mission of IUCEE is to build an ecosystem for transforming engineering education in India. The IUCEE group of academic and industrial experts from across the globe focus on faculty development, curriculum development, as well as improved teaching technologies in the member institutes. The institute has been conducting numerous activities and events in association with IUCEE both in terms of ability enhancement (faculty and students) and curriculum enrichment. The BMSCE faculty are also nominated for the IUCEE International Engineering Educator Certification Programme (IIEECP) and many have achieved certifications. Faculty are nominated to the annual IUCEE conference ICTIEE where speakers from all around the world share their thoughts on teaching and learning.

### 10) Integrated Dual Degree Program with partnership from industry may be offered.

BMSCE is autonomous institution affiliated to VTU. Institute need to strictly adhere to the autonomy guidelines released by university from time to time. Currently, the College doesn't have any approval from university to start integrated dual degree program with partnership from industry. However, BMS trust has been accorded the approval to begin University activities since academic year 2024-25 and institute will make all the sincere efforts to launch such programs under the University.



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### 11) The Institute may consider introducing national skill development programmes.

The students are introduced to skill development courses from the 1st semester onwards wherein skill-based courses are integrated into the curriculum. Skill development is one of the thrust areas of NEP 2020.

In every program, 80% of the courses are designed to enhance employability opportunities or students' technical skills, and they are offered either as professional core courses or electives. Skill Labs with focus on cutting-edge technologies, have been established to provide students necessary platform to apply theoretical knowledge and gain practical hands-on experience.

BMSCE actively promotes skill development sessions and programs as part of its capacity-building initiatives. Training covers soft skills, life skills, ICT skills, language skills, competitive training, and entrepreneurship. During the academic year 2022-23, a total of 37 skill development programs and activities were conducted across various departments, benefiting both students and research scholars. Additionally, the Placement Cell also conduct training on verbal and aptitude/quantitative for the benefit of students.

BMSCE hosted a workshop on NSDC Programmes on 04.03.2024. The workshop was inaugurated by the Hon'ble Vice-Chancellor, VTU. The Chairman & MD of Aspire Knowledge and Skills Private Limited oriented the participants on the importance and benefits of implementing NSDC programs. BMSCE is also partnering with the Skill Hub initiative by VTU and Rooman Technologies, Bangalore, to understand the industry needs and foster student growth.

Recently, the Skill Development Center was established in accordance with VTU guidelines to enhance student competencies in specialized areas based on industry needs. The Center also aims to offer a range of skill development courses that will be integrated into the curriculum across all semesters.



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# 12) Improve the campus wide integrated information system for effective academic and administrative management to pass on academic other information to parents.

An institutional e-governance policy has been created with an aim to provide efficient system of governance and easy access of information to all stakeholders. The policy applies to all the Parents, students, alumni, faculty, staff, employers, academic administrators and others who directly or indirectly utilize the services provided by the Institute. The institution has implemented various e-Governance practices like quick communication, transparency, and accessibility to support parents. Some of the key measures are listed hereunder:

- E-Communication mechanism through notifications, email and SMS to Parents and students.
- Implementation of online payment gateways
- Online Grievance Submission: Grievance Redressal Mechanism has been established to enable students and parents to represent their grievance through online. The link has been provided in the college website. The system ensures that their concerns are documented and addressed promptly.
- Structured feedback on curriculum is obtained from Parents, Students, faculty, employers, alumni and other stakeholders.
- The college website (www.bmsce.ac.in) has Robust functionality and reaches out to all stakeholders. Apart from important institutional activities and events, updates important notifications are regularly posted on the website to keep the Parents, students and all the stakeholders informed.
- The guidelines related to admission process and fee structure are also displayed on the college website for the benefit of prospective students.

#### 13) Enhance faculty development programs for non-teaching staff

With an aim to enhance the productivity and efficiency of the non-teaching staff (both technical and admininstrative], the institution and departments have been regularly conducting training sessions.

For the administrative staff members, training programmes on office management, communication skills, financial management, regulatory compliance and time management are conducted. For technical staff members, training programmes and workshops on laboratory and workshop equipment, software tools, safety protocols and others were regularly conducted. During the assessment period, a total of 20 training programmes have been conducted. The staff members are also encouraged to upgrade their qualification and skills. The Institution ensures that the company supplying equipments, provides comprehensive training to staff members on the usage and safety measures. This also maximises the efficiency and longevity of the equipment while minimizing the risk of accidents or misuse.



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### 14. Make better and effective use of Alumni's potential for improving quality as well as branding

To harness the full potential of BMSCE alumni community, initiatives aimed at engaging, empowering, and mobilizing alumni support for enhancing quality and branding have been strengthened. The Alumni of BMSCE provide dedicated support and contribute significantly to all institutional activities. The alumni occupy prominent positions both in India and across the globe. The BMSCE Alumni Association (BMSCEAA) is registered under societies on 07.07.2011 with Registered Number: DRB-C/SOR/66/2011-12. BMSCEAA is formed with an aim to build an actively engaged alumni network. BMSCE has an alumni base of over 40000 with more than 29000 currently registered. In addition, several national and international chapters are also active. Each chapter fosters lifelong relationships with its members, forming a relevant and engaged community. Presently there are 20 International chapters across the globe and 6 national chapters.

- The Academic Council, NAAC Internal Quality Assurance Cell, IQAC (Autonomous) Cell, Departmental Advisory Board (DAB) have representation of alumni who help in designing the curriculum, provide feedback on academic programs with focus on addressing the recent technologies and ensure that the college stays relevant to industry needs
- 2. The alumni are also involved in institutional initiatives and activities in the form of Tech fests, delivering guest/invited lectures, facilitating placement and internship and other activities which greatly enhance the learning experience for current students.
- 3. The proceeds of BMSCEAA Corpus are being used to recognize meritorious students in the form of Merit-Cum-Means Scholarships to top performing students and also extending financial support to needy students in the form of education loans. During the past five assessment years, a total of 86.78 lakhs worth scholarships were disbursed among 518 beneficiary students. Alumni Scholarship amount enhanced from Rs.10,000 per student to Rs.20,000 per student from the AY 2020-21. An educational loan amounting to the tune of 329.76 lakhs has been disbursed to needy students. During the assessment period, 23 deserving and needy students have been provided interest free educational loans to the tune of Rs.52.35 Lakhs.
- 4. The achievements of distinguished alumni have been highlighted on the college website, social media and other platforms aimed at strengthening institutional branding.



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### 15)Improve the placement and training in core companies with better job profiles

The placement scenario over the last decade has seen a significant shift towards computer science and allied courses. This trend is driven by the increasing demand for technology professionals in various industries. The graduates across programmes are looking for lucrative offers from Computer and allied industries/companies instead of preferring industries specific to their fields of study. The Placement and Training Department has adopted numerous measures to attract core companies and also enthuse students to take up offers relevant to their fields of study. Some of the measures adopted and outcomes achieved is enumerated hereunder:

- Industry-Oriented Curriculum: Updating the curriculum by including latest industrial trends, technologies, and practices specific to the core branches of study. Industry representatives are part of Board of Studies and Academic Council. They thoroughly scrutinize the curriculum and suitably suggest changes to ensure that the curriculum meets the industry requirement. The departments hold regular interaction with industry professionals regarding curriculum updates industry trends and demands. It is ensured that employable skill sets, knowledge and training are addressed while developing the curriculum.
- Partial delivery of courses by industry experts: With an aim to introduce industry trends and practices specific to the core area of study, the institution has mandated that every department offers one regular course in collaboration with industry under partial delivery of course by industry person.
- Internship and Co-op Programs: Facilitating internships with core companies. During the last five years, more than 30 core industries in the area of Mechanical Engineering, Electrical and Electronics, Civil Engineering, Chemical and Bio Tech Engineering are providing Internship to students which has helped them to improve their skills and enabled them to be industry ready.
- MOU and Industry Linkage- To gain exposure to the updated technology and innovations prevalent in industries, different MoU with well-known industries are entered. Creation of industry supported labs, project works, internships, industrial visits. Training and survey, research and development, problem solving, placements are the focus areas. Some of the MOUs signed recently are with Volvo, Dassault Systems, Renalyx Health Systems Private Ltd, Swakit Biotech Pvt Ltd, National Highway Authority of India (NHAI).
- Industry Connect events: play a crucial role in bridging the gap between academia and the industry. These events offer students, faculty and scholars' opportunity to exchange knowledge, showcase innovations, and foster collaborations. Phase Shift, NIRMAAN, DYNAMECH, NEWs Conference are some of the flagship events wherein coalescing ideas from core industry are the focus areas.



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- Phase Shift National Level Annual Tech Symposium: The two days technical symposium 'Phase Shift' is organized every year to commemorate Engineer's Day. The symposium has been a medium for effective industry interaction in which the industries showcase their expertise and product exhibits. Phase Shift organises a plethora of seminars, workshops, competitions and multidisciplinary events collaborated with industries on technological advances. As part of the symposium, more than 100 plus competitions and 50 plus workshops are held during the two days. The symposium attracts more than 4000 students from other institutions and 6000 plus BMSCE students.
- The Industry Connect Meet Sahayoga is conducted every year. New frontier areas of engineering and technology and expectations of the industry are the main focus areas. The annual event attracts more than 100 industry/employers. Feedback from employers on learning abilities, adaptability, curriculum, training needs are also obtained and analysed.
- **Alumni Engagement:** Leveraged alumni networks in core companies to create mentoring programs, networking events, and alumni talks. Alumni provide insights, referrals, and career guidance to current students.
- Industry Visits and Guest Lectures: industrial visits to core companies and invited / guest lectures, seminars, and panel discussions are regularly organised. This has enhanced students' understanding of industry practices and also fostered networking opportunities.
- **Placement Cell:** The proactive and dedicated placement cell regularly interacts with industry representatives.

### 16)Effective use of MOUs and collaborations for all-round growth of the Students and Faculty

The institution has more than 86 functional MoUs and linkages with institutions/industries in India and abroad for internship, on-the-job-training, project work, student exchange, collaborative research, Environmental sustainability, community outreach and others. The MOUs have also been powerful tools to enhance the all-round development of students by facilitating partnerships between institute and external organizations. Some of the major collaborative activities are enumerated hereunder

• Study Abroad Programme: The Grand Challenge Impact Lab (GCIL), India - A Collaboration Program with University of Washington, Seattle and B.M.S. College of Engineering, Bengaluru. The GCIL - a 15-credit course was offered to students of Washington University from 03.01.2024 to 31.03.2024 at BMSCE. The programme provided opportunity to foreign students to work with leading academicians, Social Entrepreneurs and Corporate leaders in India, and learn their approaches to address global challenges. The faculty and students of BMSCE hosted the visiting team. Grand Challenges (GCs) addressed problems facing humanity —like food security, clean energy, and poverty. Numerous projects were undertaken by the students as part of the GCIL Project. The faculty of BMSCE conducted hands-on



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sessions regarding probable solutions to GC problems. The solutions and probable ways to solve the projects undertaken by the students as part of GCIL were presented before the representatives of NGOs on 07.03.2023. The students also presented probable solutions for the GC Problems. The NGOs appreciated the efforts of the students in addressing the challenges and assured that they would review the solutions and take the initiatives forward from their end.

- The Institution reached an MOU with Adamya Chetana Foundation on 04.06.2022.
   It was a significant step toward promoting sustainability and environmental consciousness more specifically in the aspects of green lifestyle, environment, food, health and culture. More than 100 activities were conducted as part of the MOU with active participation of students and staff members.
- The BMSCE IPR Cell was established on 13.01.2021 in collaboration with Karnataka State Council for Science & Technology (KSCST), Bengaluru. The MOU was signed on 04.11.2020. The MOU has benefited the IP Cell to create awareness about IPR among the faculty and students by conducting workshops, seminars, Guest Lectures on IPR. As part of the MOU, the KSCST assist in Prior art search and filing of IP. The Invention Disclosure format -IDF submitted by the faculties and students is forwarded to the KSCST IP cell for prior art search. The KSCST identifies the novelty of the said IP and conveys the grading based on feasibility /potential of filing of the IP.
- Industry MOUs and Linkages: With an aim to gain exposure to the updated technology and innovation happening in industries, different MoU with well-known industries is entered. Creation of industry supported labs, project works, internships, industrial visits. Training and survey, research and development, problem solving, placements are the focus areas. Presently 64 functional MOUs with reputed industries are in voque.
- Industry Supported Laboratories: BMSCE has established 22 laboratories in the campus across disciplines with the support / sponsored by the reputed industries. These labs provide students practical knowledge that will support them in the industry. Some of the Major strategies adopted towards holistic development of students.

#### Other Initiatives towards around development of students.

- The curriculum is designed such that the students acquire domain knowledge, skills, ethical values and the right attitude. The programmes emphasise on critical thinking, problem solving and industry specific technical skills.
- The institution promotes research starting from the first year of engineering through unique do-it-yourself labs known as Propel Labs. Robotics and Embedded Systems, Bullz Racing, 3D Printing and Aerolabs are four propel labs where students work on the latest concepts and ideas. This foster student's engagement in research endeavours in the form of fabrication / coding / modelling / product design / process design / relevant scientific methodologies.



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- With an aim to guide the students to prospective careers, the institution has constituted Competitive Examinations and Higher Studies Cell (CEHSC). The CEHSC motivates the students to take up Competitive Exams such as GATE, CAT, GRE, TOEFL, GMAT, Civil services (UPSC, MPSC) etc, held throughout India.
- Numerous Student Forums/hobby Clubs provide students the opportunity to participate in a wide range of Co-Curricular, Extra-Curricular, Social and Community Development Activities conducted throughout the year. The clubs provide a platform for the students to discuss ideas related to different branches of science and organize as well as participate in various co-curricular and extracurricular activities.
- The courses on Humanities, Social Science, Basis Sciences, Engineering Sciences, Professional Core courses and Open Elective courses inculcate an interdisciplinary approach among students. Students across varied disciplines also team up to execute interdisciplinary projects.
- The National Service Scheme (NSS) and the National Cadet Corps (NCC) are integral components of the co-curricular ecosystem that actively contribute to the holistic development of students.
- The Sports and Cultural committee provide students the platform to showcase their talents and develop essential life skills.



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#### THE REPORT OF BIG FOUNDATION

BMSCE shall set standards for other institutions with respect to quality start-ups, creating greater number of entrepreneurs

- Conducted BIG Pitch with 14 participants
  - Identified 5 Startups for Grant
  - Identified 3 Startups for pre-seed for sustainable Waste to wealth Projects
  - 1 startup with Concept for R&D Funding
  - 1 Startup with Concept of support for enhancing Mental health with both Mentoring and VC Fund
  - 4 startups ready to Pitch to Investors

#### More collaborative activities with industry

- In Campus Internships:
  - GCPIT- 12 Applicants
  - Beegle.ai- 36 Applicants
  - Synapsenet- 47 Applicants
  - StayFlexi- 49 Applicants
  - SEED Global- 24 Applicants
  - Autoyos- 78 Applicants
- > Collaboration agreement signed with Mathworks for Accelerator Partnership
- Hackathon with Industries:
  - Approved: Mathworks
  - First Phase of discussions concluded:
    - Robert Bosch
    - Philips
    - Carl Zeiss
    - GE Healthcare
    - HP

#### Success Story: Rana Vivek Singh, CEO of Magicroll.ai

Revolutionizing video editing by adding engaging B-rolls (text and picture overlays, popups, captions) to videos within minutes without human intervention

- ► 600+ Customers (60% USA)
- ➤ Monthly Recurring Revenue \$1200
- ➤ \$1.2M Annual Recurring Revenue projection with the growth of 40% Month on Month
- ➤ Total Funding Received:
  - 26 Lakhs from the Accelerator, Change Engine
  - STPI Next GOI: 35 lakh
  - Funding in Pipeline: 6.4Cr

#### Section IV: Recommendations for Quality Enhancement of the Institution

(Please limit to **ten major ones** and use telegraphic language) (It is not necessary to indicate all the ten bullets)

- • Try to get deemed University Status
- Faculty may be further encouraged to practice more advanced ICT enabled teaching-learning methods including e-learning resources.
- Academic audit and Peer team evaluation by external experts may be undertaken periodically
- Design and Develop the courses and programs as per the requirement of Industry 4.0
- More encouragement to students to opt for MOOCs courses. Their progress needs to be monitored on regular basis.
- The Curriculum has to be designed in a such a way to accommodate mandatory industry internship as
  well as interdisciplinary courses and research internship preferably in a overseas university by
  allocating some credits for the same;
- Efforts and mechanisms to be worked out to attract high quality faculty to bring in conceptual based learning with research and applied orientation;
- Special focus may be given to aggressively and strategically push innovation and entrepreneurship agenda among staff and students;
- The Institute may go for MoUs with premier academic institutions for innovative teaching learning methods and research.
- Integrated Dual Degree Program with partnership from industry may be offered.
- The institute may consider introducing national skill development programmes
- Improve the campus wide integrated information system for effective academic and administrative management to pass on academic other information to parents.
- Enhance faculty development programs for non-teaching staff

BANGALORE

- Make better and effective use of Alumni's potential for improving quality as well as branding
- Improve the placement and training in core companies with better job profiles
- Effective use of MOUs and collaborations for all-round growth of the Students and Faculty

I have gone through the observations of the Peer Team as mentioned in this report

Signature of the Head of the Institution

B.M.S. College of Engineering
(Autonomous College under VTU)

Bangalore - 560 019

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### NAAC-INTERNAL QUALITY ASSURANCE CELL [IQAC]

AGENDA FOR THE MEETING OF THE NAAC IQAC CORE COMMITTEE TO BE HELD ON 31.08.2024 [SATURDAY] AT 11.00 AM IN THE BOARD ROOM OF THE COLLEGE

- 1. Confirmation of the minutes of the previous meeting of NAAC IQAC core committee.
- 2. Address by Principal, BMSCE Summary of Key Initiatives and institutional accomplishments since the previous IQAC core committee meeting.
- 3. A brief report by Chief Coordinator, IQAC regarding NAAC cycle III accreditation process, activities, submission of SSR, pre-qualification, grading and others.
- 4. Compliance report on the previous NAAC peer team observations
- 5. Role of IQAC core-committee during the peer team visit

6. Any other subject with the permission of the chair

Chief-Coordinator, IOAC

Principal & Chairperson