



Yearly Status Report - 2018-2019

Part A

Data of the Institution

1. Name of the Institution		B.M.S.COLLEGE OF ENGINEERING
Name of the head of the Institution		Dr. B.V.RAVISHANKAR
Designation		Principal
Does the Institution function from own campus		Yes
Phone no/Alternate Phone no.		08026614356
Mobile no.		9945517699
Registered Email		principal@bmsce.ac.in
Alternate Email		prof.bvrs@gmail.com
Address		P.O.Box. No.1908, Bull Temple Road, Bengaluru
City/Town		Bengaluru
State/UT		Karnataka
Pincode		560019

2. Institutional Status					
Autonomous Status (Provide date of Conformant of Autonomous Status)		01-Jul-2008			
Type of Institution		Co-education			
Location		Urban			
Financial Status		Self financed and grant-in-aid			
Name of the IQAC co-ordinator/Director		Dr.Mangala Keshava			
Phone no/Alternate Phone no.		08026614356			
Mobile no.		9845675201			
Registered Email		iqac@bmsce.ac.in			
Alternate Email		mk.civ@bmsce.ac.in			
3. Website Address					
Web-link of the AQAR: (Previous Academic Year)		https://bmsce.ac.in/assets/files/aqar/aqar_2017-18.pdf			
4. Whether Academic Calendar prepared during the year		Yes			
if yes,whether it is uploaded in the institutional website: Weblink :		https://www.bmsce.ac.in/assets/files/AQAR2018-19/Part%20A%2004-Calendar%20of%20Events.pdf			
5. Accrediation Details					
Cycle	Grade	CGPA	Year of Accrediation	Validity	
				Period From	Period To
1	A	3.41	2013	05-Jan-2013	04-Jan-2018
2	A++	3.83	2019	28-Mar-2019	27-Mar-2024
6. Date of Establishment of IQAC			01-Mar-2014		
7. Internal Quality Assurance System					

Quality initiatives by IQAC during the year for promoting quality culture

Item /Title of the quality initiative by IQAC	Date & Duration	Number of participants/ beneficiaries
Phase Shift 2018	15-Sep-2018 2	2000
Academic Audit - Higher Semesters	11-Aug-2018 1	275
Facilitating Monitoring, Evaluation and Continuation of Autonomy Committee (MEC) of University (VTU)	08-Aug-2018 1	350
Academic Audit - I Semester	06-Aug-2018 1	70
TEQIP sponsored Professionalism and Skill Development (MCA Dept)	02-Jul-2018 5	40
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8. Provide the list of Special Status conferred by Central/ State Government-UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
Civil Engineering	GIAN	MHRD- GIAN	2018 7	5.44
Bio Technology	DBT-STAR	DBT	2018 1460	25
Information Science	TEQIP	TEQIP-III	2018 122	0.1
Information Science	TEQIP	TEQIP-III	2018 122	0.12
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9. Whether composition of IQAC as per latest NAAC guidelines:

Yes

Upload latest notification of formation of IQAC

[View File](#)

10. Number of IQAC meetings held during the year :

1

The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website

Yes

Upload the minutes of meeting and action taken report

[View File](#)

11. Whether IQAC received funding from any of the funding agency to support its activities during the year?	No
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12. Significant contributions made by IQAC during the current year(maximum five bullets)

• Monitoring of the academic and nonacademic process through scheduled internal audits • Preparation of the Annual Quality Assurance Report (AQAR) as per guidelines of NAAC • Providing necessary support system for student related issues and also creating awareness about student services • IQAC worked continuously for collecting and collating qualitative quantitative data from every unit of the Institution. Maintaining cumulative record of all the departmental activities/achievements. • Constitution of Differently Abled Service Cell to empower Differently Abled students. Competitive Exam Higher Study Cell [CEHSC) to motivate aspiring students to take up all types of Competitive Exams • Provide information towards applications to Visvesvaraya Technological University, AICTE, UGC etc • Providing information to various Governmental and NonGovernmental Application/ Surveys/Data Captures and make necessary and prompt followup • Provide regular information towards review of Strategic Plan and Quality Initiatives • Organization of workshops, seminars on quality related themes and promotion of quality circles etc • The IQAC is the nodal agency of the institution for quality related endeavors.

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13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year

Plan of Action	Achievements/Outcomes
To introduce on Undergraduate Course in Aerospace Engineering	The Institution introduced new Undergraduate Course in Aerospace Engineering commencing from the Academic Year 2018-19
To Enhance the Industry Collaboration for Delivering Tangible outcomes	To promote additional industry-academia networking, numerous guest and invited lectures are conducted by industry personnel. This is aimed to communicate to the faculty and students the industry viewpoints regarding attitudes, needs.
To give more focus on Humanities & Social Science (HSS) Course to enhance the wellness and overall grooming of students like Yoga, Physical Education and other activities	• Current AICTE curriculum includes HSS courses upto 8 of the total credits in the curriculum. We have taken the guidelines from AICTE and VTU and scheduled to assign 7 to 10 of the total credits for HSS courses. • Yoga and Physical Education is offered as a mandatory course as part of the curriculum. • Three week induction programme including, yoga, inter personal relations communications, stress and time management etc. were

	held during August 2018.
To start Certificate Courses / One year Diploma Courses	<ul style="list-style-type: none"> The industry driven one credit course is mandated in 7th semester curriculum. Here the course will be taught by industry personnel.
Content Development of selected courses in all the Departments for Developing BMSCE MOOCs	<ul style="list-style-type: none"> MOOCs is included as 2 credits courses in the overall curriculum for several disciplines across the institute
To organize international conference on Innovation and Technology	<ul style="list-style-type: none"> 16th International Conference on Remote Engineering and Virtual Instrumentation was held from 03-06 February 2019 at BMSCE ICNEWS 2018 International Conference sponsored by IEEE (December 2018)
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14. Whether AQAR was placed before statutory body ?	Yes
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Name of Statutory Body	Meeting Date
IQAC	21-Sep-2019

15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	Yes
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Date of Visit	23-Mar-2019
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16. Whether institutional data submitted to AISHE:	No
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17. Does the Institution have Management Information System ?	Yes
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If yes, give a brief description and a list of modules currently operational (maximum 500 words)	<p>The Management has introduced Management information systems (MIS) for development, maintenance, management, and study of computer based information systems in organizations. The Implementation of eGovernance in areas of operation is noted hereunder:</p> <ul style="list-style-type: none"> Planning and Development of eGovernance for making system digitized (since 2011) Administration Development of eGovernance for making system digitized (2011) Finance and Accounts Tally Solutions (since 1998) Student Admission and Support LYBSYS (Library) 2011 Student Admission and Support (Tech FocZ (Library) - (since 2014) Student Admission and Support
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Inflibnet (Library) - (since 2016) • Student Admission and Support Olive Board (Placement) - (since 2013) • Student Admission and Support Data Capture (since 2013) • Student Admission and Support eYantra (since 2014) • Student Admission and Support Inpods Ell scholar (since 2011) • Student Admission and Support Blended MOOCs (since 2013) • Student Admission and Support MATLAB (since 2013) • Student Admission and Support ELL Scholar (Language Laboratory) (since 2012) • Student Admission and Support AKS PLUS (Language Laboratory) (since 2013) • Examination Software (inhouse) (2008) Best Practice - Student Admission Process With a view to make the admission process transparent, simple and student friendly, the college has adopted indigenous development ERP Module called BMS app Objective • To make the admission process transparent, time bound, student and administration friendly. • To incorporate technology in admission process • To follow the admission guidelines of Government and Affiliating University. • To create the database for the various purposes which saves the time and to make the process economical. • The college website (www.bmsce.in) has admission link which provides all the detailed information for the students regarding programmes and courses offered, guidelines, eligibility and fees structure. The College follows online admission process by using indigenous development ERP Module called BMSAPP. The students can fill up online registration form by logging to admission link which is made available on college website. The filled in forms are checked and verified by the admission committee. • After confirmation of the admission form, the student can pay the admission fees through online portal PayU using any one of the modes, Credit Card, Debit Card, Internet Banking, and Swift Transfer. The software is used to generate roll call, library identify card and admission fees receipt. • The college follows all the norms of the Government and Affiliating University in admission process. The economically weaker students can pay the fees in instalments with a prior permission of

the Principal. The administration gives preference to physically challenged students in admission process. The whole process of admission process takes hardly 10 to 15 minutes per student and a confirmation mail regarding the completion of admission process is sent to student mail ID automatically. The whole process of admission process takes hardly 10 to 15 minutes per student and confirmation mail regarding the completion of admission process is sent to student mail ID automatically. This enables the Head of the Institution to monitor the ongoing admission process with day to day summary.

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Design and Development

1.1.1 – Programmes for which syllabus revision was carried out during the Academic year

Name of Programme	Programme Code	Programme Specialization	Date of Revision
BE	CV	Civil Engineering	31/10/2018
Mtech	CTM	Transportation Engineering and Management	31/10/2018
Mtech	CCT	Construction Technology	31/10/2018
Mtech	CEE	Environmental Engineering	31/10/2018
BE	ME	Mechanical Engineering	31/10/2018
BE	EC	Electronics & Communication Engineering	31/10/2018
Mtech	LDC	Digital Communications	31/10/2018
Mtech	LEL	Electronics	31/10/2018
Mtech	LVS	VLSI & Embedded Systems	31/10/2018
BE	EC	Electronics & Communication Engineering	31/10/2018

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1.1.2 – Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the Academic year

Programme with Code	Programme Specialization	Date of Introduction	Course with Code	Date of Introduction
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BE	Civil Engineering	31/10/2018	Software Application Lab (16CV6DCSWL)	31/10/2018
BE	Civil Engineering	31/10/2018	Internship/Industrial Training (16CV8DMITP)	31/10/2018
BE	Civil Engineering	31/10/2018	Major Project work(11CV8DCMAP)	31/10/2018
BE	Civil Engineering	31/10/2018	CAD Laboratory (16CV5DCCDL)	31/10/2018
BE	Mechanical Engineering	31/10/2018	Mechatronics 16ME7DCMCT	31/10/2018
BE	Mechanical Engineering	31/10/2018	Project Management & Financial Accounting 16ME7DCPMF	31/10/2018
BE	Mechanical Engineering	31/10/2018	N A Mechanical Lab 16ME7DLNAM	31/10/2018
BE	Mechanical Engineering	31/10/2018	I.C. E Lab 16ME7DLICE	31/10/2018
BE	Mechanical Engineering	31/10/2018	Fracture Mechanics 16ME7DEFRM	31/10/2018
BE	Mechanical Engineering	31/10/2018	Advanced Robotics 16ME7DEARB	31/10/2018
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1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the Academic year

Programme/Course	Programme Specialization	Dates of Introduction
Mtech	English for Research Paper Writing	07/09/2018
Mtech	Business Analytics	07/09/2018
Mtech	Business Models and Entrepreneurship	07/09/2018
Mtech	Web Technology	07/09/2018
Mtech	Big Data Analytics	07/09/2018
Mtech	Advanced Machine Learning	07/09/2018
Mtech	High Performance Communication Networks	07/09/2018
Mtech	Secure Coding	07/09/2018
Mtech	Security Assessment and Risk Analysis	07/09/2018

Mtech	Mathematical Foundations of Computer Networks	07/09/2018
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1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the College level during the Academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
BE	Civil Engineering	01/07/2018
BE	Mechanical Engineering	01/07/2018
BE	Electrical & Electronics Engineering	01/07/2018
BE	Electronics and Communications Engineering	01/07/2018
BE	Industrial Engineering and Management	01/07/2018
BE	Computer Science & Engineering	01/07/2018
BE	Telecommunication Engineering	01/07/2018
BE	Information Science and Engineering	01/07/2018
BE	Electronics and Instrumentation Engineering	01/07/2018
BE	Medical Electronics	01/07/2018
BE	Chemical Engineering	01/07/2018
BE	Biotechnology	01/07/2018
BE	Aerospace Engineering	01/07/2018
Mtech	Construction Technology [CV]	01/07/2018
Mtech	Machine Design [ME]	01/07/2018
Mtech	Electronics [EC]	01/07/2018
Mtech	Power Electronics [EE]	01/07/2018
Mtech	Computer Science and Engineering [CSE]	01/07/2018
Mtech	Digital Communications [EC]	01/07/2018
Mtech	Environmental Engineering [CV]	01/07/2018
Mtech	Transportation Engineering and Management [CV]	01/07/2018
Mtech	Computer Networking and Engineering [IS]	01/07/2018
Mtech	Biochemical Engineering	01/07/2018

	[CH]	
Mtech	Biomedical Signal Processing and Instrumentation [ML]	01/07/2018
Mtech	Manufacturing Science and Engineering [ME]	01/07/2018
Mtech	VLSI and Embedded Systems [EC]	01/07/2018
MCA	Masters in Computer Applications	01/07/2018
MBA	Business Administration	01/07/2018

1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
Finishing School on Soft Skills- Assessment and Training for pre-Final Year IEM Students	04/05/2018	66
Leading a Life of Visionary	09/07/2018	55
Student Internship Program on Fundamentals of Physical Design	18/07/2018	25
Student Internship on Hands-on in Network Lab	23/07/2018	20
One week value added program on Soft Skills (R PROGRAMMING MATLAB)	02/08/2018	30
Data Science	27/08/2018	60
Workshop on "Gazing with Machine Learning" Phase Shift 2018	15/09/2018	23
Workshop on "Power of Altair Technology for design of complex machines" Phase Shift 2018	15/09/2018	23
Workshop on "Artificial Intelligence and Deep Neural Networks" Phase Shift 2018	15/09/2018	80
workshop on "FEKO-Antenna Design and Simulation" Phase Shift 2018	15/09/2018	27

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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
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BE	Internship Programme	109
BE	Jai Sai Construction	1
BE	PWD	1
BE	BMRG Projects India Pvt Ltd.,	1
BE	DRN Infrastructure	1
BE	PWD, Jabalpur	1
BE	Nitesh Estates	1
BE	Samruddhi Constructions	3
BE	Laxmi Construction Co.	1
BE	Namma Metro	6
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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	Yes
Alumni	Yes
Parents	Yes

1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution?
(maximum 500 words)

<p>Feedback Obtained</p> <p>A structured feedback is received from all the stake holders namely 1) students, 2) Teachers, 3) Employers, 4) Alumni and 5) Parents, for design and review of syllabus - semester wise/year wise. The curriculum is developed based in the industrial/societal needs. Students, teachers, alumni and industry personnel are given an opportunity to provide feedback on curriculum through different platforms. All are invited to BOS, Academic council meetings and BOG meetings. Course End Survey (CES) is taken by every student registered in the course and hence provides a platform for individual student feedback of the course. One more survey called the exit survey is conducted for the graduating batch. This survey gives an opportunity for students to comment on the curriculum, its depth and breadth and any suggestions for improvement. In addition to the feedbacks obtained from different stakeholders at different levels, a formal questionnaire is also sent through Google forms and the college portal. The set of questions vary for different stakeholders. Based on the feedback obtained, the following are the observations made with regard to the degree of satisfaction with respect to curriculum. Feedback - Students The feedback document with regard to curriculum was floated on the college website. Nine queries were asked. A rating of 5 to 1 was followed depending upon the level of satisfaction. Average rating was 3.3 and score of 65.6 was found. Those queries whose rating was less than the average was marked for improvement. This included that the syllabus load was heavy and that the evaluation scheme needs to be looked into. Feedback - Teachers The feedback obtained from teachers had 8 questions, the average rating was 4.2 and average score was 84.6. The points which need to be strengthened were requirement of industry based courses and recent advances in the courses needs to be included. Feedback - Alumni The alumni in their feedback have felt that curriculum based</p>

training for competitive examinations and remedial coaching needs more attention. The average rating was 3.5 and score was 69.4. Feedback - Parents The feedback obtained from parents of the wards emphasize that curriculum with holistic development needs to be incorporated and startups need to be encouraged. The average rating was 3.9 and a score of 78.8 was found. Feedback - Employers The feedback from employers had seven queries. The average rating and score obtained was 4.6 on a scale of 5 and 92. Two parameters which showed less than the overall average was with regard to exercising creativity and attitude to work beyond schedule. Based on the feedback obtained, points indicated will be taken up during the curriculum revision which is due in 2020. One faculty member has been nominated to coordinate for the competitive examination coaching. A cell has been formed to encourage students to become entrepreneurs and to launch the startups with the help of the institution coordinator. Regarding issues such as creativity and attitude problems, it is planned to take up during placement training and other orientation programmes.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 – Student Enrolment and Profile

2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled
BE	Civil Engineering	180	2700	180
BE	Mechanical Engineering	180	2700	180
BE	Electronics and Communication Engineering	180	900	180
BE	Electrical Engineering	60	600	60
BE	Industrial Engineering and Management	60	900	60
BE	Computer Science and Engineering	120	3000	120
BE	Telecommunication Engineering	60	900	60
BE	Information Science and Engineering	120	3500	120
BE	Electronics & Instrumentation Engineering	60	400	60
BE	Medical Electronics	60	400	59

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2.2 – Catering to Student Diversity

2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of	Number of	Number of	Number of	Number of
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	students enrolled in the institution (UG)	students enrolled in the institution (PG)	fulltime teachers available in the institution teaching only UG courses	fulltime teachers available in the institution teaching only PG courses	teachers teaching both UG and PG courses
2018	4231	912	278	69	347

2.3 – Teaching - Learning Process

2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Number of smart classrooms	E-resources and techniques used
344	247	45	69	15	24

[View File of ICT Tools and resources](#)

[View File of E-resources and techniques used](#)

2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

B.M.S. College of Engineering introduced a formal student mentoring system when it attained academic autonomy. This system is referred to as 'student proctoring system' and has proved to be a very effective tool in addressing the academics of each and every student uniformly. Each student is diverted to a particular faculty member right at the beginning when he/she enters the portals of the institution. By doing so, the student is thus in the safe hands of the proctor. Every student entering the college is assigned a faculty mentor (or proctor). Every proctor has around 25 students. The same proctor is retained for four years (or until he/she graduates). Proctors are viewed as academic guides on campus. The Institution has designed a proctor diary, and there exists two copies for every student: one copy is with the student, while the other is with the proctor. The initial content in the proctor diary includes essential personal details of the student like Name, Date of birth, home town, residential address, parent's details, any medical history, contact details, hobbies, significant achievements, emergency contact details etc. This initial personal details are then followed by the academic details of the student. It includes details like courses registered, grades secured, attendance status, credits earned, courses that need to be taken up again, etc. These details are entered at the beginning of every semester, and constantly updated during the semester. These academic details are then followed by details of individual student achievements- in co-curricular activities, extra-curricular activities, awards, internships, training programs, performance in competitive examinations, etc. The proctor diary then includes details of leave record of the student, meetings with proctor and meetings with parents'. The proctor diary is an in-house designed booklet that captures all academic and non-academic details of the students during his engineering program. The proctor diary is a document that serves as a ready reference to monitor and guide the students on all academic matters, especially in selection of electives, and academic rules and regulations of the college. Besides the entries in the proctor diary, the proctor constantly monitors, discusses and engages with the students. The entire system of student-proctor, has served useful, especially in situations where there are continuous changes in academic regulations, credits to be earned etc. The bond between the student and his/her proctor is such that every success and difficulty, they resort to the proctor to share their stories. This proctoring mechanism has indeed proved to be beneficial to the student community.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
5143	344	15

2.4 – Teacher Profile and Quality

2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
25	25	25	25	11

2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National,

International level from Government, recognised bodies during the year)

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2018	Dr.Managala Keshava	Associate Professor	Best paper :National conference on Recent trends in Architecture Civil Engineering towards energy efficient and Sustainable Architecture (NCACESD 2019)
2018	Dr.H B Nagaraj	Professor	For Being in the Top 1 of Reviewers in the World- Verified By Clarvaite Analytics - PUBLONS PEER REVIEWER AWARD 2018
2018	Dr.Girish S	Professor	Best paper 2nd International Conference
2018	Dr .R.V.Ranganath	Professor	Mr.Naveen Katavi, Student of M.Tech. (Construction Technology) submitted thesis titled "Ultra High Performance Concrete by Nano Materials" - Best Thesis by the Indian, Concrete Institute, Bengaluru
2019	Madhav Murthy	Assistant Professor	Certificate of Appreciation towards reviewing Research papers of ICTIEE 2019 conference, Research papers of 6th International Conference on Transformations in Engineering Education (ICTIEE 2019)
2019	Shashiraj	Assistant Professor	Dassault Systems Peer Learning Experience Program (PLEXP).

2019	Arjun C C	Assistant Professor	Certificate of Appreciation from the Rotaract District Council 3190
2018	Dr.B. Ravishankar	Professor	Dr. J M Mahajan Award
2018	Dr.K. J. Rathanraj	Professor	Marquis Whos Who
2018	Dr.B. R. Ramji	Professor	RULA Award for outstanding Scientist
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2.5 – Evaluation Process and Reforms

2.5.1 – Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
BE	ML	VIII	03/06/2019	12/06/2019
BE	EI	VIII	03/06/2019	12/06/2019
BE	IS	VIII	03/06/2019	12/06/2019
BE	TE	VIII	03/06/2019	12/06/2019
BE	CS	VIII	03/06/2019	11/06/2019
BE	IM	VIII	03/06/2019	12/06/2019
BE	EE	VIII	03/06/2019	12/06/2019
BE	EC	VIII	03/06/2019	11/06/2019
BE	ME	VIII	03/06/2019	13/06/2019
BE	CV	VIII	03/06/2019	12/06/2019
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2.5.2 – Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage
554	11282	4.91

2.6 – Student Performance and Learning Outcomes

2.6.1 – Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the weblink)

<https://bmsce.ac.in/assets/files/agar/documents/2.6.1-Program%20outcomes.pdf>

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
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CV	BE	Civil Engineering	136	130	96
ME	BE	Mechanical Engineering	187	181	97
EC	BE	Electronics and Communication Engineering	158	153	97
EE	BE	Electrical Engineering	74	70	95
IM	BE	Industrial Engineering and Management	65	63	97
CS	BE	Computer Science & Engineering	156	150	96
TE	BE	Telecommunication Engineering	66	63	95
IS	BE	Information Science & Engineering	116	111	96
EI	BE	Instrumentation Technology	32	31	97
ML	BE	Medical Electronics	26	26	100
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2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

<https://bmsce.ac.in/assets/files/agar/documents/Student%20Feedback%20on%20TLP%20Overall%20Report-2018-19.pdf>

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Promotion of Research and Facilities

3.1.1 – The institution provides seed money to its teachers for research

Yes

Name of the teacher getting seed money

Chandraprasad MS, V.Saisha, Balachandra K, Shreenivas B, Manjunath P.S.,
Gurumurthy Hegde

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3.1.2 – Teachers awarded National/International fellowship for advanced studies/ research during the year

Type	Name of the teacher awarded the fellowship	Name of the award	Date of award	Awarding agency
National	NIL	NA	01/06/2018	NA
International	NIL	NA	01/06/2018	NA
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3.2 – Resource Mobilization for Research

3.2.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Major Projects	730	MINISTRY OF DEFENCE	8.94	0.2
Interdisciplinary Projects	1095	SERB	28.68	6
International Projects	730	SEK-C (INTERNATIONAL FUNDS RECEIVED)	33.29	7.28
Interdisciplinary Projects	1095	SERB	45.08	24.74
Major Projects	365	VGST	5	5
Interdisciplinary Projects	1095	SERB	25.25	5
Major Projects	365	AICTE	3	2.4
Major Projects	365	DBT	6	6
Interdisciplinary Projects	30	GOI (DEPT OF ATOMIC ENERGY)	21.33	1.5
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3.2.2 – Number of ongoing research projects per teacher funded by government and non-government agencies during the years

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3.3 – Innovation Ecosystem

3.3.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
NIRmaan ICESS-2018	Civil Department	18/11/2018
Phase shift	Civil Department	15/09/2018
GIAN course on Integrated Water Resource and Management	Civil Department	11/02/2019
Overview of MATLAB Software	Civil Department	03/05/2019
Advanced Manufacturing"	Mechanical	16/07/2018
Phase Shift- 2018	Mechanical	15/09/2018

Workshop on CAD Modeling, MATLAB and ANSYS'	Mechanical	06/10/2018
Training on "Hydraulics and Pneumatics"	Mechanical	29/10/2018
IMTEX-2019 Exhibition	Mechanical	24/01/2019
Data acquisition for space systems	Electronics Instrumentation	15/09/2018
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3.3.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
Second place for the poster "Object detection and Identification for Surveillance" in Poster Presentation competition	Abhijit H K	International Association of Online Engineering	02/03/2019	Student
Second place for the poster "Object detection and Identification for Surveillance" in Poster Presentation competition	Dhiraj S Shet	International Association of Online Engineering	02/03/2019	Student
Second place for the poster "Object detection and Identification for Surveillance" in Poster Presentation competition	Kaushal K	International Association of Online Engineering	02/03/2019	Student
Second place for the poster "Object detection and Identification for Surveillance" in Poster Presentation competition	Dr.Jyothi S Nayak	International Association of Online Engineering	02/03/2019	Teacher
Second place for the poster "Automated	Dr.Jyothi S Nayak	International Association of Online	02/03/2019	Teacher

Vehicle Entry System" in Poster Presentation competition		Engineering		
Author for developing online learning material for Dassault Systèmes Peer Learning Experience Program (PLEXP).	Shashiraj	Dassault Systems Peer Learning Experience Program (PLEXP).	21/02/2019	Teacher
III consolation prize "Mitsubishi Electric Cup" 2019 Team Name COGNIZERS	Pranav M, Rachana S Raju, Kanishka Rai, Keshav Kumar Thakur, Dr. Santosh R Desai	Mitsubishi Electric India, National-level Automation Competition in India	16/02/2019	Student
Gold, Silver and Bronze medals in Para-swimming competitions, Sharja	Mr. N. Punith	IWAS World Games UAE 2019	16/02/2019	Student
Certificate of Appreciation towards reviewing Research papers of ICTIEE 2019 conference, Research papers of 6th International Conference on Transformations in Engineering Education (ICTIEE 2019)	Madhav Murthy	Certificate of Appreciation towards reviewing Research papers of ICTIEE 2019 conference	12/01/2019	Teacher
Best Thesis Award of Mtech Thesis by Indian Concrete Institute Bengaluru	Mr. Naveen Katavi	Indian Concrete Institute Bengaluru 2018	05/09/2018	Student
View File				

3.3.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsored By	Name of the Start-up	Nature of Start-up	Date of Commencement
Start-ups-BMSCE	RAHUL Sarwad	-	LAS INNOVATIONS	Product Service	07/05/2019

Start-ups- BMSCE	DHANUSH	-	ANNADAT	Service	07/05/2019
Start-ups- BMSCE	Mohammad Arfan	-	BAUTOMATE	Product	07/05/2019
View File					

3.4 – Research Publications and Awards

3.4.1 – Ph. Ds awarded during the year

Name of the Department	Number of PhD's Awarded
Mathematics	1
Business Administration [MBA]	3
Biotechnology	1
Civil Engineering	5
Computer Science Engineering	2
Electrical and Electronics Engineering	2
Electronics and Communications Engineering	3
Industrial Engineering Management	1
Information Science Engineering	2
Mechanical Engineering	4
Chemistry	2

3.4.2 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
International	Civil Engineering	32	2.06
International	Mechanical Engineering	24	1.59
International	Electrical Electronics Engineering	6	4.68
International	Electronics and Communications Engineering	39	3.52
International	Industrial Engineering and Management	5	0.31
International	Computer Science Engineering	25	3.64
International	Telecommunication Engineering	9	1.47
International	Information Science and Engineering	41	4.27
International	Electronics and Instrumentation Engineering	2	3.27

International	Medical Electronics	7	2.14
View File			

3.4.3 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
Chemical Engineering	16
Medical Electronics	8
Information Science and Engineering	25
Telecommunication Engineering	33
Computer Science and Engineering	36
Industrial Engineering and Management	12
Electronics and Communications Engineering	30
Electrical and Electronics Engineering	20
Mechanical Engineering	1
Civil Engineering	29
View File	

3.4.4 – Patents published/awarded during the year

Patent Details	Patent status	Patent Number	Date of Award
Automated de-clogging system using an air blaster.	Published	201841031269	21/08/2019
An Eye-gaze tracking system and a method for operating the same.	Filed	201941009943	14/03/2019
An Interposer	Filed	201941020352	22/05/2019
Radio frequency identification based user database management system.	Filed	201941025817	28/06/2019
Reversibly photolocable azobenzene derivatives.	Published	4050/CHE/2015	10/05/2019
View File			

3.4.5 – Bibliometrics of the publications during the last academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
Ultra-sensitive H2S	Raghavan M.S., Muralidharan	Materials Research Express	2019	0	B.M.S. College of Engineerin	0

sensing at ppb concentrations by barely crystalline WO _x /W thin film	G., Pramanik A., Shivas hankar S.A., Bhat N.				g	
Role of iron in the enhanced reactivity of pulverized Red mud: Analysis by Mössbauer spectroscopy and FTIR spectroscopy	Singh S., Aswath M.U., Das Biswas R., Ranganath R.V., Choudhary H.K., Kumar R., Sahoo B.	Case Studies in Construction Materials	2019	3	B.M.S. College of Engineering	3
Retinal vascular fractal dimension in bipolar disorder and schizophrenia	Appaji A., Nagendra B., Chako D.M., Padmanabha A., Hiremath C.V., Jacob A., Varambally S., Kesavan M., Venkatasubramanian G., Rao S.V., Webers C.A.B., Berendschot T.T.J.M., Rao N.P.	Journal of Affective Disorders	2019	1	B.M.S. College of Engineering	1
Role of mixed nanofluids on fluid flow and intensify energy transfer in a boundary layer region driven by a free	Ammani Kuttan B., Manjunatha S., Jayanthi S., Gireesha B.J.	Heat Transfer - Asian Research	2019	0	B.M.S. College of Engineering	0

convective force						
Examination of retinal vascular trajectory in schizophrenia and bipolar disorder	Appaji A., Nagendra B., Chako D.M., Padmanabha A., Jacob A., Hiremath C.V., Varambally S., Kesavan M., Venkatasubramanian G., Rao S.V., Webers C.A.B., Barendschot T.T.J.M., Rao N.P.	Psychiatry and Clinical Neurosciences	2019	2	B.M.S. College of Engineering	2
Efficient task allocation approach using genetic algorithm for cloud environment	Rekha P.M., Dakshayini M.	Cluster Computing	2019	3	B.M.S. College of Engineering	3
Denoising using self adaptive radial basis function	Jeelani A., Veena M.B.	Indonesian Journal of Electrical Engineering and Informatics	2019	0	B.M.S. College of Engineering	0
Strategies to reduce radiation exposure in electrophysiology and interventional cardiology	Shankar S., Padmanabhan D., Chandrashekharaiah A., Deshpande S.	US Cardiology Review	2019	0	B.M.S. College of Engineering	0
Influence of reactive SiO ₂ and Al ₂ O ₃ on mechanical and durability	Dinesh H.T., Shivakumar M., Dharmaprakash M.S., Ranganath R.V.	Asian Journal of Civil Engineering	2019	1	B.M.S. College of Engineering	1

properties of geopolymers						
Coordination chemistry of expanded porphyrins	Alka A., Shetti V.S., Ravikanth M.	Coordination Chemistry Reviews	2019	5	B.M.S. College of Engineering	4
View File						

3.4.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
Ultra-sensitive H ₂ S sensing at ppb concentrations by barely crystalline WO _x /W thin film	Raghavan M.S., Muralidharan G., Pramanik A., Shivanankar S.A., Bhat N.	Materials Research Express	2019	12	0	B.M.S. College of Engineering
Role of iron in the enhanced reactivity of pulverized Red mud: Analysis by Mössbauer spectroscopy and FTIR spectroscopy	Singh S., Aswath M.U., Das Biswas R., Ranganath R.V., Choudhary H.K., Kumar R., Sahoo B.	Case Studies in Construction Materials	2019	12	3	B.M.S. College of Engineering
Retinal vascular fractal dimension in bipolar disorder and schizophrenia	Appaji A., Nagendra B., Chako D.M., Padmanabha A., Hiremath C.V., Jacob A., Varambally S., Kesavan M., Venkatasubramanian G., Rao	Journal of Affective Disorders	2019	12	1	B.M.S. College of Engineering

	S.V., Webers C.A.B., Be rendscho T.T.J.M., Rao N.P.					
Role of mixed nanofluids on fluid flow and intensify energy transfer in a boundary layer region driven by a free convective force	Ammani Kuttan B., Manjunatha S., Jayanthi S., Gireesha B.J.	Heat Transfer - Asian Research	2019	12	0	B.M.S. College of Engineering
Examination of retinal vascular trajectory in schizophrenia and bipolar disorder	Appaji A., Nagendra B., Chako D.M., Padmanabha A., Jacob A., Hiremath C.V., Varambally S., Kesavan M., Venkatasubramanian G., Rao S.V., Webers C.A.B., Be rendscho T.T.J.M., Rao N.P.	Psychiatry and Clinical Neurosciences	2019	12	2	B.M.S. College of Engineering
Efficient task allocation approach using genetic algorithm for cloud environment	Rekha P.M., Dakshayini M.	Cluster Computing	2019	12	3	B.M.S. College of Engineering
Denoising using self adaptive	Jeelani A., Veena M.B.	Indonesian Journal of Electrical	2019	12	0	B.M.S. College of Engineering

radial basis function		Engineering and Informatics				g
Strategies to reduce radiation exposure in electro physiology and interventional cardiology	Shankar S., Padmanabhan D., Chandrashekharaiah A., Deshpande S.	US Cardiology Review	2019	12	0	B.M.S. College of Engineering
Influence of reactive SiO2 and Al2O3 on mechanical and durability properties of geopolymers	Dinesh H.T., Shivakumar M., Dharmaprasanth M.S., Ranganath R.V.	Asian Journal of Civil Engineering	2019	12	1	B.M.S. College of Engineering
Coordination chemistry of expanded porphyrins	Alka A., Shetti V.S., Ravikanth M.	Coordination Chemistry Reviews	2019	12	5	B.M.S. College of Engineering
View File						

3.4.7 – Faculty participation in Seminars/Conferences and Symposia during the year

Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	3	29	1	53
Presented papers	7	41	4	11
Resource persons	3	6	9	8
View File				

3.5 – Consultancy

3.5.1 – Revenue generated from Consultancy during the year

Name of the Consultant(s) department	Name of consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)
Civil Department	Shikaripura Halagatti Junction Ramadurga,	RNS Infrastructure Limited	65700
Biotechnology Department	HPCL Analysis of the Samples	RVCE	2000
Civil Department	Construction of Tnsrp Ii/Epc 05 -	P C Projects Pvt., Ltd.,	50000

	Upgrading Omalur - Sankari - Thiruchengode-Paramathy Road Sh86 Km 54/800 To 81 Surface Unevenness Test		
Civil Department	Seismic Evaluation of Unreinforced Shallow Masonry Domes Using Shock Table Test	Hunnarshala Foundation for Building Technology Innovations	88889
Chemical Department	Technical Presentation Before MOEF EAC Committee For Expansion	Siddapur Distilleries Limited	25000
Civil Department	Material Testing	Shravanee Shelters	6500
Biotechnology Department	HPCL Analysis of the Samples	RVCE	1000
Biotechnology Department	HPCL Analysis of the Samples	RVCE	1000
Civil Department	Road Roughness Survey	GMR Tambaram Tindivanam Section of NH 45	241000
Biotechnology Department	Testing Phytochemical/Chemical Composition In Our Miracle Drinks/ Vedic Drinks	Mallur Flora And Hospitality Pvt. Ltd.,	40000
View File			

3.5.2 – Revenue generated from Corporate Training by the institution during the year

Name of the Consultan(s) department	Title of the programme	Agency seeking / training	Revenue generated (amount in rupees)	Number of trainees
Biotechnology	PHASE SHIFT-2018 SPACE SYSTEMS	COMTEK	20000	27
Biotechnology	PHASE SHIFT-2018 SPACE SYSTEMS	PROTOGEN	10000	16
Biotechnology	PHASE SHIFT-2018 SPACE SYSTEMS	BYJUS	7840	15
Biotechnology	PHASE SHIFT-2018 SPACE SYSTEMS	EPPENDORF	5000	12
Civil Engineering	PHASE SHIFT-2018 SPACE SYSTEMS	SIDDESWARA NAGAR	5000	20
Civil Engineering	PHASE SHIFT-2018 SPACE SYSTEMS	STONED MONKEY	5000	17

Civil Engineering	PHASE SHIFT-2018 SPACE SYSTEMS	VENKATESH GUPTHA	5000	10
Chemical Engineering	PHASE SHIFT-2018 SPACE SYSTEMS	HIKAL	10000	10
Chemical Engineering	PHASE SHIFT-2018 SPACE SYSTEMS	MANYA	10000	30
Chemical Engineering	PHASE SHIFT-2018 SPACE SYSTEMS	BCPL	5000	18
View File				

3.6 – Extension Activities

3.6.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
Surgical strike day celebration on 29-09-2018	Ministry of Defence, Government of India	6	200
Martyrs Day on 30-01-2019	1 Karnataka Signal Regiment NCC, NCC GROUP HQ A, Karnataka and Goa Directorate NCC	100	400
Blood Donation Camp on 30-01-2019	2 Karnataka Signal Regiment NCC, NCC GROUP HQ A, Karnataka and Goa Directorate NCC	120	310
International Yoga Day 21-06-2019	Ministry of Defence, Government of India	1	50
Sadbhavana Divas(20-08-2018)	BMSCE NSS	4	120
Kala Sinchana(16-08-2018)	NSS and Kala Sinchana	4	30
YFS Young Change Makers Camp(02 and 03-09-2018)	NSS and YFS,an NGO	2	70
Workshop on "Green Ganesha idol making"(11-09-2018)	NSS with YFS	20	120
NSS Orientation Programme(20-09-2018)	NSS	2	30
State Level Workshop for NSS programme officers(NSS and VTU,Belagavi	2	30

26-09-2018)

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3.6.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
iTeach- Road Safety Awareness Session	Certificate of Appreciation	RID District 3190, ROAR 2019	350
Combined Annual Training Camp conducted at NMIT from 15-07-2018 to 24-07-2015	Cdt. Ajay Kumar was bestowed with gold medal in cross country run. Cdt. Ananya Pushkar was awarded as the best speaker. Sgt. Mamatha.N, Sgt. Aman Kumar, LCpl. Shreya, LCpl Rebecca, Cdt. Ananya Pushkar, Cdt. Nischita, Cdt. Junaid and Cdt. Tejashwini	1 Karnataka Signal Regiment NCC, NCC GROUP HQ A, Karnataka and Goa Directorate NCC, Ministry of Defence	35
Marathon Run	Lt. Ashok Kumar S, Associate NCC Officer was bestowed with a Memento by Brig. D. M. Purvimat VSM, Deputy Director General (DDG), Karnataka and Goa NCC Directorate and Col. Rajesh Verma, Group Commander, HQ Gp 'A' Bangalore for having come first in	NCC GROUP HQ A, Karnataka and Goa Directorate NCC, Ministry of Defence	5000
Youth Conclave, an initiative of YFS	Institution partner	Youth for seva	50
Quarterly Recognitions	Star Club Award (Third Quarter)	Rotaract District Council 3190	1400
Quarterly Recognitions	Star Club Award (Fourth Quarter)	Rotaract District Council 3190	1400
DDG Commendation Card	SGT Jaysheela Reddy completed Republic Day Camp 2019, Delhi. He was part of the RAJPATH Contingent. He was part of the Karnataka and Goa	Karnataka and Goa Directorate NCC, Ministry of Defence	3

	contingent of the National Cadet Corps (NCC) which created history by winning the coveted Prime Ministers Banner		
DDG Commendation Card	SGT Rohit Raj completed Republic Day Camp 2019, Delhi. He was part of the PM Rally and was Lead Sketcher for the Flag area team. He was part of the Karnataka and Goa contingent of the National Cadet Corps (NCC) which created history by winning the co	Karnataka and Goa Directorate NCC, Ministry of Defence	3
DDG Commendation Card	CPL. Ajay V has completed ROCK CLIMBING CAMP 2017, Gwalior and ADVANCED MOUNTAINEERING CAMP, Uttarkashi 2018 conducted by Nehru Institute of Mountaineering. He made BMSCE NCC proud by winning GOLD medal in Sports Climbing Competition. For his achi	Karnataka and Goa Directorate NCC, Ministry of Defence	3
Republic day parade	2nd place	BBMP, Government of Karnataka	65
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3.6.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activities	Number of students participated in such activities
Voter Awareness	Rotaract Club of BMSCE with BBMP and NSS Unit of BMSCE	Voter Awareness Sensitisation Drive and Inauguration of ELC	5	1500
Swachh Bharat Awareness (16-08-2018)	NSS and Gov. of Karnataka	Awareness	4	1850

SWACHCHTA HI SEWA PAKWADA on 23-09-2018	Ministry of Defence, Government of India	Cleanliness Drives-: Bus stands and Railway stations	1	80
SWACHCHTA HI SEWA PAKWADA on 22-09-2018	Ministry of Defence, Government of India	Wall Paintings	1	80
SWACHCHTA HI SEWA PAKWADA on 20-09-2018 and 21-09-2018	Ministry of Defence, Government of India	Cleaning of statues: Important Public Personalities	1	80
SWACHCHTA HI SEWA PAKWADA on 19-09-2018	Ministry of Defence, Government of India	Shramdaan: Cleaning of Streets, drains and Back Alleys	1	80
SWACHCHTA HI SEWA PAKWADA on 18-09-2018	Ministry of Defence, Government of India	Nukad Natak: Segregation of waste	1	80
SWACHCHTA HI SEWA PAKWADA on 17-09-2018	Ministry of Defence, Government of India	Talk: What can do to clean my city	5	120
SWACHCHTA HI SEWA PAKWADA on 16-09-2018	Ministry of Defence, Government of India	Mass Awareness Rallies	2	80
SWACHCHTA HI SEWA PAKWADA on 15-09-2018	Ministry of Defence, Government of India	Inauguration of the event by ANO and Cleaning the area around Bull Temple	2	80
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3.7 – Collaborations

3.7.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
HIKAL Industrial Internship	Ms. Grissel Fernandes	HIKAL INDIA PVT LTD	60
BARC, India Internship	Mr. Saieesh V Nayak	BARC, INDIA	60
CGCRI - Summer Internship	Ms. Trisha Baneerjee	CSIR-CGCRI LAB	60
To create a collaborative platform encompassing Government,	Dr.L.Uday Simha	ECOPARADIGM, Bengaluru	1

Business, Civil society and working together for mutual benefit culminating in providing sustainable solutions for societal change			
Inspection of Civil Engineering structures for Quality, Quantity certification, site safety monitoring and progress report.	Dr. S. Raghunatha, Dr.S.Muralidhara, Dr. K.R.Suresh, Dr. A.S.Arunkumar	Bangalore Nirmithi Kendra(Urban) Bangalore	2
Research, engineering and capacity building activities related to water and sanitation	Dr.L.Uday Simha	R D Department, Sanitation, CDD Society Bangalore	45
Collaborative project	1. Dr. Umadevi and Dr.Joshi Manisha, B.M.S. College of Engineering, Bangalore. 2. Dr. Sikkandar Mohamed Yacin, Majmaah University, Kingdom of Saudi Arabia,	Amoudi Scientific Research Foundation of Majmaah University, Kingdom of Saudi Arabia	730
Two days Workshop on "Multidomain system Modelling and Simulation using Modelica Faculty and student Exchange	FET MJP Rohilkhand University, Bareilly	TEQIP-III	2
Collaborative project	Dr. Umadevi and Dr.Joshi Manisha, B.M.S. College of Engineering, Bangalore. 2. Dr. Sikkandar Mohamed Yacin, Majmaah University, Kingdom of Saudi Arabia,	Amoudi Scientific Research Foundation of Majmaah University, Kingdom of Saudi Arabia	730
MITACS AT UNIVERSITY OF WATERLOO, CANNADA	Ms.Navyashree Gunjul Vedachala	TEQIP-III MHRD	90
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3.7.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the	Name of the	Duration From	Duration To	Participant
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	linkage	partnering institution/ industry /research lab with contact details			
Internship	Internship	Namma Metro	06/01/2019	31/08/2019	6
Internship	Internship	Mahalaxmi Greens	06/01/2019	31/08/2019	1
Internship	Internship	Laxmi construction Co.	06/01/2019	31/08/2019	1
Internship	Internship	Samruddhi constructions	06/01/2019	31/08/2019	3
Internship	Internship	Nitesh Estates	06/01/2019	31/08/2019	1
Internship	Internship	PWD, Jabalpur	06/01/2019	31/08/2019	1
Internship	Internship	DRN Infrastructure	06/01/2019	31/08/2019	1
Internship	Internship	BMRG Projects India Pvt Ltd.,	06/01/2019	31/08/2019	1
Internship	Internship	PWD	06/01/2019	31/08/2019	1
Internship	Internship	Jai Sai Construction	06/01/2019	31/08/2019	1
View File					

3.7.3 – MoUs signed with institutions of national, international importance, other institutions, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
Direct Subzi	26/02/2019	Student Project / Internship	2
CIM TOOLS	13/02/2019	Student Scholarship	9
Tika Services Pvt. Ltd	23/05/2019	Research, training and Internship	5
ECOPARADIGM, Bengaluru	13/05/2019	To create a collaborative platform encompassing Government, Business, Civil society and working together for mutual benefit culminating in providing sustainable solutions for societal change	5

Bangalore Nirmithi Kendra(Urban) Bangalore	19/01/2018	Inspection of Civil Engineering structures for Quality, Quantity certification, site safety monitoring and progress report.	24
Dassault Systems Foundation	10/12/2018	Project	6
BELBIRD Technologies Private Limited	07/06/2019	Project	6
Florida International University, USA	30/08/2018	Collaborative research	1
TEQUED Labs Pvt. Ltd	12/07/2018	FDP,Workshop, curriculum and Lab Development	50
TVS Motors, Hosur	23/04/2019	Student Project / Internship	13
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CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
2390	4560

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Campus Area	Existing
Class rooms	Newly Added
Laboratories	Newly Added
Seminar Halls	Newly Added
Classrooms with LCD facilities	Existing
Seminar halls with ICT facilities	Existing
Video Centre	Existing
Value of the equipment purchased during the year (rs. in lakhs)	Newly Added
Others	Newly Added
Number of important equipments purchased (Greater than 1-0 lakh) during the current year	Newly Added
Classrooms with Wi-Fi OR LAN	Existing
View File	

4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or partially)	Version	Year of automation
LIBSYS	Fully	7.0	2002

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
Library Automation	1	654304	0	0	1	654304
Weeding (hard & soft)	0	0	0	0	0	0
Text Books	2997	1842958	1572	475382	4569	2318340
Reference Books	17	43000	133	168082	150	211082
Journals	149	679590	151	607625	300	1287215
e-Journals	8641	3123917	1887	1742151	10528	4866068
e-Books	14441	3123917	11113	1742151	25554	4866068
Digital Database	7	3123917	6	1742151	13	4866068

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4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
Antara Roy Choudhury	Linux for Sys-Ads (https://spoken-tutorial.org/tutorial-search/?search_fossilinuxforSys-Adssearch_languageEnglish)	https://spoken-tutorial.org/	13/08/2018

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4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/GBPS)	Others
Existing	2352	0	0	0	373	144	1835	800	0
Added	56	0	0	0	30	6	20	200	0
Total	2408	0	0	0	403	150	1855	1000	0

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

1 MBPS/ GBPS

4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
Impartus Lecture CaptureSystem	www.http://bmsce.in/sites/default/files/17-e-content_dev-lcs-additional_info-4.3.4.pdf

4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurred on maintenance of physical facilities
778.08	665.71	961.65	1015.31

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website)

A full-fledged building maintenance section headed by a Chief Engineer (EO CE), is established to oversee the construction and maintenance of physical infrastructure. Potable Water Supply: Centralized RO Systems of capacity 500 LPH (02 Units) and 250 LPH (01 Units), 10 LPH (04 Units), 40 LPH (04 Units) and 25 LPH (04 Units) have been established in all the buildings to cater for safe drinking water. The quality of drinking water is tested every three months. The fire extinguishers are refilled and kept in a serviceable condition throughout the year. Sewage Disposal: BMSCE Campus has a network of underground sewer lines and the sewage disposal is connected to the main BWSSB manhole outside the campus. 350 KLD Sewage treatment plan is ready for commissioning. Solid Waste Management: The dry solid waste from departments is collected in a pit located within the campus. The dry solid waste is collected every day in the morning by a BBMP approved contractor. The same is transported to the nearest land fill and solid waste management facility for proper disposal as per State Pollution Board norms. Chemical Waste: The quantity of Chemical Waste generated is very minimal. Masonry tanks have been constructed in few departments which generate chemical waste. A certain amount of coagulants are added to facilitate precipitation of the suspended/ dissolved particles. The treated effluent is disposed into the BWSSB drains. The sludge settled at the bottom is collected once in a year and stored in an air tight container for further disposal to landfills through an authorized Hazardous Waste handler. Electric Power Backup: Sufficient back up power supply has been maintained in case of power failure from BESCO. Vehicle Parking: The institution provides special vehicle parking facilities at the Lower Basement (4468 SQM) and Upper Basement (4468 SQM) inside the campus. Provision/Space to park 200 cars and 300 two-wheeler Vehicles are available. E-Waste disposal: All un-serviceable E-Waste such as computers, printers, cables, floppies, CD's, mouse and key board etc. is disposed through vendor as per guidelines for implementation of E-Waste (Management and Handling) Rules, 2011 issued by CPCB. Budget: The Equipment, instruments, infrastructure and other facilities require a continuous maintenance and repair. Every year, sufficient funds are allocated towards Maintenance fund. ICT tools: The computers are monitored and maintained time-to-time. The Data Centre monitors the Campus Wide Networking (CWN) facility of the institution for ubiquitous network connectivity throughout the campus. Maintenance of Infrastructure: The infrastructure maintenance is done by estate office as and when required. General Insurance coverage is provided for Building, Furniture, fixture etc Equipment's: All Major/advanced equipment are maintained by Annual Maintenance Contract (AMC). Minor Equipment's are repaired

and maintained regularly. Library: The Library holdings consist of books, journals, Library Software (LIBSYS), e-journals, e-books etc. The books and journals are bounded. The stock verification is done as a part of regular maintenance. Central library works from 08 AM to 10.00 PM. The library has Online Public Access Catalogue (OPAC) for easy search of books for the benefit of students and Staff.

<https://bmsce.ac.in/assets/files/aqar/documents/4.4.2-Maintenance%20of%20Campus%20Infrastructure.pdf>

CRITERION V – STUDENT SUPPORT AND PROGRESSION

5.1 – Student Support

5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	Alumni	114	1140000
Financial Support from Other Sources			
a) National	DSW Scholarship (SC/ST), CATEGORY 1 and Low Income Fee Concession, SC/ST Fee Concession From Directorate of Technical Education (DTE), Defence Fee Concession from DTE	1053	26074295
b) International	-	0	0
View File			

5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implemetation	Number of students enrolled	Agencies involved
Carrier Vizion	07/09/2018	35	Saddiksha Public Charitable Trust
Finishing School on Soft Skills- Assessment and Training for pre-Final Year IEM Students	05/04/2018	66	Department of MBA, BMS College of Engineering
One Day Student Workshop on "Failure Modes and Effects Analysis (FMEA)"	11/04/2018	66	Shri. Madhavan, Shingo Institute of Japanese Management (SIJM)
Personality Development	29/08/2018	50	Ditial Shark Technologies
View File			

5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the	Number of	Number of	Number of	Number of
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	scheme	benefited students for competitive examination	benefited students by career counseling activities	students who have passed in the comp. exam	students placed
2018	Carrier Guidance by Bijus	0	180	0	0
2018	Carrier Guidance for MS /PhD program at North Carolina University	0	60	0	0
2018	Carrier Guidance by Vani	0	180	0	0
2018	Institute wide Soft Skills and Training Program from Placement Department, BMS College	60	60	0	27
2018	Competitive Exams Training	25	0	7	34
2018	TEQIP for Gate Exam	13	0	0	0
View File					

5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
4	4	2

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Name of organizations visited	Number of students participated	Number of students placed	Name of organizations visited	Number of students participated	Number of students placed
188	35182	1481	30	41	41
View File					

5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Department graduated from	Name of institution joined	Name of programme admitted to
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2018	1	BE-CV	Civil Engineering	Australia	MBA/M.Sc
2018	1	BE-CV	Civil Engineering	Hamburg University, Germany	MBA/M.Sc
2018	1	BE-CV	Civil Engineering	Germany Ruhr University, Bochum	MBA/M.Sc
2018	1	BE-CV	Civil Engineering	Australia	MBA/M.Sc
2018	1	BE-CV	Civil Engineering	Australia	MBA/M.Sc
2018	1	BE-CV	Civil Engineering	Australia	MBA/M.Sc
2018	1	BE-CV	Civil Engineering	City University of London UK	MBA/M.Sc
2018	1	BE-CV	Civil Engineering	Swinburne University of Technology, Australia	MBA/M.Sc
2018	1	BE-CV	Civil Engineering	The University of Adelaide, Australia	MBA/M.Sc
2018	1	BE-CV	Civil Engineering	IIT Madras	MBA/M.Sc
View File					

5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
GATE	56
CAT	1
GRE	28
TOFEL	18
Civil Services	1
Any Other	8
NET	1
View File	

5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Kreedotsav 2018-19 organized 22nd to 24th Sep 2018	Sate Level	1500
VTU Aquatic Championship	Sate Level	128

organized on 3rd oct 2018		
VTU Gymnastics and Mallakhamba Competition organizedv on 23rd 24th Oct 2018	State	55
VTU Handball (W) Competition organized on 29th 30th March 2019	Bangalore Zone	126
VTU Handball Inter Zone Competition organized on 30th march 2019.	State	112
View File		

5.3 – Student Participation and Activities

5.3.1 – Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one)

Year	Name of the award/medal	National/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2018	Silver	Internatio nal	1	0	1BM16EE041	Pragnesh Anekal
2018	Silver	Internatio nal	1	0	1BM15IM057	Unnati Tayal
2018	Gold	National	1	0	1BM18EC116	Ritu Toshniwal
2018	2 Gold, 1 Silver & 3 Bronze	Internatio nal	6	0	1BM17CV214	Punith N
2018	Silver	National	1	0	1BM16EE041	Pragnesh Anekal
2018	Silver	National	1	0	1BM18ML003	Aishwarya R
2018	Gold	National	1	0	1BM15EC121	Varsha Sanjeev
2018	49th Place	Internatio nal	1	0	1BM16EC077	Parthasara thy R
2018	5th Place	National	1	0	1BM16EC077	Parthasara thy R
2018	23rd Place	Internatio nal	1	0	1BM16EC077	Parthasara thy R
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5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

BMSCE provides students the opportunity to participate in various types of academic and administration activities. The students are active members of various in-house clubs, student forums, student chapters and committees. • The student representatives are invited to Board of Governance (BOG) Meetings. The students are invited to the brainstorming sessions of academic council and Board of Studies meetings regularly. Views of students are considered while initiating new courses, curriculum framing, teaching methodology etc. The

students participate in the feedback system. Students provide feedback on faculty (4 times in a year), HODs Principal (once in a year) and Institution (2 times in a year). By this the views of the students are recognized for the holistic development of the institution. • The College offers numerous Student Forums/Clubs to provide opportunity to students to participate in wide range of Co-Curricular, Extra-Curricular, Social and Community Development Activities. Throughout the year numerous events are organized for the students to pursue their hobbies. Every year the students actively participate in the annual inter-collegiate technical symposium 'Phase Shift'. The students of various engineering colleges gather to collaborate, present, discuss, learn and explore development and applications in cutting edge technologies in all the fields of engineering and management. The two days National symposium has a footfall of more than 8000 students who benefit from the product displays put up by various industry collaborators in the form of exhibition stalls. Students form departmental associations and arrange talks from person of eminence from industry. • The students are exposed to current research through expert lectures from people of eminence. Several stake holders visit the campus and provide expert advice and also interact with students. The students also participate in seminars conducted elsewhere. Students are encouraged to carry out mini major project work in house and in collaborations with industry and academia. BMSCE has embarked on a mission to recognize and award final year UG Engineering students who have taken up innovative, value added UG projects with a flavour for societal responsibility in their project work. The Institution has recently established a Technology Innovation Club for students with an aim to inculcate the culture of innovation amongst students and encourage them to generate new ideas. • The students are part of service and extension activities through NSS, NCC, Rotaract, Women Cell units etc. The student representatives are also part of IQAC, Anti ragging committee, Grievances' Redressal Committee, Women's Cell and other committees. Students are also encouraged to form student chapters under IEEE, IGBC etc and organize activities with the help of these professional bodies.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

The BMSCE Alumni Network (BMSCEAN) established and registered under the Societies Registration Act 21 of 1860. BMSCEAN is formed with an aim build an actively engaged alumni network. The Association connects with alumni through a diverse set of events/services. Since its inception the BMSCEAN has been active in ensuring that its esteemed alumni continue to be part of the institutional ecosystem. The Alumni Network ensures active alumni participation in various institutional initiatives in the form of Tech forums, Tech fests, alumni advisory boards, mentoring of students, placement and internship opportunity to students. The proceeds of the BMSCEAN corpus are being used to recognize meritorious students in the form of BMSCEAN Merit Scholarships since 2012-13 and also supporting students needing financial support in the form of educational loans. Alumni are registered online and connected on the online portal bmscealumni.net. The Network is now 22500 members strong. The database is being updated on a regular basis. The Alumni Contribute in the Curriculum Design process. The Department Advisory Board has representation from industry, academia, alumni besides faculty and students. Board of Studies includes alumni representatives. Alumni actively participate in the Institutional initiatives like Phaseshift, Conferences, Workshops and department level technical symposia etc. Alumni provide expert suggestion to the institutional leadership on various academic and administrative functions. The guest lectures by alumni pave the way for interaction to further improve TLP. Alumni are mentoring students for national and international programmes like SAE Baja events, SAE

Aerospace and general activities like career counseling. Alumni are part of IQAC, Departmental Advisory Board, Alumni Executive Committee etc. Alumni provide feedback once in a year about the institution. Alumni Survey and their feedback help the effective implementation of the OBE Process. BMSCE Alumni Interest Free Education loans were rolled out in 2013 for the needy students of BMSCE. As on 31.07.2017, 73 students have benefited so far. A total loan amount of Rs.278.37 Lakhs has been disbursed. Alumni Sponsored Merit Scholarships: Alumni Donations and Contributions The BMSCE Alumni Network recognizes meritorious students by giving the BMSCEAN Merit Scholarships at the end of every semester. The toppers at the end of the Academic year are recognized during the Annual Alumni Day with a cash prize of Rs.10000/- each and a merit certificate. In the year 2011-12, 53 Scholarships worth Rs 5,30,000/- were presented through alumni Association. In the year 2012-13, 53 Scholarships worth Rs 5,30,000/- were presented through alumni Association. In the year 2013-14, 108 Scholarships worth Rs 10,80,000/- were presented through alumni Association. In the year 2014-15, 112 Scholarships worth Rs 11,20,000/- were presented through alumni Association. In the year 2015-16, 114 Scholarships worth Rs 11,40,000/- were presented through alumni Association. In the year 2016-17, 114 Scholarships worth Rs 11,40,000/- were presented through alumni Association. In the year 2018-19, 108 Scholarships worth Rs 10,80,000/- were presented through alumni Association. The year 2018-19 saw the initiation of sholarships for achievers in the field of sports. Two scholarships of the 108 were towards sports. The Alumni Association creates and maintains.

5.4.2 – No. of registered Alumni:

22500

5.4.3 – Alumni contribution during the year (in Rupees) :

730000

5.4.4 – Meetings/activities organized by Alumni Association :

A meeting was held to discuss the interest expressed by Mr V Janakiraman in starting an endowment in the name of his late son and our alumnus Sri Ganesh (Class of 1982 Mechanical). Date: Thursday, 6th Sep 2018 Venue: Principals chambers, BMSCE Attendees: Family of Sri Ganesh: Mr V Janakiraman (father of Sri Ganesh), Mr Dan Balchandra (our alumnus 1963 Mechanical and uncle of Sri Ganesh) Executive Committee of BMSCE Alumni Network (BMSCEAN): Dr B V Ravishankar, Dr J Sharana Basavaraja Alumni Network Office: Vidhya Shenoy Points discussed and actions: 1. Gold Medal for the best final year project: 2. Lab/Building in memory of Sri Ganesh: Fwd: Minutes of meeting: 13 Oct 2018 Minutes of meeting held on Thursday the 13th of October 2018 Attendees: Principal Dr B V Ravishankar, Vidhya Shenoy Other members present: Prof Ravishankar Deekshit, Prof B Kanmani Items discussed and actions: 1. Alumni Day event and date approval Action: Principal to discuss the Alumni Day date and felicitation of batch of 1976 and others from previous batch not felicitated with the Chairman and seek his approval. Expected Date of discussion: 15th Oct 2018 2. Chief Guest for the Alumni Day 3. Means cum merit scholarship versus merit scholarship for the Second endowment started by Mr V Janakiraman in the name of our late alumnus Sri J Ganesh: As establishing the criteria and implementation of authenticity checks for the means scholarship is challenging it was decided to implement 2 merit scholarships out of the proceeds of the endowment started by Mr V Janakiraman. The same was also discussed with Mr v Janakiraman and he has accepted the proposal. 4. Nomination for the Sri T V Chidambariah Memorial Means Cum Merit Scholarship: The 3 toppers at the end of the 6th Semester, their family income details as well as the background provided by the Civil HOD was discussed. The Principal has directed the HOD of Civil to discuss the cases of the 2nd and 3rd topper with 3 other senior

professors from the Civil department and revert with a decision. 5. Coverage of the Architecture meritorious students who have completed 1 year with BMSCA under the BMSCEAN Merit Scholarship There hasn't been a closure of the coverage of the BMSCA meritorious students under the BMSCEAN Merit Scholarships. Reminders have been sent to the director of BMSCA. 6. Proposal by Dr Kanmani on recognizing GATE toppers: Dr Kanmani has placed a request before the Executive Committee of the BMSCE Alumni Network to consider recognizing the GATE toppers with a cash award of Rs.5000/- Action: Principal to discuss the proposal with the Chairman 7. Expiry of ARM contract: The yearly contract of the Alumni Relations Manager expires end of October 2018. Principal to discuss this with the Chairman and revert.

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 – Institutional Vision and Leadership

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

The college involves all the stakeholders in decision making process for framing guidelines and rules regulations to ensure smooth and systematic functioning of the institute. The Principal provides leadership for the academic administration and creates an effective environment conducive for learning. The institution practices decentralization for the effective growth of the college. The two best practices are one related to the academic spectrum while the second is related to the overall developmental strategies of the institution. The first is taken care of by nominating Deans to look into the academics and student community of the institution. Dean first year, Dean Academics and Dean Student affairs meticulously look into the programme content and holistic development of the students. The second practice is the formation of several cells and committees which look into specific areas for the well-being of the student during his/her stay in the campus. Dean first year is responsible right from the entry of the students in to the campus. The induction programme and orientation programmes are well framed and managed by the dean first year. The higher semesters are managed by Dean Academics. Both the deans ensure that all the courses studied are relevant and important for the respective disciplines as per the statutory bodies. A Dean Student affair looks into the proctoring, counseling and well-being of the students. He/she is also responsible for the smooth conduction of the graduation day. All the Head of the Departments are members of the Academic Council and College Council where major Academic/Administrative decisions are taken. More academic power is delegated to the Heads of the Departments. At the department level, decisions are taken by various department level Committees. As part of the Departmental Academic Committee [DAC], the faculties provide their inputs on all academic related matters. The institution has in place several Committees / Sub-Committees to continuously monitor/guide the academic and administrative activities. The committees comprise of key stakeholders including government, administrators, faculty, staff, industry, employer, alumni, parent and students. Many senior faculty members occupy pivotal administrative positions like the Vice-Principal, Deans, Placement Officer, Director, IQAC, Hostel Secretaries, Wardens, Controller of Examination etc. The Management has brought out a handbook to ensure transparency and guide the staff to discharge their responsibilities with ease and efficiency. The book provides policies, procedures, rules, benefits and other service matters. The management has also devised the policy of rotation of heads of the departments with an aim to induct and groom the next in line to lead the department. The management has prescribed necessary guidelines for the nomination of faculty as HOD on rotation basis. The BOG members directly participate in various activities of the Institution. The minutes of the BOG, Academic Council and Annual Report are published on college website. The finance committee appraises the BOG

pertaining to finances of the college. The Institution also publishes audited financial statements on its website for public information. This clearly indicates the role of a participative management.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Admission of Students	The admission to the college is very transparent following the guidelines of statutory authorities. The admission process of any institute is one of the most important things which creates an impression on students. The college website (www.bmsce.in) has admission link which provides admission related information to students. The College uses ERP module called BMSApp to help students fill the online registration and make payments through the online portal. The whole admission process takes 10-15 minutes per student and a confirmation mail regarding the completion of admission process is sent to student mail ID automatically.
Library, ICT and Physical Infrastructure / Instrumentation	A separate platinum jubilee academic block was inaugurated to house classrooms, staff rooms, laboratories and seminar halls. Majority of the class rooms have internet and smart board facilities. Good parking facility for 2 and 4 wheelers has been created. The main library is located in this big and spacious building. The Library resources have been completely Bar Coded and automated using LIBSYS 7-Integrated Library Package. Access to all the On-line library collection, such as NPTEL lectures of all IITs and IISC have been made available throughout the campus using Intranet for the benefit of faculty students.
Examination and Evaluation	An in-house software solution was developed and implemented for the student seating arrangement during the semester end examination. In addition to displaying the student room allotment on the notice board, this software sends SMS of the room allotment details to students individually. In addition to regular moderation, second evaluation for all answer scripts in the marks range of 25-37 was introduced. The answer

	<p>scripts in which the student has F grade were shown to them. The grievances were addressed by the concerned faculty. The question papers and the answer scripts were audited.</p>
Industry Interaction / Collaboration	<p>BMS College of Engineering (BMSCE) has placed emphasis on the cultivation of strong links with industry and promotion of various industrial activities by the faculty members and students. The prime objective of this cell is to strengthen the relationship between the institute and industry resulting in a mutually beneficial partnership. Ten MoUs were signed with industry during 2018-19. The activities include internship, faculty development programs, RD, industrial visits, working model competitions, technical paper presentations, project for students and workshops/seminars by technical experts.</p>
Research and Development	<p>BMSCE RD Center aims to promote high-quality research in BMSCE. The impact factor based incentive has been changed to Web of Science journal citation reports (CR) (Q1 to Q4) to overcome the limitations of Impact factor comparison across disciplines and promote/enhance quality research. Apart from the two patents granted, 8 patents were filed. 26 research scholars obtained their Ph.D Degree. 58 students registered for Ph.D in VTU and 6 students registered in Mangalore University. Regular meetings with faculties deputed under QIP are conducted to know the progress of their research work.</p>
Human Resource Management	<p>The recruitment of faculty / staff is a transparent procedure handled by the Establishment section of the college. It includes placing advertisement in leading Kannada and English dailies. Applications received are sent to concern HOD for shortlisting as per the department requirement. The BOA subcommittee screens the shortlisted candidates based on merit and calls for the final interview. Finally, the BOA selects the candidates to be appointed in the college. Candidates with PhD and who have submitted thesis at premier university are considered for appointment. During the academic year 2018-19, 25 teaching (Assistant Professors) and 15 non-teaching staffs were appointed.</p>

Curriculum Development	The new curriculum is intended towards incorporating the credit distribution in line with AICTE directive. The present curriculum includes Conceive Design Implement Operate (CDIO) concept. Each discipline has introduced project from the second year into their curriculum. This will lead to a complete Capstone project in the final year. During the semester break, students will take up activities as enlisted by AICTE VTU under activity points. In entire 8 semesters a student need to earn 100 activity points for completion of the degree. During the long break between semesters a student need to take internship mandatorily.
Teaching and Learning	The departments are well equipped with modern state of the art facilities in the classroom with Smart Board and lecture capture system. Teaching methodology includes Project based learning, Problem Based Learning and Activity based learning. More emphasis is given on problem solving. Formative assessment question papers are framed by taking care of the mapping strength of Course Outcomes. MHRD Virtual labs/ NPTEL/ Swayam platforms were also used to complement the online teaching. For the slow learners of final semester, preparatory classes were conducted in order to clear their doubts before they appear for their final semester end examination.

6.2.2 – Implementation of e-governance in areas of operations:

E-governance area	Details
Planning and Development	1. e-Governance team with Medha tech Website redesign
Administration	1. Grievance software in website integration 2. Connect Module for SMS based information dissemination
Finance and Accounts	1. Online fees collection module with receipt generation 2. Placement fees collection Module
Student Admission and Support	1. Online Admission module development with Clickcrawl 2. CAMPUS portal for student information dissemination 3. Online feedback system- Medha tech inhouse 4. Conduction of online classes- Google calssroom 5. Virtual tour with e-Governance 6. Grievance software 7. Integration of mail access in CAMPUS portal 8. Fast track

	registration 9. SMS dissemination module integration 10. Online Course Registration
Examination	1. Results Display on web 2. Online exam conduction- Google classroom 3. Online exam conduction PEXA lite- COE 4. IDENIZEN - Smart Campus V 2.8 5. Power Builder- Tool 6. Cognitron Technology Software

6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2018	VENKATESH .B	CONVERGENT TECHNOLOGY-PUNE	-	9472
2018	RAMROHIT .V	NORDIC RHEOLOGICAL NTNU-NORWAY	-	100000
2018	GURUMURTHY HEGDE	CONFERENCE- BANKAK , THAILAND	-	31498
2018	MADHAV MURTHY	CONFERENCE- KUALA LAMPUR MALAYSIA	-	100000
2018	GURUMURTHY HEGDE	NANO CONFERENCE- BANGALORE	-	14337
2018	GURUMURTHY HEGDE	CONFERENCE -INDONESIA	-	30000
2018	SESHACHALAM .D	ACM-IEEE CONFERENCE	-	99681
2018	KANMANI	-	IEEE	5093
2018	CHANDASREE DAS	-	IEEE	3540
2018	SAMITA MAITRA	-	IEEE	4385

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6.3.2 – Number of professional development / administrative training programmes organized by the Colleges for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2018	TEQIP III Sponsored FDP on Communication	-	28/05/2018	01/06/2019	25	0

	Networks Security in association with CSE Dept.					
2018	-	Staff Development Program on "Professionalism Skill Development"	02/07/2018	13/07/2018	0	2
2018	Two weeks FDP on "Queuing theory and Stochastic Process for Advanced Systems"	-	02/07/2018	13/07/2018	30	0
2018	-	TEQIP-3 sponsored one week Staff Development Program on Professionalism and Skill Development organized by Dept. of ECE EI	02/07/2018	07/07/2018	0	45
2018	-	TEQIP sponsored Professionalism and Skill Development	02/07/2018	06/07/2018	0	40
2018	Faculty Development Programme on "Advanced Manufacturing"	-	16/07/2018	27/07/2019	47	0
2018	TEQIP III Sponsored FDP on Data Science Visualization in association with CSE	-	30/07/2018	03/08/2019	30	0

	Dept.					
2018	Computer Networks	-	27/09/2018	27/09/2018	2	0
2018	3D Scanner Training as a part of the Commissioning in MMM Lab	-	03/10/2018	10/10/2018	8	0
2018	Seminar on Biotechnology for Gold - Relevance to Karnataka in association with 'The National Academy of Sciences-India	-	23/10/2018	23/10/2018	50	0
View File						

6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional development programme	Number of teachers who attended	From Date	To date	Duration
Workshop on 'Curriculum Revision, Outcomes Attainment'	50	08/11/2018	08/11/2018	1
Faculty Development Program on 'Queuing Theory and Stochastic Process for Advanced Systems'	2	02/07/2018	13/07/2018	12
Sustainable Urban Transport: Design of Road Infrastructures and Facilities	1	15/02/2019	17/02/2019	2
Refresher Program on "Design of Machine Elements"	1	02/07/2018	13/07/2018	12

Faculty Development Program on "Advanced Manufacturing".	7	16/07/2018	27/07/2018	12
Workshop on CAD Modeling, MATLAB and ANSYS'	5	06/08/2018	10/08/2018	5
Training on the 3D Scanner in Mechanical Measurements Metrology Lab	5	03/10/2018	10/10/2018	8
Competency Development Program	1	24/10/2018	25/10/2018	2
Training on "Hydraulics and Pneumatics	12	29/10/2018	31/10/2018	3
Training on Mechanical Measurements Metrology Lab	4	10/12/2018	22/12/2018	13
View File				

6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
25	25	18	18

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
<ul style="list-style-type: none"> • AICTE scales (Sixth Pay) with up to date DA (164). • Career Advancement Scheme (CAS) benefit • Study leave with full salary for pursuing PhD under QIP • Deputation to participate in workshop/ seminar/ conference • Reimbursement of fee paid towards PhD under part-time • Cash incentives for publications in refereed journals • Financial support for patent advise filing • Financial support for presenting papers in National and 	<ul style="list-style-type: none"> • Revised State Government Pay scales up-to date DA (11.5). • Time-bound promotions • Leave Terminal benefits as per KCSR • Extension of Maternity Leave • Medical (family) Accidental Insurance coverage • Family Welfare Fund • Festival advance • Vehicle Loan (two wheelers) • Educational Aid to Children of Non-Teaching Staff • Management Quota seats for the wards of employees • Benefit of VRS to Management employees • Employees 	<ul style="list-style-type: none"> Library Information Centre • Placement and Training Centre • Entrepreneur Development Cell • Research and Development Cell (RD) • Industry Institute Interaction Cell • Innovation PROPEL LABS • MOOCs laboratory • Language Laboratory • International Cooperation Division • Melton Foundation, USA • In-campus Hostels Support • Cash incentive to Student Achievers • Student Counseling support • Online student feedback • Proctoring System

<p>International conference • Cash incentive for writing technical literature Books • B.M.S. Centre for Engineering Consultancy (BMSCEC) to facilitate consultancy activities</p>	<p>Credit Co-operative Society</p>	<p>Competitive Exam Higher Study Cell • Differently abled Service Cell • Anti-Ragging Measures • Scholarships Freeships • Interest Free Educational Loan • Group Medical Insurance • Professional Bodies: IEEE, IET, IESA etc. • Peer Learning/social learning PHASE SHIFT • Industrial, Field Site visits • Industry supported Labs • Student Fora / Innovation Clubs • Sports and Cultural Forums UTSAV • NCC, NSS ROTARACT • Outreach Activities</p>
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6.4 – Financial Management and Resource Mobilization

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

The Institute has a mechanism for internal and external audit to ensure financial compliance. The institutional accounts are regularly audited. The internal audit is an ongoing continuous process. A team of qualified auditors from external resources have been permanently appointed to do a thorough quarterly check and verification of accounts. The external auditor appointed by the college performs audit of the financial statements of the college. The audited statement is duly signed by Principal, Chairman and Chartered Accountant. All accounting systems are accrual basis computerized and maintained on Tally. The audited financial statements are published on the website regularly.

6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose
Alumni Association Fee	5732100	Funds
View File		

6.4.3 – Total corpus fund generated

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6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	No	-	Yes	IQAC DEAN ACADEMIC
Administrative	Yes	VTU-LIC Members	Yes	H R Suresh Co., Chartered Accountants

6.5.2 – Activities and support from the Parent – Teacher Association (at least three)

1. Proctor Meetings 2. Feedback on Curriculum 3. Hostel Matters

6.5.3 – Development programmes for support staff (at least three)

1. Medical (Family) Accidental Insurance coverage 2. Family Welfare Fund 3. Management Quota seats for the wards of employees.

6.5.4 – Post Accreditation initiative(s) (mention at least three)

1. Enhancing Infrastructure facilities (opening of the PLATINUM JUBILEE ACADEMIC BLOCK) 2. Starting of New Under Graduate programme in AEROSPACE ENGINEERING 3. Enhancing Research facilities : B S Narayan Centre for Nano-Materials Displays (CND)

6.5.5 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b) Participation in NIRF	Yes
c) ISO certification	No
d) NBA or any other quality audit	Yes

6.5.6 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2018	Preparation of Self-Study Report of NAAC Cycle 2	18/01/2018	03/06/2019	03/06/2019	250
2018	Carrying out Academic Audit - Higher Semesters	26/07/2018	11/08/2018	11/08/2018	275
2019	Hosting the Sixteenth Intl. Conference on Remote Engineering and Virtual Instrumentation, REV 2019	14/09/2018	03/02/2019	06/02/2019	93
2018	Participating in NIRF 2019	12/11/2018	06/12/2018	06/12/2018	150
2019	Uploading AISHE-2018-19	11/12/2018	28/02/2019	28/02/2019	50
2019	Preparation for visit of VTU LIC Committee 2018-19	23/02/2019	28/02/2019	28/02/2019	350
2019	Conducted	01/02/2019	09/02/2019	09/02/2019	24

	IQAC Core Committee Meeting				
2019	Facilitating NAAC Peer Team Visit	07/03/2019	23/03/2019	24/03/2019	400
2019	Conducting Academic Audit of second sem courses	26/03/2019	27/03/2019	28/03/2019	70
2019	Proposal of Strategic Plan for the Institution	12/06/2019	12/06/2019	12/06/2019	10
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CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
Lecture- Demonstration on Self Defence	28/11/2018	28/11/2018	42	2
Quiz Competition on "Constitution of India [the Preamble] and National Commission of Women Act 1990"	22/12/2018	22/12/2018	521	168
"Clothes Collection Drive"	21/02/2019	26/02/2019	120	60
Health Checkup Camp	05/03/2019	09/03/2019	105	20
Indoor Sports	06/03/2019	06/03/2019	45	15
Walkathon towards spreading awareness on Women Empowerment	07/03/2019	07/03/2019	520	30
International women's Day	08/03/2019	08/03/2019	60	15

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources

9.5

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Physical facilities	Yes	26
Provision for lift	Yes	21
Ramp/Rails	Yes	14
Braille Software/facilities	Yes	1
Rest Rooms	Yes	26
Scribes for examination	Yes	2
Special skill development for differently abled students	Yes	1
Any other similar facility	Yes	30

7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2018	1	0	15/08/2018	1	Independence Day Celebration-NSS and kalajyothi Katte, Lakshmipura	Independence Day Celebrations with community	40
2018	0	1	08/09/2018	1	Plantation Drive - NSS With AIKYA	Plantation Drive	19
2018	0	1	31/10/2018	1	Unity Day-NSS	Preaching Unity	72
2018	0	1	10/11/2018	1	Walkathon about Say NO to Drugs-NSS	Say No to Drugs	60
2018	0	1	11/11/2018	1	Plantation Drive -NSS with Adanya Chetana	Plantation Drive	62
2019	0	1	26/02/2019	1	Dental Checkup	Dental Check Up	269

					NSS, BMS Hospital and Rotory	Drive	
2019	1	0	08/03/2019	1	Women's Week -Fearless Walkathon - NSS and Womens Cell, BMSCE	Fearless Women-Walkathon	16
View File							

7.1.5 – Human Values and Professional Ethics

Title	Date of publication	Follow up(max 100 words)
PG - MBA programme	01/01/2018	The students of Master of Business Administration study one course as a cross functional elective in their 3rd semester. The course code is 18MBA3XCGB which deals with Corporate Governance and Business Ethics. This course was introduced in the year 2018 syllabus revision.
PG - MCA programme	01/01/2018	The students of Master of Computer Applications study one course on Professional Communication and Ethics in their first year of post-graduation. The code is 18MCA1HSPE. This course was introduced in the year 2018 as part of the syllabus revision.

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Inauguration of the event by ANO and Cleaning the area around Bull Temple	15/09/2018	15/09/2018	82
Mass Awareness Rallies	16/09/2018	16/09/2018	82
Talk: What can do to clean my city	17/09/2018	17/09/2018	125
Nukad Nataks: Segregation of waste	18/09/2018	18/09/2018	81

Shramdaan: Cleaning of Streets, drains and Back Alleys	19/09/2018	19/09/2018	81
Cleaning of statues: Important Public Personalities	20/09/2018	21/09/2018	81
Wall Paintings	22/09/2018	22/09/2018	81
Cleanliness Drives-: Bus stands and Railway stations	23/09/2018	23/09/2018	81
Cleaning of public parks	25/09/2018	25/09/2018	81
Awareness Rally: ODF	26/09/2018	26/09/2018	84
View File			

7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

- The campus has aesthetically designed buildings, surrounded by greenery creating good ambience for learning.
- Waste Water Management/Rain Water harvesting
- Digital Library-E-Learning Centre - Using material in soft form and reduce hard copies.
- Plantation drives, environmental awareness programs, energy saving initiatives are undertaken to achieve green status within the campus. Involving the students, faculty and staff in "Green Campus Initiatives"
- Mails are extensively used to ensure that the office is paperless to a large extent.
- Steps towards carbon neutrality, e-waste hazardous managements, conservation of energy and water are undertaken.
- The NSS, NCC and ROTARACT Units conduct many eco-friendly and go-green activities

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

1. Title of the Practice: National Level Technical Symposium - Phase Shift -2018

2. Objectives of the Practice Phase Shift is the annual technical symposium of BMSCE. The motive behind this symposium has primarily been to develop inquisition, a better scientific temper and the desire to consume knowledge, and be able to apply both knowledge and the relevant skills to produce masterpieces well beyond our time. Phase Shift is a collaborative effort of different departments and student fora/clubs of the institution. It aims at enhancing the level of technical knowledge in the student community, and ultimately strives to bridge the gap between technical corporate organizations and students at the institutional level. It is essential to formulate new goals, new perspectives and new directions to enhance learning, exploring new opportunities, and to develop skills in an ever changing world. A symposium of this scale is organized entirely by a dedicated student body under the able guidance of faculty. The symposium has been a medium for effective industry interaction in which the industries collaborate with BMSCE to showcase technical expertise and products exhibits. It also helps in improving engineering application capability, innovation capacity, cooperation spirit, self-management ability and communication skills. Over the span of two days, students witness a competitive and collaborative atmosphere of technical competitions, hands-on training, and workshops based on trending technology, talks by eminent professors and seminars by industry professionals/experts. A symposium of this scale is organized entirely by a dedicated student body under

the able guidance of faculty. 3. The Context The fifth edition of Phase Shift was held on the 15th and 16th of September, 2018. The theme for the symposium this time was 'Space Systems '. Over the span of two days, students witnessed a competitive and collaborative atmosphere of technical competitions, hands-on training, and workshops based on trending technology, talks by eminent professors and seminars by industry professionals/experts. were adjudged by a well experienced industry jury from renowned industries who witnessed the event. More than 65 industries were inside BMSCE campus, hosting different workshops, competitions with Alpha Design Technologies taking the main lead. 4.

The Practice Phase Shift every year will be conducted for two days to commemorate Engineer's Day. The theme of the Phase Shift will be chosen based on the generic, trending technical, multidisciplinary concept addressing various moderate to complex Engineering problems. The Theme for 2018 Phase Shift was chosen as "Space Systems". The team comprises of faculty and student core teams, organizing committee members and coordinators. Participating Institutes can decide the team from various streams of UG like Electronics, Instrumentation, Mechanical, Electrical, or Mechatronics, Computer, IT etc. The events comprised of a Hackathon, walkathon and treasure hunt. 5. Evidence of Success This edition of Phase shift was a great success too. Several industries around 65 in no. collaborated, with Alpha Design Technology as the main sponsors. A sum of about Rs. 13 Lakhs was collected from various sponsorships.

The total number of events hosted was ninety with thirty industry driven workshops. Around twenty plus colleges participated and had more than 5000 students participation. 6. Problems Encountered and Resources Required The overall event came out as an excellent team work. All the stake holders were involved in successful conduction of the event. The involvement of the departments in terms of bringing out exclusive projects requires improvement.

7. Notes (Optional) The Phase Shift 2018 platform provided the students to Collaborate, Innovate and Excel in the field of Space systems. The following are the pictures showcasing the grand annual event in BMSCE. -----

1. Title of the Practice Enhancing electronic periodical publications (e-Journals) 2. Objectives of the Practice The purpose of introducing this online e-journal is to reach widely to every reader interested in their disciplines, by way of open access system through internet and disseminate ideas and knowledge all over the world. The e-Journal aims to provide: • Awareness among the Students/Faculty Research Scholars about the existence of the e-journal resources subscribed by the central library. • To find out the purpose of using e-journals • To analyse the frequency of using e-journals among Faculty and Students • To find out the most frequently used e-journals being referred by students, Faculty and research scholars. 3. The Context An electronic journal is a periodical publication which is published in electronic format, usually on the Internet. Electronic journals have several advantages over traditional printed journals. E-journals are becoming increasingly popular both as a means of rapid desktop access to current research materials and as a way to view past volumes. E-journals offer a range of potential advantages to libraries and end-users. It allows remote access. Electronic issues of journals consist of Full-text and Bibliographic Databases. Full- text databases contain the whole content of an article such as citation information, text, illustrations, diagrams and tables. Bibliographic databases only contain citation information of an article, such as author's name, journal title, publication date and page numbers. An e-database is an organized collection of information. It supports flexible and in-depth searching of different fields, e.g. journal title, article title, author, abstract, year, etc. Therefore, e-database is extremely useful to find out the articles on particular topics. 4. The Practice Libraries have been exploring easily to cope up with the problems of ever increasing prices of the journals, space requirements and decreasing level of usage as the

journals get older. Nevertheless, libraries are required to maintain back issues of the journals, usually in bound form. Electronic Journal helps the librarians in addressing these problems to a great extent without significantly affecting the service levels. Electronic journals can be accessed via internet from any web enabled PC. Depending on the type of subscription, one or more users can access the service simultaneously, either directly from an independent web enabled PC or in a local area network through a proxy server (IP addresses based access). Electronic journals also offer benefit of full text searching and downloading of articles. Access to articles in electronic journals can also be made through aggregator services which offer searchable databases of contents of e-journals from several publishers, and links to journal site for full text. Emerald, OCLC and J-Gate are some of the example of e-journal aggregator services. E-journals offer a range of potential advantages to libraries and end-users.

- Allows remote access.
- Can be used simultaneously by more than one user.
- Provides timely access on a 24 X 7 X 365 formula.
- Supports different searching capabilities.
- Accommodates unique features (e.g. Links to related items, reference linking)
- Saves physical storage space.
- Supports multimedia information.

5. Evidence of Success

- Greatly facilitated and acted as catalyst on the factors such as, access ability, ease of use and perceived utility.
- Latest and most fascinating resources were accessible.
- Supported growth and development of teaching learning practices.
- More library users have become real authors and producers of research data by virtue of using e-Resources.
- Moved from text based users to image based users.
- Subject experts used hyperlinks to view related articles.
- Both faculty and students liked the Electronic resources as it was convenient, relevant and time saving to their natural work.

6. Problems Encountered and Resources Required

The adoption of the e-resources has made a great advantage over the library services for easy retrieval of required information within a short period of time. There are some challenges in offering the high level of the services to users. Some of the challenges facing with e-resources management are discussed below:

- Shortage of library funds
- Requires a robust technical infrastructure
- Lack of professional skills to handle e-resources
- Protection of databases from virtual crimes
- Maintenance of privacy and confidentiality
- Collection of the digitized e-resources

7. Notes (Optional)

There are several advantages such as providing 24x7 multi-access services. It saves time of the user and allows various types of searching facilities. It is more economical than the print version and supports multimedia applications. It can be downloaded instantly and provides current information.

Library Services in the Digital Age:
<https://bmsce.ac.in/home/Library-Services> Phase-Shift Event:
<http://www.bmscephaseshift.com/2018/>

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

<https://bmsce.ac.in/assets/files/agar/documents/7.2.1-Best%20Practices.pdf>

7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

The vision statement of the institution is 'Promoting prosperity of mankind by augmenting human resource capital through quality technical education and training'. The institution follows systematic educational practices. In this endeavour, one such practice was to set up an e-governance cell. E-governance provides transparency in the education system which provides confidence to the parents, students, industries and social environment about the institute. The major objective of e-Governance in the college is to develop digital infrastructure and maintain them in the college for enhanced communication,

information exchange and increased productivity of various stakeholders involved in the institute. The development of digital infrastructure is expected to leverage the faculty students and management for a seamless connect in the campus. The institute needed an in-house team which can provide data consistency for displaying the large amount of data in a systematic manner and to provide information to the stakeholders. The system had to be consolidated and teams formed internally for monitoring, disseminating information in the departmental level and in the institute level. There was a need for increased utilization of the digital platform to provide access to information to all the stakeholders of the institute. Considering that India is going through a transition phase from the traditional education system to a world class accredited system of education, systems with sustainable, time reducing solutions will help the teaching learning fraternity to dedicate quality time on education and research. This practice of moving from physical to digital infrastructure also helps to provide a seamless connection among the system of varied departments. The system itself posed a challenge as some of the traditional ways of working had to be altered completely to accommodate the new system. During the design, development and implementation phase the system had to undergo dynamic changes which involved team brainstorming and discussions with stakeholders of the institute and presenting the changes which was challenging for the team. The e-Governance team was formed in the year 2019 and was involved in development of the website, creation of modules for grievances, result display modules, department level control panels for better management of the website and dissemination of information. The team is also responsible for developing an exclusive one login idea for faculty, students, office, Head of the departments to monitor, disseminate and organize information which will be available at various points of access. The module development has increased the usage of the website among all the stakeholders. The website has been able to cater to all the stakeholders. The development of virtual tours of the campus helps the stakeholders to assess the college infrastructure virtually. The target was to have maximum student community login into the website using various devices, this has been achieved by throwing open the web portal to the faculty, students, parents and industries in a phased manner.

Provide the weblink of the institution

<https://bmsce.ac.in/assets/files/aqar/documents/7.3.1-Institutional%20Distinctiveness.pdf>

8.Future Plans of Actions for Next Academic Year

The institution aims to maintain the legacy of this great college. Three core areas identified are academics, research and industrial connect. Enhancing and strengthening the three paves the way for the growth of the institution. One major step planned for the next academic year (2019-2020) will be the opening up of a platinum jubilee block, which will house several departments and class rooms. In addition to these, one exclusive floor to be dedicated to the college central library, two seminar halls with 150 to 250 capacity, several meeting rooms and two basements for parking of two wheelers and four wheelers. The advancements in the current scenario include setting up of centre of Excellence, smart classrooms, enhancing laboratory facilities and upgrading laboratories with the state of art facilities. As it is planned to increase the intake of students, the class strength is more and hence adopting smart class rooms is inevitable. By doing so, the teaching becomes effective and paves the way for digital learning. Theory and lab classes go hand in hand. With the revisions in the courses, the lab sessions also need to be revamped. Hence, it is planned to upgrade the existing laboratory facilities and also add new equipment which will cater to the revised syllabus. This is very much required as the number of research scholars registered in the various research centres of the institution has seen a gradual upward growth. Also, one MTech course in Thermal Engineering is planned to be

introduced in the next academic year. The second area to be marked as a thrust area is research. It is planned to set up a couple of COEs as it is seen that there are several doctoral holders who could contribute and enhance their research capabilities in future. The institution plans to set up an exclusive research centre which will cater to the field of nano-materials which is one of the upcoming domains. It is also planned to strengthen and expand the existing research and development cell. This cell will cater to the requirements of the research scholars registered and will liaison with the university (VTU) effectively. The cell will also track the contributions from the faculty members, research scholars and students towards research. Also several innovative research measures are being planned to be taken up by the cell. The third area planned to enhance is the institute-industry connect. It is planned to host the Mitsubishi Cup where in international players will be collaborating with the institution. The annual event, the phase-shift -2019 is planned on the theme 'sustainability' which is the current buzzing word. Also the college plans to set up an exclusive cell which will look into innovations, incubation and startups. The developments in the three core areas indicated above will surely enhance the image of the college in the national and international levels.