



SELF STUDY REPORT

FOR

2nd CYCLE OF ACCREDITATION

B.M.S.COLLEGE OF ENGINEERING

B.M.S.COLLEGE OF ENGINEERING P.O.BOX.NO.1908, BULL TEMPLE ROAD,
BENGALURU- 560019

560019

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Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

B.M.S. College of Engineering, Bengaluru, established in the year 1946, was the first private Engineering College in the country. The College owes its existence to the foresight and vision of its founders, Late Sri.B.M.Sreenivasaiah and his illustrious son Late Sri.B.S.Narayan. The College is strategically located in the heart of the Bangalore city. The College is approved by AICTE and permanently affiliated to VTU and also approved as QIP Centre of AICTE. The College offers 13 UG, 15 PG and 14 PhD degree programmes. More than 350 research scholars are pursuing their PhD Degree. 103 PhDs and 16 MSc have been produced so far. The college is aided by Government of Karnataka and also offers self-financing programmes. A recipient of World Bank Assistance under TEQIP I & TEQIP II and presently listed under TEQIP III. BMSCE is the only College in India adopted by the Melton Foundation, USA. The College is autonomous (since 2008-09) and has been effectively practicing Outcomes Based Education (OBE). Curriculum design & development, Pedagogy and Assessment are given highest priority. The college maintains high academic quality standards; the certification by the NAAC, NBA (Tier-I Format) and NIRF Ranking is testimony of the same. The college has one of the largest student populations amongst engineering colleges in Karnataka. Currently more than 5000 students (India and abroad) are pursuing their higher studies in the College. The College continues to be the most preferred destination not only for the students of the state but also from various parts of the country. The quality educational practices supplemented with academic ambience, state of the art infrastructure, pedagogy, academic innovations, research, incubation, training opportunities and entrepreneurship is enabling the institute to produce graduates who are industry ready. BMSCE boasts of a strong alumni base of over 40,000 most of them occupying coveted positions in India and abroad. The institution offers highly qualified, committed and experienced faculty. The College has been ranked amongst the best engineering Institutes in the country by various credible ranking agencies and media houses.

Vision

VISION OF THE COLLEGE

Promoting the prosperity of mankind by augmenting human resource capital through quality technical education & training.

The founders have envisaged the vision of providing skilled and competent workforce to society by imparting quality education and training. The founders strongly believed that creation of skilled technical manpower would promote towards nation building. This vision is relevant even today looking at the young demographic nature of India and the challenges they encounter to meet the changing global market needs. The vision of every BMSCE is to nurture excellence and its mission to instil in students the desire and ability to make excellence a way of life.

For realization of the vision, emphasis is laid on creating an environment that promotes excellence. This takes the form of various initiatives to energize the different factors that impact the quality of education. Through Student-centred learning processes the institution puts the authentic knowledge needs on priority. Teaching-Learning-Practices (T-L-P) are streamlined for the improvement of academic performance and holistic development of the students. The employability factor is one of the prime considerations in the design and

development of outcome based curriculum. The labs are also regularly upgraded in order to stay advanced. The institution has a well-laid strategic plan. The implementation of the vision and plan is executed with the support and with the involvement of all the stake holders. The BOG approves the Vision & Mission, Short Term and Long Term goals and the Budget based on the Strategic Plan. The BOG ensures that all decisions on the matters such as admission quality, new programmes, infrastructure, Teaching Learning Process and Placements are arrived based on the vision of the Institution.

Mission

MISSION OF THE COLLEGE

The Management provides clear vision and mission to the institution. The management firmly believes that a strong vision and mission statements will help stakeholders to attain their respective goals. The mission is achieved basically through the process of education, training and research. The following measures are implemented to accomplish the institutional mission:

Curriculum Design: Involvement of all stakeholders to ensure that the curriculum is robust and relevant. Practicing Outcome based education (OBE)

Adopting Innovative Processes in Teaching and Learning: Encouraging innovation in Teaching and Learning and best practices in TLP

Industry-Institute-Interaction: Collaborative efforts with the industry personnel for enhancing the learning levels of the students through Industry Supported labs and other activities.

Research & Development: Promoting Research, Innovation & entrepreneurship through dedicated R&D cell, centres of excellence and incubation. Initiatives in Sensitizing/Promoting Research Climate in the institution

Modern Tool Usage: Use of technology (MOOCs and Blended MOOCs) for enhancing the learnability coefficient (self-pace) of the students, recording of live lectures and social learning platforms like WIKSATE. E-learning solution for automatic recording and distribution of class room lectures and flipped class model.

Governance: Active participation of BOG members in all the institutional development activities. Has a good governance document in place.

Strategic Planning: strategic plan Long Term and Short Term Goals are in Place. The management periodically reviews the status of its implementation.

Effective & Sound Financial Management: Budgetary provisions for the departments are made based on the requirements/inputs provided by the Department

Quality Assurance: Academic Audits at the departmental/Institution levels for monitoring the continuous improvement are in vogue. Internal Quality Assurance Cell (IQAC) has been constituted to monitor/maintain quality in all its processes. Effective Student Feedback system on faculty and the institutional facilities is in place. Departmental Advisory Board (DAB) created for advising in academic matters. Rubrics to assess the level of student projects are available

Alumni Network: Committed alumni association having a wide global network sponsors/ conducts Workshops in Current Trends/Technology for enhancing the skills & personality development among the students;

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- Being the oldest private engineering college in India (Estd 1946), BMSCE has accrued a very strong stakeholder base
- Strategically located in the heart of the Bengaluru City, the Silicon Valley of India
- Aided Institution -Government of Karnataka
- TEQIP -I, TEQIP-II & TEQIP III funded Institute. The institute was rated as high performance institution in TEQIP I & TEQIP II phases.
- Beneficiary of MHRD-Global Initiative of Academic Networks (GIAN) programmes across domains
- Sound financial position of the trust managing the Institute.
- Transparent and good Governance in academics and administration
- The college is being ranked consistently among the top engineering colleges in the country by NIRF (MHRD) and various other media sources.
- Only institution from India adopted by the Melton Foundation, USA.
- Highly qualified, experienced and competent faculty with Number of doctorates from premier institutions.
- The college attracts meritorious students from across the country. It has the largest student population amongst engineering colleges in Karnataka.
- The college maintains high academic quality standards; the certification by the NAAC and NBA is the testimony of the same. BMSCE is one of the first few Institutions to be awarded with NBA Accreditation in Tier-1 format.
- The college is effectively practicing OBE. The curriculum design, pedagogy and assessment are given highest priority. The Institute has put efforts in encouraging innovation and has adopted best practices/ process in teaching learning processes.
- Appreciable IRG from R&D Projects & consultancy and good number of patents published.
- Good Infrastructure with modern hi-tech seminar halls, auditorium, modern laboratories with latest equipment, hostel accommodation, banking facility, etc. A well-equipped Learning Resource center with large collection of books and periodicals. It also has various e-learning resources and databases to support academic and research activities.
- BMSCE boasts of a very strong Alumni Network of over 40,000, most of them occupying coveted positions in various educational, industrial, research organization in India and abroad. The alumni have created endowment fund and merit scholarship and are supporting the deserving students

Institutional Weakness

WEAKNESS

- Inadequate levels of participation from foreign students for full time courses
- Need to attract more number of faculty from industry offering contemporary courses relevant to the

industry

- Inadequate commercialization of intellectual property generated
- Hostel accommodation within the campus is inadequate to meet the current and increasing demand
- Over-reliance on IT industry for placements
- Formal Networking with other institution / organisations to be enhanced

Institutional Opportunity

OPPORTUNITIES

- Exploring the ways to offer dual degree programmes
- Faculty exchange programs with various top tier Institutes across the globe.
- Establishing a dedicated Foreign Language Department
- Exploring the opportunity to become a private University
- To increase the number of PhDs and reach 70% in due course of time
- NBA mentoring to other Indian Institutions
- Improve peer reviewed journal publication (Scopus, citation index, impact factor, h-index)
- Being a start-up hub for engineering graduates
- To offer Short term / Certificate courses of one or more years duration to working professionals
- Explore the possibility of commercialization of patents
- Engaging adjunct faculty from industry across all domains
- Increased need towards offering cross-disciplinary and humanities related programs

Institutional Challenge

CHALLENGES

- Establish multi campuses in India and Abroad.
- To create an exclusive foreign faculty panel to teach across various domains.
- Blending appropriate MOOC courses with the current curriculum to add value
- Resource augmentation for a growing institution
- Attracting core engineering company placements catering to all domains
- Attuning to changing Government needs
- Keeping pace with global development in pedagogy and research
- To attract more number of international placements

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

The institution has academic autonomy, and hence has the responsibility of designing the curriculum. This

responsibility is well exercised and ensured through the curriculum which helps to attain the Program Outcomes (POs) defined by NBA, the recommended content by Program Specific Criteria (PSC) of professional bodies, the model curriculum and credit structure as suggested by All India Council for Technical Education (AICTE), the content of prominent competitive examinations, the autonomous guidelines by the affiliating university (VTU) together with suggestions from various stakeholders. In addition, the academic autonomy is utilized in an effective manner through implementation of the Choice Based Credit System (CBCS) model through providing a wide range of choice of courses during course registration for students, especially in the higher semesters. The curriculum also includes courses that identify, nurture and develop entrepreneurs. Frequent revisions in curriculum are allowed, especially introduction of elective courses, and revision in the outcomes of courses (every semester if required). However, changes in credit structure and overall revision in curriculum is taken up once in two to three years. The curriculum has included internship(s) to be taken up by students during semester breaks and is assessed through report and seminar during the regular semester. This is to provide field experience to students beyond curriculum. The campus also encourages conduction of regular value-added programs for focused development of skills in core/allied domain beyond curriculum for interested students. These value added programs are usually focused on multi-disciplinary activities. Processes are in place for academic audits and feedback from stakeholders towards continuous improvements in Curriculum, design and delivery.

Teaching-learning and Evaluation

Teaching Learning Process is a very important parameter in OBE. The teachers play a vital role in this process. The teaching fraternity has good number of qualified members who have obtained their doctoral degree from premier academic institutions. The average teaching experience is around fifteen years. Majority of the faculty have adopted various ICT tools for effective delivery. These tools are student centric which include experiential learning and problem solving methods. The teachers identify the advanced and slow learners and remedial method is adopted to enhance the level of slow learners. The college caters to the diverse students who come from several states and other countries. This is well reflected as there is a good demand ratio for the seats offered by the institution. The holistic development of all students is monitored through an effective mentoring system. The college has adopted many Innovative Processes in Teaching and Learning and the institution is consciously putting efforts to further encourage innovation in Teaching and Learning. The Departments have also evolved many best practices with respect to TLP. Academic Audits (internal/external) is conducted for continuous improvement. Industry participation on various Boards BOG, AC, BOS, BOE and Inviting student representatives for BOG/AC Meetings are some of the other measures adopted. The College publishes the Rules and Regulation for all Programmes. In addition to academic rules and regulations, the regulations governing examination, evaluation and mal-practice etc., have been manifested. The processes mentioned ensure fair and uniform conduction, evaluation of examination. The COE takes feedback from the students and other stakeholders for further improvisation. The institution continues to adopt improved examination processes. The Internal Quality Assurance Cell conducts quality audit for improving the academic quality. The Evaluation process is transparent. Students are evaluated on a continuous assessment system, comprising of written examinations, class seminars, and assignments. Students can peruse the valued answer scripts of the internal tests, and provision is being made to enable perusal of answer scripts of the final examinations.

Research, Innovations and Extension

BMSCE acknowledges innovations, research and consultancy as key focus areas. The steady increase in the

number of linkages with research organisations and reputed universities both India and abroad is a testimony to the institutions commitment towards research. The institution has developed many new centres of excellence, innovative and industry supported labs, to create research opportunities for students, faculty and researchers. The labs are best-in-class, well-equipped and sophisticated. The facilities are regularly updated to stay advanced. A R&D Centre is established at the Institution level to promote Research & Innovation among the faculty & students. The increased number of publications, grants, patents and consultancy summaries the institutions achievement in R&D. Centralized labs/design centers and propel labs have been established for the benefit of first year students. These labs are broad based and not confined to a single area/discipline. Currently about 300 students are working in these labs. The college library has a good collection of books and journal subscriptions to facilitate research. Good number of collaborative activities is being pursued with various foreign Universities and research organisations. The entrepreneurship development cell and industry institute interaction cell encourages forging collaborations with outside world. The institution has introduced number of Initiatives towards Sensitizing/Promoting Research culture and also to encourage faculty to take up Doctoral Degree. As active agents of social change, the institution addresses, sensitize and find solutions to social and environmental problems through various extensions through its NCC, NSS, Rotaract, Youth Red Cross Unit volunteers. The institution has received numerous state, national and international level awards in recognition of its activities and commitment of societal commitment.

Infrastructure and Learning Resources

The college has an extensive Infrastructure spread over 11.00 acres 30 Guntas with a total built up Area – 103923 SQM. The infrastructure comprises of Academic Buildings, Departments, State of the Art laboratories, Incubation Centres/Innovative Labs, Centre of excellence, well-furnished classrooms, Full-fledged office of Controller of Examinations, Auditoriums/Conference Halls/Digital Classrooms, cafeteria, Health Care Centre, roads, power supply systems, Water supply etc. The Data Centre monitors the CWN facility or ubiquitous network connectivity throughout the campus (intranet 10 GBPS and 700 MBPS)

The Library housed in a spacious building (4600 SQM) and has a seating capacity of 650.

- Titles -35,508 & Volumes-1,40,869
- Printed Journals – National : 146 & International: 25
- Open access system (Dewey Decimal Classification Scheme)
- Online access of international databases (digital library)
- Member of National Digital Library & VTU's e-Consortium
- Access to 9 databases; 8641 e-Journals
- Digitized 900 CDs' and accessed through intranet
- NPTEL video lectures (338 Nos.) for reference
- Reprographic/Scanning/Printing facilities
- Departmental libraries for ready reference

Separate Hostels for Men and Women on the campus with all necessary facilities is provided for study and recreation. The Institution has excellent Placement and Training Centre.

The website provides access to official information. BMS provides top notch sports, gym and cultural facilities. The building & maintenance section is in charge of civil and electrical maintenance including backup. Adequate fire fighting facilities, telephone, extensive parking space are some of the other facilities provided. Adequate budgetary provision has ensured the proper maintenance of infrastructure and academic

support facilities.

Student Support and Progression

BMSCE offers students the opportunity to participate in various types of academic and campus governance activities.

- The student representatives are invited to the BOG and Academic Council Meetings.
- The student are also part of IQAC, Anti ragging committee, GRC, BoS, Women's Cell etc
- Professional Bodies/Student Forums/Clubs provide opportunity to students to participate in wide range of Co-Curricular, Extra-Curricular, Social and Community Development Activities. Fully Committed NSS, NCC, Rotaract, Women Cell units etc. are in place
- The students actively participate in the feedback system.
- The Placement & Training Centre provides career guidance and helps students in achieving their goals.
- Entrepreneurship Development Cell nurtures the idea of entrepreneurship among the students.
- The students are exposed to current research through expert lectures from people of eminence.
- Every year best student projects are recognised and awarded
- The Competitive examination Cell established to motivate aspiring students to take up all types of Competitive Exams
- The Differently Abled Service Cell aims to empower Differently Abled students
- Technology & Innovation Club established to inspire interest amongst students in innovation and technology
- The BMSCE Alumni Network (BMSCEAN) is now 20000 members strong. The Cell connects BMSCE with its alumni from various branches and builds an actively engaged community.
- Grievance Redressal Cell is also another outlet for the students, where the students represent their grievances.
- Melton Foundation global Fellowship program specifically designed to develop and integrate the students into a lifelong global network. BMSCE is the only institution adopted by the foundation.
- Propel Labs to promote Research Interest among the Students have been set up
- The Industry Interaction Cell facilitates exchange of ideas amongst students, faculty, and the industry.

Governance, Leadership and Management

The BOG is constituted as per the statutory provisions. Two faculty members (on rotation basis) are members of BOG. The BOG meets regularly. The BOG adopts transparent governance mechanism. The BOG approves the strategic Plan and budget based on the strategic plan. The BOG regularly monitors its implementation. The institution adheres to the Good Governance practices; a well prepared document is published. The BOA nominated by BOG is in-charge of recruitments. The BOG reviews/ratifies the proceedings Academic Council, TEQIP, Finance, disciplinary & others. Many senior faculty members occupy pivotal administrative positions like the Vice-Principal, Deans, Placement Officer, Hostel Secretaries, Wardens, Controller of Examination etc., and are also members of various decision making and administrative bodies. As part of the Departmental Academic Committee [DAC], the faculties provide their inputs on all academic related matters. All the Head of the Departments are members of the academic council, college council and HODs Council where major academic/administrative decisions are being addressed. A decentralized functioning mechanism empowers the

departments to function with greater flexibility. There is an open door policy. Students, staff can approach the Principal, Vice Principals, Deans, HODs for problems which require immediate attention and are redressed on top priority. There is a duly formed grievance redressal cell for students and parents. Effective and participative decision making process is adopted to achieve the vision, mission and the goals of the institution and also in building an effective organizational culture. A well-established online feedback mechanism is in place. Regular academic audit (both internal and external) are conducted.

Institutional Values and Best Practices

The institution strives to uphold human values and adopts good practices to maintain the integrity of its stakeholders

Gender Equity : The institution makes much efforts to empower women faculty and students. BMSCE Women Cell organises numerous events, awareness programs and walkathon, free health check-up for ladies. Installed sanitary napkin incinerators as well as sanitary napkin vending machine for the health and hygiene maintenance for the girls. Separate common room for both boys and girl students are provided. Students are encouraged to learn self-defense methods etc also.

The Anti-Sexual Harassment Committee (ASHC): holds several interactions with the students and faculty and brings awareness on sexual harassment.

The student counsellor has been working since April 2016 in BMSCE. So far 207 sessions have been conducted. The issues addressed are maladjustment, academic performance anxiety, low esteem etc.

Security Measures at BMSETH Girls Hostels

The hostels are installed with CCTV surrounding the building to monitor the movements. The hostels are fenced and gated properly. The movement are recorded and monitored by professional Security personnel. The Anti-ragging committee and squads monitor and ensure that the campus and hostels are ragging-free.

Celebration of National Festivals: Every year the institute organizes national festivals and birth / death anniversaries of the great Indian personalities viz., social reformers and freedom fighters.

The Institution conducts multiple extension activities like tree plantation, Swatch Bharath Abhiyaan etc. Green Audit and Energy Audit of the campus are done. Steps towards carbon neutrality, e-waste & hazardous managements, conservation of energy and water are undertaken. Rain water harvesting has been in place to assure an independent water supply during water restrictions. The NSS, NCC, Youth Red Cross, Rotoract Clubs have become institutional distinctiveness in terms of their contribution and the number of awards they have received

Societal Commitment: Management has adopted two government schools and has been regularly supporting the cause.

Facilities for physically challenged: like ramps, toilets, scribes etc are provided. Several initiatives have been taken up based on location advantage and disadvantages. Code of conduct for staff and students is made available online in the college portal.

NAAC

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	B.M.S.COLLEGE OF ENGINEERING
Address	B.M.S.COLLEGE OF ENGINEERING P.O.Box.No.1908, Bull Temple Road, Bengaluru-560019
City	Bengaluru
State	Karnataka
Pin	560019
Website	www.bmsce.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	B.V.Ravishankar	080-26622130	9845675201	080-26614357	principal@bmsce.ac.in
IQAC Coordinator	Mangala Keshava	080-26614356	9945517699	080-26612192	iqac@bmsce.ac.in

Status of the Institution	
Institution Status	Private , Grant-in-aid and Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular Day

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	

Date of Establishment, Prior to the Grant of 'Autonomy'	14-08-1946
Date of grant of 'Autonomy' to the College by UGC	01-07-2008

University to which the college is affiliated		
State	University name	Document
Karnataka	Visvesvaraya Technological University	View Document

Details of UGC recognition		
Under Section	Date	View Document
2f of UGC	31-05-2018	View Document
12B of UGC	31-05-2018	View Document

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)				
Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
AICTE	View Document	10-04-2018	12	The details of AICTE approval pertaining to the year Two Thousand and Eighteen is being provided

Recognitions	
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	No

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	B.M.S.COLLEGE OF ENGINEERING P.O.Box.No.1908, Bull Temple Road, Bengaluru-560019	Urban	11.3	104219.1

2.2 ACADEMIC INFORMATION

NAAC

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Civil Engineering	48	PUC	English	180	178
UG	BE,Mechanical Engineering	48	PUC	English	180	177
UG	BE,Telecommunication Engineering	48	PUC	English	60	60
UG	BE,Chemical Engineering	48	PUC	English	60	58
UG	BE,Electronics And Communication Engineering	48	PUC	English	180	180
UG	BE,Electrical And Electronics Engineering	48	PUC	English	60	59
UG	BE,Information Science And Engineering	48	PUC	English	120	119
UG	BE,Electronics And Instrumentation Engineering	48	PUC	English	60	60
UG	BE,Medical Electronics	48	PUC	English	60	58
UG	BE,Industrial Engineering And Management	48	PUC	English	60	60
UG	BE,Computer Science And Engineering	48	PUC	English	120	120

UG	BE,Bio Technology	48	PUC	English	60	56
UG	BE,Aerospac e Engineering	48	PUC	English	60	60
PG	Mtech,Civil Engineering	24	BACHELO R OF ENGI NEERING	English	18	18
PG	Mtech,Civil Engineering	24	BACHELO R OF ENGI NEERING	English	18	18
PG	Mtech,Civil Engineering	24	BACHELO R OF ENGI NEERING	English	18	16
PG	Mtech,Mech anical Engineering	24	BACHELO R OF ENGI NEERING	English	24	15
PG	Mtech,Mech anical Engineering	24	BACHELO R OF ENGI NEERING	English	18	18
PG	Mtech,Chem ical Engineering	24	BACHELO R OF ENGI NEERING	English	18	3
PG	Mtech,Electr onics And C ommunicatio n Engineering	24	BACHELO R OF ENGI NEERING	English	24	23
PG	Mtech,Electr onics And C ommunicatio n Engineering	24	BACHELO R OF ENGI NEERING	English	18	16
PG	Mtech,Electr onics And C ommunicatio n Engineering	24	BACHELO R OF ENGI NEERING	English	18	17
PG	Mtech,Electr ical And	24	BACHELO R OF ENGI	English	18	17

	Electronics Engineering		NEERING			
PG	Mtech,Information Science And Engineering	24	BACHELOR OF ENGINEERING	English	18	17
PG	Mtech,Medical Electronics	24	BACHELOR OF ENGINEERING	English	18	4
PG	Mtech,Computer Science And Engineering	24	BACHELOR OF ENGINEERING	English	18	18
PG	MCA,Masters Of Computer Applications	36	BACHELOR DEGREE	English	60	54
PG	MBA,Masters Of Business Administration	24	BACHELOR OF DEGREE	English	120	116
Doctoral (Ph.D)	PhD or DPhil,Civil Engineering	72	MASTERS DEGREE IN ENGINEERING	English	132	94
Doctoral (Ph.D)	PhD or DPhil,Mechanical Engineering	72	MASTERS DEGREE IN ENGINEERING	English	93	59
Doctoral (Ph.D)	PhD or DPhil,Telecommunication Engineering	72	MASTERS DEGREE IN ENGINEERING	English	18	12
Doctoral (Ph.D)	PhD or DPhil,Chemical Engineering	72	MASTERS DEGREE IN ENGINEERING	English	28	6
Doctoral (Ph.D)	PhD or DPhil,Electronics And Communication	72	MASTERS DEGREE IN ENGINEERING	English	89	51

	Engineering					
Doctoral (Ph.D)	PhD or DPhil, Electrical And Electronics Engineering	72	MASTERS DEGREE IN ENGINEERING	English	33	13
Doctoral (Ph.D)	PhD or DPhil, Information Science And Engineering	72	MASTERS DEGREE IN ENGINEERING	English	44	27
Doctoral (Ph.D)	PhD or DPhil, Industrial Engineering And Management	72	MASTERS DEGREE IN ENGINEERING	English	20	8
Doctoral (Ph.D)	PhD or DPhil, Computer Science And Engineering	72	MASTERS DEGREE IN ENGINEERING	English	66	33
Doctoral (Ph.D)	PhD or DPhil, Bio Technology	72	MASTERS DEGREE IN ENGINEERING	English	13	8
Doctoral (Ph.D)	PhD or DPhil, Masters Of Business Administration	72	MASTERS DEGREE IN ENGINEERING	English	42	24
Doctoral (Ph.D)	PhD or DPhil, Mathematics	72	MASTERS DEGREE IN ENGINEERING	English	49	18
Doctoral (Ph.D)	PhD or DPhil, Physics	72	MASTERS IN ENGINEERING	English	21	8
Doctoral (Ph.D)	PhD or DPhil, Chemistry	72	MASTERS IN ENGINEERING	English	28	15

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	36				24				16			
Recruited	28	8	0	36	11	13	0	24	10	6	0	16
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	29				51				195			
Recruited	15	14	0	29	22	29	0	51	95	100	0	195
Yet to Recruit	0				0				0			

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				30
Recruited	19	11	0	30
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				115
Recruited	58	57	0	115
Yet to Recruit				0

Technical Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				42
Recruited	42	0	0	42
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				158
Recruited	107	51	0	158
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	43	22	0	21	30	0	39	25	0	180
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	12	12	0	66	81	0	171

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Part Time Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties					
Number of Visiting/Guest Faculty engaged with the college?	Male		Female		Total
	4		1		5

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	602	156	93	0	851
	Female	294	47	15	0	356
	Others	0	0	0	0	0
PG	Male	171	21	4	3	199
	Female	164	19	2	2	187
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	0	0	0	0	0
	Female	0	0	0	0	0
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years					
Programme		Year 1	Year 2	Year 3	Year 4
SC	Male	55	60	54	52
	Female	24	17	20	23
	Others	0	0	0	0
ST	Male	5	9	9	8
	Female	7	3	2	5
	Others	0	0	0	0
OBC	Male	135	144	142	155
	Female	51	47	43	59
	Others	0	0	0	0
General	Male	493	460	472	491
	Female	166	204	201	233
	Others	0	0	0	0
Others	Male	131	159	152	145
	Female	49	38	39	36
	Others	0	0	0	0
Total		1116	1141	1134	1207

2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

Department Name	Upload Report
Aerospace Engineering	View Document
Bio Technology	View Document
Chemical Engineering	View Document
Chemistry	View Document
Civil Engineering	View Document
Computer Science And Engineering	View Document
Electrical And Electronics Engineering	View Document
Electronics And Communication Engineering	View Document
Electronics And Instrumentation Engineering	View Document
Industrial Engineering And Management	View Document
Information Science And Engineering	View Document
Masters Of Business Administration	View Document
Masters Of Computer Applications	View Document
Mathematics	View Document
Mechanical Engineering	View Document
Medical Electronics	View Document
Physics	View Document
Telecommunication Engineering	View Document

3. Extended Profile

3.1 Program

Number of programs offered year-wise for last five years

2017-18	2016-17	2015-16	2014-15	2013-14
27	27	27	27	25
File Description			Document	
Institutional Data in Prescribed Format			View Document	

3.2 Students

Number of students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
5544	5438	5254	5130	4871
File Description			Document	
Institutional Data in Prescribed Format			View Document	

Number of outgoing / final year students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1428	1388	1298	1294	1183
File Description			Document	
Institutional Data in Prescribed Format			View Document	

Number of students appeared in the examination conducted by the Institution, year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
10965	10581	10415	9917	9457
File Description			Document	
Institutional Data in Prescribed Format			View Document	

Number of revaluation applications year-wise during the last 5 years

2017-18	2016-17	2015-16	2014-15	2013-14
1984	1943	2028	3166	2963

3.3 Teachers**Number of courses in all programs year-wise during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
811	624	631	619	590

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of full time teachers year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
351	346	341	336	318

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of sanctioned posts year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
351	346	341	336	318

File Description	Document
Institutional Data in Prescribed Format	View Document

3.4 Institution**Number of eligible applications received for admissions to all the programs year-wise during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
18835	17085	17735	17935	16867

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
732	672	678	661	577

File Description	Document
Institutional Data in Prescribed Format	View Document

Total number of classrooms and seminar halls

Response: 169

Total number of computers in the campus for academic purpose

Response: 2082

Total Expenditure excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
6425.41	4279.80	2836.05	2857.25	2127.43

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curriculum Design and Development

1.1.1 Curricula developed /adopted have relevance to the local/ national / regional/global developmental needs with learning objectives including program outcomes, program specific outcomes and course outcomes of all the program offered by the Institution

Response:

Factors for Curriculum Design:

The Curriculum is designed to ensure that the students have the required domain knowledge, skills and attitude. The factors considered for design of curriculum are: (i) Model curriculum prescribed by AICTE, (ii) Curricular structure of VTU, (iii) The Program Specific Criteria of professional bodies, (iv) Suggestions by industry experts and alumni, (v) Syllabus for various competitive exams like GATE, IES, etc, (vi) Syllabus of various reputed Indian and International Universities, (vii) Recent technological developments in the domain.

Addressing POs through the Curriculum:

The first step towards ensuring academic quality is the design of the curriculum, in particular, the types of courses, the number of electives, and the curricular structure, with complete details of the course title and course contents. The next step is the process of defining the Course Outcomes (COs) for every course and the mapping with the Program Outcomes (POs) as defined by NBA and the Program Specific Outcomes (PSOs) as defined by the program. It is ensured that the CO-PO mapping of the various core-courses of the curriculum is such that every PO is addressed by a minimum of two courses. Hence, the Curriculum, the courses of the curriculum, the COs of the various courses, the assessment tools to measure the COs, the strength of the CO-PO mapping, the strength of the CO-PSO mapping all constitute an effective curriculum design. An effective implementation of this Outcomes Based Education (OBE), ensures that our graduating engineers have all the 12 POs defined by NBA, and hence can compete on a global platform, and have expected global attributes. Specific to every program, we have 3-5 Program Educational Objectives (PEOs), that are measured through the performance of the alumni 3-4 years after graduation.

Process for Curriculum Design:

The initial version of the curriculum is prepared by having the above design criteria, through discussions with stakeholders. The curriculum is then placed for discussion/approval by the department level body: DAB (Department Advisory Board) and/or a BOS (Board of Studies) constituted as per prevailing norms, and has industry, academic experts in addition to faculty as members. The curriculum (suitably revised based on suggestions by DAB/BOS) is then placed for approval during the Academic Council (AC). Curriculum is finally evolved (after incorporating suggestions by AC if any).

The academic autonomy of the Institution provides the opportunity to frequently revise the curriculum based on needs and suggestions of various stake holders.

1.1.2 Percentage of programs where syllabus revision was carried out during the last five years**Response:** 100

1.1.2.1 How many programs were revised out of total number of programs offered during the last five years

Response: 27

1.1.2.2 Number of all programs offered by the institution during the last five years

Response: 27

File Description**Document**

Minutes of relevant Academic Council/BOS meeting

[View Document](#)

Details of program syllabus revision in last 5 years

[View Document](#)**1.1.3 Average percentage of courses having focus on Employability/ Entrepreneurship/ Skill development during the last five years****Response:** 83.18

1.1.3.1 Number of courses having focus on employability/ entrepreneurship/ skill development year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
668	518	521	516	499

File Description**Document**

Program/ Curriculum/ Syllabus of the courses

[View Document](#)

Average percentage of courses having focus on employability/ entrepreneurship

[View Document](#)**1.2 Academic Flexibility****1.2.1 Percentage of new Courses introduced out of the total number of courses across all Programs offered during last five years****Response:** 58.45

1.2.1.1 How many new courses are introduced within the last five years

Response: 474

1.2.1.2 Number of courses offered by the institution across all programs during the last five years

Response: 811

File Description	Document
Institutional data in prescribed format	View Document

1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented

Response: 100

1.2.2.1 Number of programs in which CBCS/ Elective course system implemented.

Response: 27

File Description	Document
Institutional data in prescribed format	View Document

1.3 Curriculum Enrichment

1.3.1 Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum

Response:

Courses to address Environment and Sustainability:

The curriculum includes various courses that address Environment, concern for environment, awareness on hazards for environment. For example the first year B.E. program includes a institute core course on 'Environmental studies' (based on the AICTE mandatory guideline). In addition to the above institute core courses, individual programs have included additional courses to address Environment and Sustainability.

For example: 'Environmental Biotechnology' by Biotechnology; 'Pollution control and management', 'Non-conventional Energy Technology' and 'Waste water treatment' by Chemical Engg.; 'Environmental Impact Assessment' and 'Solid Waste Management' by Civil Engg.; 'Green Computing' by Computer Science Engg. and Information Science Engg.;

The curriculum of PG programs also includes courses to address Environment and Sustainability. For example: 'Bioenergy', 'Safety Management in Bioprocess industry' and 'Biological waste treatment and Engineering' by M.Tech. Chemical Engg.; 'Sustainable Construction', 'Atmospheric Environmental Pollution and Control', 'Industrial Wastewater Treatment', 'Hazardous Waste Management' and

'Ecology and Environmental Impact Assessment' by M.Tech programs in Civil Engg.;

Courses to address Human Values and Professional Ethics:

The curriculum includes various courses to address Professional Ethics and Human Values. For example: The institute core course on 'Constitution of India & Professional Ethics' is included in the first year to help human values and professional ethics in all students. The curriculum also includes course on 'Personality Development and Communication' to develop human values and communication skills. In addition to the above institution core course, individual programs have included additional courses to address Professional Ethics and Human Values.

For example: 'Bioethics, Biosafety & IPR' and 'Biotechnology for Society' by Biotechnology; 'Law for Engineers' and 'Construction Project Management, Finance and Professional Ethics' by Civil Engineering; 'Value Engineering' by Industrial Engg.; 'IPR and Cyber Law' and 'Project Management and Finance' by the Electrical Science cluster (EE, EC, TE, ML and EI); 'Sustainable Telecommunication Networks' by Telecommunication Engg.; 'Electronics and Communication for Sustainable Development' by Electronics and Communication Engg.; 'Sustainable Practices in Electrical Engineering' by Electrical and Electronics Engg.; 'Micro-sensing Networks for Sustainable Cities' by Electronics and Instrumentation Engg.; 'Intellectual Property Rights' and 'Renewable Energy and Sustainability' by Mechanical Engg.; 'Entrepreneurship and Management' by Mechanical Science cluster (ME, IM);

The curriculum of PG programs also includes courses to address Human Values and Professional Ethics. For example: 'Business Government and Society', 'Business Ethics and Corporate Governance' and 'Work Ethics' by MBA; 'Innovation and Entrepreneurship' and 'Cyber Regulations & Professional Ethics' by MCA; 'Cyber Security and Law' by M.Tech. in Information Science Engg.; 'Construction and Contract Management' by M.Tech in Civil Engg.

In the present curricular structure, specific course to address gender is not included. However, the campus ambience, the work culture provide opportunity for students to demonstrate professional behaviour. The campus is proud to have about 60% boys and 40% girls students. The Women Cell and the Anti-sexual harassment committee continuously offer various programs like Debate, seminar, panel discussions on gender sensitization. The impact of these programs is evident through the confidence portrayed by all students irrespective of their gender.

1.3.2 Number of value-added courses imparting transferable and life skills offered during the last five years

Response: 37

1.3.2.1 How many new value-added courses are added within the last 5 years

Response: 37

File Description	Document
List of value added courses	View Document
Brochure or any other document relating to value added courses	View Document

1.3.3 Average percentage of students enrolled in the courses under 1.3.2 above

Response: 10.35

1.3.3.1 Number of students enrolled in value-added courses imparting transferable and life skills offered year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
644	541	585	459	492

1.3.4 Percentage of students undertaking field projects / internships

Response: 56.73

1.3.4.1 Number of students undertaking field projects or internships

Response: 3145

File Description	Document
List of programs and number of students undertaking field projects / internships	View Document
Any additional information	View Document

1.4 Feedback System

1.4.1 Structured feedback received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni 5) Parents for design and review of syllabus Semester wise /year-wise

A. Any 4 of above

B. Any 3 of above

C. Any 2 of above

D. Any 1 of above

Response: A. Any 4 of above

File Description	Document
Any additional information	View Document

1.4.2 Feedback processes of the institution may be classified as follows:

A. Feedback collected, analysed and action taken and feedback available on website

B. Feedback collected, analysed and action has been taken

C. Feedback collected and analysed

D. Feedback collected

Response: A. Feedback collected, analysed and action taken and feedback available on website

File Description	Document
Any additional information	View Document
URL for feedback report	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average percentage of students from other States and Countries during the last five years

Response: 6.54

2.1.1.1 Number of students from other states and countries year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
351	345	336	355	326

File Description

Institutional data in prescribed format

Document

[View Document](#)

2.1.2 Demand Ratio(Average of last five years)

Response: 12.65

2.1.2.1 Number of seats available year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1468	1408	1408	1408	1300

File Description

Demand Ratio (Average of Last five years)

Document

[View Document](#)

2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

Response: 90.57

2.1.3.1 Number of actual students admitted from the reserved categories year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
622	591	621	609	555

File Description	Document
Average percentage of seats filled against seats reserved	View Document

2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners

Response:

The institution assesses the learning levels of the student right from the time he/she is admitted to the college through a structured orientation programme.

Orientation Programme: Every year the institution organises Student's Orientation Programme for the newly enrolled 1st year students. The annual information booklet is provided to all newly admitted students at the beginning of the academic session. The booklet provides details about the faculty coordinators and their responsibilities as well as information about anti-ragging norms, Code of Conduct, events for the forthcoming year, staff and their functions etc.

Apart from highlighting the various aspects of the institution, the programme also orients the students of the specific attributes that are expected of them.

Bridge Courses: For the students joining under the lateral entry system (diploma holders joining the second year engineering course), the college offers special coaching, bridge programmes and peer guidance.

Remedial Classes: are conducted in the evening with an aim to improve the academic performance of the slow learners and students who participate in sports and other activities. For the students admitted under PIO (People of Indian origin) quota, special classes are conducted during evening hours to supplement their classroom learning.

Advanced Learners: are encouraged to participate and present papers in various Seminars/ Conferences/ Workshops/ Inter Collegiate Competitions. They are encouraged to participate in various inter collegiate co-curricular activities such as debates, Problem Solving, design competitions etc. Meritorious students from every semester in the respective departments are provided with a scholarship of Rs. 10000/- along with a certificate of merit. They are also encouraged to participate in a wide range of activities through student clubs/forums.

The Institution provides an opportunity for faculty to innovate in the TLP of the course and through on-campus activities beyond curriculum. For example: Blended MOOCs with IIT, Open Ended Experiments in Lab courses, Value Added Programmes, Projects for Community Service, Live Lecture Programmes (IITM), IITB e-Yantra, Blended learning – QEEE, Propel Labs promoting research among the UG students, Collaborative Engineering labs in the first year, Student project Competition Awards for best student projects, Facilitating Internships during the semester breaks, Project Based Learning, Inter-departmental student projects, Augmentation of labs with state of art equipment.

With an aim to motivate students to take up all types of Competitive Exams to encourage and guide students to pursue higher studies after their graduation and avenues available for them, an exclusive Competitive Examination & Higher Studies Cell has been recently established.

Slow Learners: The slow learners are identified on the basis of performance during CIE (Continuous Internal Evaluation), assignments/tutorials and performance in the SEE (Semester End Examination). Special program in the form of remedial classes is arranged to improve the performance in the courses..

The faculty advisory system (Proctor) is introduced to help and motivate the students to improve their overall academic performance. The departmental advisory board (DAB) also provides advice on academic matters. External and internal academic audits are conducted on regular basis to assess the progression of students.

2.2.2 Student - Full time teacher ratio

Response: 15.79

2.2.3 Percentage of differently abled students (Divyangjan) on rolls

Response: 0.52

2.2.3.1 Number of differently abled students on rolls

Response: 29

File Description	Document
Institutional data in prescribed format	View Document

2.3 Teaching- Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Response:

The Power point presentations are used in the classrooms to provide audio visual experience to the students. The NPTEL video lectures are adopted. The “Think-Pair-Share” is implemented in the class rooms. Quizzes are conducted regularly. The Assignments are given to the students to nurture their problem solving abilities. Collaborative learning is practiced. For ex, the MOOCs tie-up with IIT, Bombay.

The Inpods tool is used to assign, monitor and evaluate assignments and quizzes. The Edmodo tool is used to share knowledge among the peers. The Moodle, an open source learning platform is used to share information, to create quizzes, to build modules etc. The social learning platform, Wiksate is effectively used for collaborative learning. The lecture capturing platform, Impartus, provides an E-Learning solution of automatic recording and distribution of classroom lectures on flipped class model.

The Project Based Learning is adopted for the self-study components from 3rd semester onwards. The students have to do projects pertaining to a comprehensive course which has two credits of self-study component. The project allocation, monitoring and evaluation system is in place. Rubrics for project evaluation covering all the quality criteria's. The mapping to the appropriate POs is also done with the level of mapping. Effectively designed open ended experiments are adopted. These experiments challenge the student's critical thinking, analysis and design capabilities. The students are also trained on virtual labs and modern simulation tools.

The industry visits/site visits/ survey camps, guest lectures are conducted regularly on the latest topics and trends in the industry. Hands on workshops by the industry experts. Important Elective courses are offered along with the experts from the industry. Propel labs are established to promote research from the first year.

The final year Projects are mentored and evaluated by externals from professional body and industry. These projects are evaluated by a well-defined detailed rubrics framework to ensure quality of the projects. The best projects are awarded prizes.

Audit courses /Value added programmes are conducted on various topics. The students are also trained towards abstract writing, technical paper writing and literature survey. The OBE is practiced in true spirit resulting in more focussed all-round development of our students.

Modern Tool Usage: Use of technology (MOOCs and Blended MOOCs) for enhancing the learnability coefficient (self-pace) of the graduates, recording of live lectures and social learning platforms like WIKSATE.

Industry-Institute-Interaction: Collaborative efforts with the industry personnel for enhancing the learning levels of the graduates. Conduction of Annual Technical Symposium- "PHASE SHIFT", Exhibition of research projects of UG/PG students and industrial visits in coordination with industries.

Student Support System: Remedial Classes for the slow learners and Bridge courses for lateral entry students are conducted regularly.

The Departments have also evolved many best practices with student centric methods. 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 Institution ensures overall development of students through participatory learning experience.

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

Response: 100

2.3.2.1 Number of teachers using ICT

Response: 351

File Description	Document
List of teachers (using ICT for teaching)	View Document
Provide link for webpage describing the " LMS/ Academic management system"	View Document

2.3.3 Ratio of students to mentor for academic and stress related issues

Response: 18.99

2.3.3.1 Number of mentors

Response: 292

File Description	Document
Any additional information	View Document

2.3.4 Preparation and adherence to Academic Calendar and Teaching plans by the institution

Response:

Academic Calendar:

There is uniformity in the functioning of the Semester Scheme for all academic programmes across the College, as this can provide good academic flexibility to their stake holders, particularly the students and the faculty members. For this purpose, each academic year is divided into semesters, with the calendar, durations and academic activities being fixed in advance by the college while maintaining a common opening /reopening date for the odd semester. Every academic year includes THREE semesters. Two regular semesters (Odd, Even) with a minimum of 90 working days per semester. In addition, there is a supplementary/Fast track semester of 8 weeks. The calendar includes important academic activities to assist the students and the faculty. This enables the students to be well prepared, minimize their chances of failure in CIE and/or SEE and take full advantage of the flexibility provided by the credit system.

Induction programme as per AICTE guideline:

There is a 3-week long induction programme for the UG students entering the institution, right at the start. Normal classes start only after the induction programme is over.

The purpose of the Student Induction Programme is to help new students adjust and feel comfortable in the new environment, inculcate in them the ethos and culture of the institution, help them build bonds with other students and faculty members, and expose them to a sense of larger purpose and self-exploration.

Registration of Courses: Each student registers for coursework at the beginning of the semester. The permissible Course load to be either average number of credits of the Semester of the programme (for first year) or to be within the limits of minimum and maximum credits prescribed in each later Semester. A period of 2-3 days is specifically assigned for this event in the Academic Calendar for the students to seek

proctor advice, discuss with the course instructors and complete the formalities.

Dropping of Courses: A specific time period is fixed, e.g., in the middle of a semester for this purpose to be based on the review to be conducted of students' performance in CIE by the concerned proctor. The review to mainly assist the students having poor performance to be facilitated to drop the identified course(s) (up to the minimum credits specified for the semester) without being mentioned in the Grade Card. Such Courses to be re-registered by these students and taken up for study at a later semester in the programme.

Withdrawal from Courses: A specific time period shall be identified by the College towards the end of a semester to help review the students' performance in CIE by the proctor, followed by the students having poor performance to withdraw from identified course(s) (up to the minimum credits specified for the semester) with mention in the Grade Card (Grade 'W').

In addition, every department schedules additional professional body activities, industrial visits, value added programs, conference, workshop, symposium, training programs etc. without affecting the Academic Calendar prepared at the institutional level.

2.4 Teacher Profile and Quality

2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 100

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	View Document
List of the faculty members authenticated by the Head of HEI	View Document

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years

Response: 43.96

2.4.2.1 Number of full time teachers with Ph.D. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
181	158	146	139	122

File Description	Document
List of number of full time teachers with PhD and number of full time teachers for 5 years	View Document

2.4.3 Teaching experience per full time teacher in number of years

Response: 15.93

2.4.3.1 Total experience of full-time teachers

Response: 5591

File Description	Document
Any additional information	View Document

2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

Response: 28.66

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
32	24	18	14	09

File Description	Document
Institutional data in prescribed format	View Document
e-copies of award letters (scanned or soft copy)	View Document

2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years

Response: 20.92

2.4.5.1 Number of full time teachers from other states year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
73	71	73	72	65

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	View Document

2.5 Evaluation Process and Reforms

2.5.1 Average number of days from the date of last semester-end/ year- end examination till the declaration of results during the last five years

Response: 8.2

2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	9	15	9	7

File Description	Document
List of programs and date of last semester and date of declaration of result	View Document

2.5.2 Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years

Response: 1.26

2.5.2.1 Number of complaints/grievances about evaluation year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
265	160	157	38	45

2.5.3 Average percentage of applications for revaluation leading to change in marks during the last five years

Response: 2.37

2.5.3.1 Number of applications for revaluation leading to change in marks year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
36	32	46	97	91

2.5.4 Positive impact of reforms on the examination procedures and processes including IT integration and continuous internal assessment on the examination management system

Response:

The College publishes the Rules and Regulation for all Programmes. In addition to academic rules and regulations, the regulations governing examination, evaluation and mal-practice etc., are in place.

CIE Evaluation:

The course instructor plans the evaluation pattern along with the appropriate assessment tools. This evaluation pattern is made known to the students at the beginning of the semester with rubrics and assessment frameworks.

Barcode System for coding and decoding of scripts is adopted.

SEE Evaluation[for UG]:

The question paper setting for a course is sent to three internal faculty and three external faculty members [From outside the college]. The Board of Examiners [BOE] of the Department includes the internal faculty and external faculty [from outside the college] to scrutinize the question papers. The BOE scrutinises all the question papers and finalises at least four question papers for each course.

The SEE answer scripts will be evaluated at the COEs office. The internal faculty does the evaluation of the answer scripts as per the scheme and solutions. In addition, a moderator who is a senior external faculty evaluates minimum 20 scripts before commencing moderation.

The revaluation is open for all the students who have scored less than 25 and greater than 38. The challenge evaluation is open for all. Double evaluation is ensured for those who have scored between 25-27 marks.

The office of COE will facilitate “disclosure of answer scripts” to the UG students who have failed immediately after the exam results are announced. The answer scripts, scheme, question paper and solutions are made accessible to students. The students are also provided with an observation form to note their observations if any. The BOE chairperson will take care of grievances, if any.

SEE Evaluation [for PG]:

The course instructor prepares the question paper and scheme for SEE for the course. The evaluation of answer scripts of a course will be done by respective course instructors. The students are shown the answer scripts of all the courses by the respective course instructors. This process will happen immediately before the announcement of provisional results. A student aggrieved by the marks awarded to him/her can appeal

in this regard. The BOE chairman and the course instructor will address the grievance. Then, the answer scripts and the marks sheet are forwarded to the office of COE, which in turn will tabulate and announce the results.

The office of COE conducts the examination audit at the end of every examination (twice a year). The audit committee consists of three internal and three external auditors and these auditors are not part of BOE. Once the audit is over, the team submits a report to the office of COE. The COE, in turn forward the report to the BOE chairperson to take necessary and corrective measures.

The processes mentioned ensure fair and uniform conduction, evaluation of examination. The institution continues to adopt improved examination processes.

2.5.5 Status of automation of Examination division along with approved Examination Manual

A. 100% automation of entire division & implementation of Examination Management System (EMS)

B. Only student registration, Hall ticket issue & Result Processing

C. Only student registration and result processing

D. Only result processing

Response: A. 100% automation of entire division & implementation of Examination Management System (EMS)

File Description	Document
Current manual of examination automation system and Annual reports of examination including the present status of automation	View Document
Any additional information	View Document

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 on website and communicated to teachers and students

Response:

Course Outcomes (COs) are defined for every course, and are statements that describe the competencies gained by the student through the course. Every CO is aligned to one or more POs, and is measured at the end of the course, through various assessments, designed specifically to effectively measure the CO and contribute to the PO that it is mapped to. The number of COs for a course is not fixed, and may have about six COs. Few courses may have as few as three COs, while courses like the project may have as high as twelve COs. While defining the COs, we need to ensure that they are not an abridged version of the course

content, but instead, through every CO, we attempt to specifically address one or more POs through the course content and its assessments. When COs are well defined, the CO-PO mapping becomes redundant, as one can map the CO to the PO through comprehending the essence of the CO. However, the strength of the mapping is dependent on the course instructor and this component, necessitates the need to have the CO-PO mapping together with its strength.

Syllabus:

All courses of the curriculum have well defined COs, the CO-PO mapping with its strength and is included in the syllabus. The hardcopy of the syllabus is made available to every student.

Website:

The syllabus of all programs offered by the department is uploaded on the College website which includes the COs of various courses of the curriculum.

Course handout:

The course handouts for every program includes Vision-Mission, PEOs, POs, PSOs of the Program offered by the department and COs of various courses of the Curriculum

Library:

Institute's central library keeps all the POs, PSOs and COs for easy access to students and faculty through the syllabus books of various programs.

Lab Manual:

All POs, PSOs and COs of specific lab course are printed on lab manuals and issued to all students at the beginning of every semester.

Course Files:

All the faculty members will prepare a course file for each semester that lists the POs, PSOs and COs.

2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution**Response:**

The Departments have developed the curriculum taking all the POs into consideration and assuring that the curriculum strongly maps to all the POs. The PSOs are also appropriately framed along with the curriculum development.

The COs are framed as the abilities of the student after completing the course. The framed COs are then mapped with the POs and the PSOs. During the CO-PO/PSO mapping, the strength of mapping is also

considered.

The framed COs for a course are measured by following the assessment Plan [Evaluation Scheme] done by the Course instructor at the beginning of the semester. Some of the most common assessment tools used for computing CO attainment are: The Direct Assessment Tools given by performance in Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) and the Indirect Assessment Tool given by the Course End Survey (CES).

The questions given in the internal tests are mapped to the framed COs which in turn are already mapped with the POs with a mapping level. The same kind of process happens for the Quizzes, Assignments, and Lab works. A clear Rubrics is framed for the Project evaluation considering all the quality parameters. This rubrics which is announced to the students at the beginning of the semester is used to assess the projects. The course end survey questions are framed by the course instructor to indirectly find the level of confidence of the students on the Cos framed.

For the SEE, if the question to CO mapping could be done, then the CO computation weightage among different components would be as follows: 45% for CIE, 45% for SEE and 10% for Course End Survey. For SEE, if the question to CO mapping cannot be done, then the CO computation weightage among different components would be as follows: 70% for the CIE, 20% for the SEE and 10% for the course end survey.

At the end of the course, all the COs are measured using all the assessment methods. Similarly, all the COs of all the courses in that semester are computed. A qualitative analysis is done on the attainment of the COs for a course by the course instructor after the COs are computed. The observations, actions taken and to be taken and the recommendations are reported by the course instructor as part of the CO analysis.

At the end of the programme, the POs/PSOs are computed using the CO computation value of all the COs that are mapped to a PO/PSO and through Exit Survey

The PO/PSO computation are done using the weighted average of all the COs that are mapped to that PO/PSO. The Exit survey questions are framed by the department to indirectly measure the POs/PSOs.

After the computation of POs/PSOs, a thorough analysis on these attainment levels is done by the department. This analysis includes finding the weak areas towards the attainment of POs/PSOs and a detailed plan of action of various events which help in the further attainment of the POs/PSOs.

2.6.3 Average pass percentage of Students

Response: 95.86

2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 1389

2.6.3.2 Total number of final year students who appeared for the examination conducted by the institution

Response: 1449

File Description	Document
List of programs and number of students passed and appeared in the final year examination	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3

NAAC

Criterion 3 - Research, Innovations and Extension

3.1 Promotion of Research and Facilities

3.1.1 The institution has a well defined policy for promotion of research and the same is uploaded on the institutional website

Response: Yes

File Description	Document
Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	View Document
URL of Policy document on promotion of research uploaded on website	View Document

3.1.2 The institution provides seed money to its teachers for research (average per year)

Response: 25.87

3.1.2.1 The amount of seed money provided by institution to its faculty year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
0	72.60	0	56.77	0

File Description	Document
List of teachers receiving grant and details of grant received	View Document
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	View Document

3.1.3 Number of teachers awarded international fellowship for advanced studies/ research during the last five years

Response: 16

3.1.3.1 The number of teachers awarded international fellowship for advanced studies / research year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
5	4	3	3	1

File Description	Document
List of teachers and their international fellowship details	View Document

3.1.4 Institution has the following facilities

1. Central Instrumentation Centre
2. Animal House/Green House / Museum
3. Central Fabrication facility
4. Media laboratory/Business Lab/Studios
5. Research / Statistical Databases

A. Any four facilities exist

B. Three of the facilities exist

C. Two of the facilities exist

D. One of the facilities exist

Response: A. Any four facilities exist

File Description	Document
Institutional data in prescribed format	View Document

3.2 Resource Mobilization for Research

3.2.1 Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution during the last five years (INR in Lakhs)

Response: 883.93

3.2.1.1 Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
241.94	251.79	209.61	106.21	74.38

File Description	Document
List of project and grant details	View Document
e-copies of the grant award letters for research projects sponsored by non-government	View Document
Any additional information	View Document

3.2.2 Number of research centres recognised by University and National/ International Bodies

Response: 14

3.2.2.1 Number of research centres recognised by University and National/ International Bodies

Response: 14

File Description	Document
Names of research centres	View Document

3.2.3 Percentage of teachers recognised as research guides

Response: 8.58

3.2.3.1 Number of teachers recognised as research guides

Response: 29

3.2.3.2 Number of full time teachers worked in the institution during the last 5 years

Response: 338

File Description	Document
Details of teachers recognized as research guide	View Document

3.2.4 Number of research projects per teacher funded, by government and non-government agencies, during the last five year

Response: 0.77

3.2.4.1 Number of research projects funded by government and non-government agencies during the last five years

Response: 52

3.3 Innovation Ecosystem

3.3.1 Institution has created an eco system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge

Response:

The College hosts 4 such innovation/incubation centre with different thematic areas.

Centre for Innovation in Medical Electronics is one of the centre which concentrates on affordable healthcare device and has four successful innovations from the centre on Digital X-Ray, Vertigo disorder, Smart eye Kiosk, in collaboration with industry and institutes abroad along with the funding from various government and non-government agencies. The tangible benefits for students is that they got interned with Incubates in the development of the devices, got exposure to student community about Product development as well as Students were recruited by the Incubating companies.

Department of Master of Computer Applications, BMSCE and Altimetrik create “Innovation Cluster Lab” (ICL), a joint research and innovation lab which is designed to encourage innovative thinking and solutions at the forefront of the digital eco-system, the initiative embraces the spirit of “Make in India” by encouraging students and faculty to focus on the “CREATE” aspect of innovation, but with a global thinking and mind-set infused by the industry through Altimetrik. Under this initiative, hackathons were conducted and also there were 6 applications developed in Internet of Things domain. Swaccha Bharath, Connect, Smart-Tech app, Autonomous inventory management system, Conical gonio image acquisition for rural, Intelligent building management system were developed.

Department of Biotechnology has worked on Keratinolytic enzymes hydrolyse keratins. These enzymes have application in tannery and are used in hair removing products. The proposed technology to remediate the pollution and create value out of waste, i.e. to produce amino acids out of feather waste. The isolation, characterisation of a bacterial strain that produces keratinase and digests the feathers 90% of the chicken feathers is completed and optimum conditions for the production of keratinase (pH, Temperature and media composition) is identified along with the organism. This work is carried out in collaboration with Cleanergis Biosciences Pvt. Ltd. C-Camp, NCBS, Bengaluru.

Department of Information Science and Engineering, BMSCE is working towards innovation in the field of Machine learning, informatics and computing in collaboration with Altair Engineering India Pvt. Ltd, Bengaluru. The students along with industry are working on various innovative projects using ST Compose. Seminars, expert lecture series and industrial visits are organized as part of this initiative.

Apart from this the innovation centres hosts activities like Conferences, expert talks, training on startups, entrepreneurship bootcamps, etc which enables the students and innovators to create and transfer the knowledge.

File Description	Document
link for additional information	View Document

3.3.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry - Academia Innovative practices during the last five years

Response: 44

3.3.2.1 Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
16	12	06	05	05

File Description	Document
List of workshops/seminars during the last 5 years	View Document
Any additional information	View Document

3.3.3 Number of awards for innovation won by institution/ teachers/ research scholars/students during the last five years

Response: 137

3.3.3.1 Total number of awards for innovation won by institution/teachers/research scholars/students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
24	39	37	20	17

File Description	Document
List of innovation and award details	View Document

3.3.4 Number of start-ups incubated on campus during the last five years

Response: 1

3.3.4.1 Total number of start-ups incubated on campus year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	0	0	0	0

File Description	Document
List of startups details like name of startup, nature, year of commencement etc	View Document

3.4 Research Publications and Awards

3.4.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research

Response: Yes

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

3.4.2 The institution provides incentives to teachers who receive state, national and international recognition/awards

Response: Yes

File Description	Document
e- copies of the letters of awards	View Document
Any additional information	View Document

3.4.3 Number of Patents published/awarded during the last five years

Response: 21

3.4.3.1 Total number of Patents published/awarded year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
7	6	4	1	3

File Description	Document
List of patents and year it was awarded	View Document
Any additional information	View Document

3.4.4 Number of Ph.D.s awarded per teacher during the last five years

Response: 2.21

3.4.4.1 How many Ph.Ds are awarded within last 5 years

Response: 64

3.4.4.2 Total number of teachers recognised as guides during the last 5 years

Response: 29

File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	View Document
URL to the research page on HEI web site	View Document

3.4.5 Number of research papers per teacher in the Journals notified on UGC website during the last five years

Response: 0.57

3.4.5.1 Number of research papers in the Journals notified on UGC website during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
30	24	60	53	27

File Description	Document
List of research papers by title, author, department, name and year of publication	View Document

3.4.6 Number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings per teacher during the last five years

Response: 1.75

3.4.6.1 Total number of books and chapters in edited volumes / books published, and papers in

national/international conference-proceedings year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
92	168	170	125	38

File Description	Document
List books and chapters in edited volumes / books published	View Document

3.4.7 Bibliometrics of the publications during the last five years based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Response: 1.9

File Description	Document
BiblioMetrics of the publications during the last five years	View Document

3.4.8 Bibliometrics of the publications during the last five years based on Scopus/ Web of Science - h-index of the Institution

Response: 14.5

File Description	Document
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View Document

3.5 Consultancy

3.5.1 Institution has a policy on consultancy including revenue sharing between the institution and the individual

Response: Yes

File Description	Document
Soft copy of the Consultancy Policy	View Document
URL of the consultancy policy document	View Document

3.5.2 Revenue generated from consultancy during the last five years

Response: 221.29

3.5.2.1 Total amount generated from consultancy year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
47.35	27.48	41.87	41.16	63.43

File Description	Document
List of consultants and revenue generated by them	View Document
Audited statements of accounts indicating the revenue generated through consultancy	View Document

3.5.3 Revenue generated from corporate training by the institution during the last five years**Response:** 42.22

3.5.3.1 Total amount generated from corporate training by the institution year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
13.42	11.65	10.44	5.91	0.80

File Description	Document
List of teacher consultants and revenue generated by them	View Document
Audited statements of account indicating the revenue generated through training	View Document

3.6 Extension Activities

3.6.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years**Response:**

Orientation programs are conducted for the first year students where they are sensitized and motivated to enroll for the National Service Scheme (NSS) Cell, National Cadet Corps (NCC), Women Cell, Rotaract Club, Student Forums/Clubs etc. Participation of students in programs organized by various cells and bodies ensure their involvement in extension and outreach programs.

National Service Scheme: - The service rendered by NSS team has covered several aspects like health, environment, rural development, skill acquisition, value education etc. The details of programs organized by the unit for the past four years is shown in the following table

SNO	Parameter	Particulars		
		2014-15	2015-16	2016-
1	Plantation:			
	No. of plantation programs organized	1	1	1
	No. of Saplings planted in these programs	94	95	234
2	Blood Donation:			
	Blood Donation Camps organized	2	2	2
	Number of Units	525	695	509
3	Health/ Eye/ Immunization Camps organized	2	1	3
4	AIDS Awareness (No. of Program)	1	-	1
	Environmental Awareness Programs	5	3	4
5	Other awareness program			
	(Woman Safety, Road Safety, Voting Awareness	12	18	26
	Health, Education, Rural Empowerment			
	Alcohol awareness program etc			

The Institution has also adopted two Government Schools: Government Primary School Doddabasti, Ullal, Bangalore and Government High School, Yedyur , Bangalore

Construction of toilets for girls students, providing drinking water facility, providing electricity to school building, Distribution of books and uniforms to needy students are some of the activities that has been undertaken in these schools.

At the department level, numerous extension activities are conducted. Rejuvenation of lakes, water conservation programmes, canal rejuvenation, groundwater recharge strategies etc to name a few.

The institution has received numerous awards and certifications in recognition of its contribution towards social responsibility and community development activities. The details of awards and recognitions for the past five years are: National Young Leader Programme Award from VTU (University), Guinness World Records Certificate of Participation, State Environmental Award (Individual) Karnataka State Government, Collected 258 units of Blood at the Camp) Rotary Club, Certificate of Appreciation - Victoria Hospital, Collected 123 units of Blood at the Camp - Rotary Club, Bengaluru, Collected 113 Units of Blood at the camp-Kidwai Memorial Institute of Oncology, Bangalore, Collected 216 units of Blood at the Camp - Rotary Club, Bengaluru, Collected 66 Units of Blood at the camp - Bowring & Lady Curzon Hospital, Bangalore, Collected 165 Units of Blood at the camp - Kidwai Memorial Institute of Oncology, Bangalore, Collected 248 units of Blood at the Camp-Rotary Club, Bangalore, Collected 87 units of Blood at the Camp, Collected 110 Units of Blood at the camp, Collected 102 units of Blood at the Camp.

The Institution received the Guinness World Records Certificate of Participation in recognition of a largest diabetes awareness lesson with 8814 participants achieved at events organized by Rotary International District 3190 and Samatvam on 23rd February 2017.

3.6.2 Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

Response: 27

3.6.2.1 Total number of awards and recognition received for extension activities from Government /recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
9	7	5	5	1

File Description	Document
Number of awards for extension activities in last 5 years	View Document
e-copy of the award letters	View Document

3.6.3 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the last five years

Response: 147

3.6.3.1 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
62	28	32	19	6

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach programs conducted with industry,community etc for the last five years	View Document

3.6.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

Response: 30.17

3.6.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2550	1580	1650	1750	500

File Description	Document
Report of the event	View Document
Average percentage of students participating in extension activities with Government or NGO etc	View Document

3.7 Collaboration

3.7.1 Number of Collaborative activities for research, faculty exchange, student exchange per year

Response: 5.4

3.7.1.1 Total number of Collaborative activities for research, faculty exchange, student exchange year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
7	9	5	3	3

File Description	Document
Number of Collaborative activities for research, faculty etc	View Document

3.7.2 Number of linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the last five years

Response: 1737

3.7.2.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
356	543	404	241	193

File Description	Document
Details of linkages with institutions/industries for internship	View Document

3.7.3 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

Response: 121

3.7.3.1 Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years (only functional MoUs with ongoing activities to be considered)

2017-18	2016-17	2015-16	2014-15	2013-14
25	22	26	22	26

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	View Document
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The institution has adequate facilities for teaching - learning. viz., classrooms, laboratories, computing equipment, etc

Response:

The campus is spread over Land 11.00 acres 30 Guntas. The institution has excellent infrastructural facilities like spacious classrooms, laboratories, workshops, libraries, faculty rooms, conference halls, auditoriums administrative block. Separate hostels for men and women. The institution has augmented new infrastructure and those essential to maintain, renovate and augment the existing ones. The Description of adequacy of facility for teaching learning as per the minimum specified requirement by affiliating University viz., VTU, Belagavi is noted hereunder:

The UG Classrooms space, PG Classrooms space, Drawing Hall space, Library space and Seminar Halls space available are 7128 SQM (108 Class rooms), 1617 SQM (49 Class Rooms), 240 SQM, 4598 SQM and 1770 SQM against the university requirement of 3366 SQM, 990 SQM, 132 SQM, 400 SQM and 1584 respectively.

The UG Laboratories space, PG Laboratories space, Computer Center space, Workshop space, Physics Lab space, Chemistry Lab space, CCP Lab space and CAED Lab space available is 11961 SQM, 2917 SQM, 200 SQM, 210 SQM, 328 SQM, 810 SQM, 415 SQM and 150 SQM against the university requirement of 8580 SQM, 1980 SQM, 150 SQM, 200 SQM, 100 SQM, 100 SQM, 150 SQM and 150 SQM respectively.

The Principal Room space, HOD Cabin space, Faculty Room space, Reception space, Examination Office space, Board Room space and Store Room space available is 40 SQM, 417 SQM, 900 SQM, 25 SQM, 142 SQM, 70 SQM and 70 SQM against the university requirement of 30 SQM, 160 SQM, 860 SQM, 25 SQM, 30 SQM, 10 SQM, and 30 SQM respectively.

The Maintenance Room space, Housekeeping space, Security space, Boys Common Room space, Girls Common Room space, Toilet space, Cafeteria space, Sports Club space and First Aid & Medical Room space available is 124 SQM, 20 SQM, 20 SQM, 100 SQM, 150 SQM, 1134 SQM, 277 SQM, 300 SQM and 20 SQM against the university requirement of 10 SQM, 10 SQM, 10 SQM, 100 SQM, 100 SQM, 350 SQM, 150 SQM, 200 SQM and 10 SQM respectively.

In the library, No. of Titles, No. of volumes, National Journals, International Journals available are 53442, 204976, 147 and 26 respectively. Also, the Reprographic Facility, Facilities for viewing e-content from NPTEL/SWAYAM etc, Membership of National Digital Library and Membership of VTU e-Consortium are available in the library.

The No. of computers, printers, legal system softwares and legal application softwares available are 2230, 450, 8 and 90 against the university requirement of 833, 166, 3 and 20. The total Internet Bandwidth available is 700 mbps. Also, there are 60 secured Wi-Fi connectivity access points.

Other Campus Infrastructure

The campus has complete Wi-Fi Connectivity. Internet & Intranet facility available in Departments and Hostels. The IT infrastructure is maintained by the Data Centre. Voluminous library with LRs/Journals/e-journals, training and placement centre, on campus Health Care Centre, office of COE, Student Counseling Cell, Centers of Excellence/Incubation Centers/Innovative Labs etc.

File Description	Document
Link for Additional Information	View Document

4.1.2 The institution has adequate facilities for sports, games (indoor, outdoor),gymnasium, yoga centre etc., and cultural activities

Response:

BMS College of Engineering has made a name for itself in several sports & cultural activities – All the indoor & Outdoor activities i.e., Archery, Badminton, Basketball, Chess, Cricket, Football, Handball, Hockey, Judo, Kabaddi, Kho-Kho, Netball, Swimming, Tennis, Table Tennis, Volleyball, Yoga, Wrestling, Weight, and Power Lifting. The cultural activities are Dance, Music, Theatre, Fine Arts & Literary.

The Department of Physical Education and Sports Science serves as a vital and integral part of student life in campus. The mission of the department is to provide a broad spectrum of sports, recreation, and leisure activities for students, staff and faculty. The primary direction is to provide services and programs that stimulate growth, development and retention of students in a contemporary and safe environment that develops fitness and wellness, social interaction and leadership opportunities. The College offers multiple facilities on campus to cater to the physical development of students. The College has amenities for both Indoor and Outdoor games. The User Rate is 150 – 175 (Average Per Day).

The Indoor Sports Complex houses six Badminton courts, Volley ball and Basketball court with gallery. The Outdoor has facilities for Volleyball, Throw ball, Kho-Kho, Kabaddi and handball. A separate Gym is established for boys and girls in College and Hostels. The Sports & Cultural forum for nurturing talents of students in different forms of Dance, Music, Fine arts, Literary and theatre, etc. Cash incentives are given for outstanding Sports and Cultural achievers.

BMSCE stands in first position in sports and cultural activities at University level (2015-16 & 2016-17). Every Year Health and Fitness Classes (Yoga and Meditation, Aerobics and Recreational Games) are being conducted for all 1st year students in odd semester. A numbers of awards/medals for outstanding performance in sports/cultural activities at national/international level have been accomplished. The college encourages the students to take part in cultural activities that enable them to showcase their talent and creativity in various inter-collegiate events. The necessary training is provided through experts to the participating students. Every year, BMSCE organizes, UTSAV, the biggest techno-cultural-adventure fest in the state of Karnataka. The Management provides cash incentives for outstanding Student (sports) Achievers.

File Description	Document
link for additional information	View Document

4.1.3 Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc

Response: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 169

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	View Document
Link for additional information which is optional	View Document

4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.

Response: 79.88

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
6366.70	3830.00	2702.71	1681.22	1206.45

File Description	Document
Audited utilization statements	View Document

4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS)

Response:

The college has a voluminous computerized library which caters to the needs of students, research scholars and faculty. Housed in a spacious building spanning 49500 sq ft and has a seating capacity of 650 users at a time. The library has a rich collection of 140869 Volumes of books comprising of 35508 titles. The Digital Library provides On-line access to e-resources on Science and Technology for studies and research.

The library has access to more than 8641 e-Journals on various branches of Engineering, Science, Technology, Management and Architecture in addition to 171 National and International Printed Journals. There is a vast collection of General Books in reference Section. Apart from Central Library the departmental Libraries of MCA & MBA provide for immediate reference and easy access at the departmental levels. All Engineering Departments are having separate libraries at the department level to cater to the students.

The Library resources have been completely Bar Coded and automated using LIBSYS 7- Integrated Library Package which helps in Transactions, OPAC (Online Public Access of Catalogues) and reservation of Books etc., for the users.

The digital resources have been deployed using the Data Centre & hosted in the central server. Access to all the On-line library collection, such as the NPTEL lectures of all IITs and IISc have been procured and made available throughout the campus using Intranet for the use of Faculty & Students, Digitized CD ROM information pertains to all the important Books, Question papers, and 8641 e-Journals have also been provided in the same platform.

All the books have been classified and Catalogued using DDC and AACR2 respectively and arranged on Open shelves, Books are organized subject-wise for easy access and quick retrieval. New Books before sending to shelves are first displayed in the “new arrivals” section for 15-20 days and processed afterwards for the usage by students and staff.

File Description	Document
link for additional information	View Document

4.2.2 Collection of rare books, manuscripts, special reports or any other knowledge resource for library enrichment

Response:

The Library holds about 3776 rare books consisting of Biographies, Geographical Guides, Maps, Atlas, Dictionaries, Handbooks and books related to facts and places, along with around 25 titles have also been authored by our faculty. These books are extensively used and printed and published long back. The library also holds good collection pertaining to literature and religion.

The College library also has access to e-resources databases namely e-ShodhSindhu, Shodhganga and N.list. By accessing the said resources the library provides information services to the students, faculty and researchers. The student’s faculty and research scholars access the e-resources and download the relevant and needed articles. The faculty and researcher scholar’s access the Shodhganga to know the availability of thesis and research reports on their concerned subjects which are available freely for their research pursuits. All the electronic these submitted by various universities throughout the country are available on Shodhganga and it guides the prospective researchers to choose the research topic and problems of relevance and quality.

The library is a member of N.list and also VTU consortium wherein all our students and faculty are

extensively using the e-journals provided by the consortium online. The resources provided by the said consortiums and e-ShodhSindhu are in full text, bio-graphic and factual which in turn are very much useful because of their authenticity on research topics.

File Description	Document
link for additional information	View Document

4.2.3 Does the institution have the following

- 1.e-journals
- 2.e-ShodhSindhu
- 3.Shodhganga Membership
- 4.e-books
- 5.Databases

Any 4 of the above

Any 3 of the above

Any 2 of the above

Any 1 of the above

Response: Any 4 of the above

File Description	Document
Details of subscriptions like e-journals,e-ShodhSindhu,Shodhganga Membership etc	View Document
Any additional information	View Document

4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

Response: 88.27

4.2.4.1 Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
63.64	60.28	95.89	123.05	98.48

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	View Document
Audited statements of accounts	View Document

4.2.5 Availability of remote access to e-resources of the library

Response: Yes

File Description	Document
Any additional information	View Document

4.2.6 Percentage per day usage of library by teachers and students

Response: 35.45

4.2.6.1 Number of teachers and students using library per day over last one year

Response: 2090

File Description	Document
Any additional information	View Document

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Response:

The Data Centre monitors the Campus Wide Networking (CWN) facility of the institution for ubiquitous network connectivity throughout the campus. At present CWN is having two redundant high end carrier class core switches and one hundred access switches. The Connectivity between the core switch to the access switch is through multimode fibre optic backbone. The existing bandwidth of the intranet is 10 GBPS. Currently the CWN is supplemented with 700 MBPS of redundant internet link to cater to the internet requirement of the campus. The institute has hosted a private cloud on virtualized environment of blade servers and flex servers with fibre SAN storage to meet the computing requirements of the campus. Campus intranet has paved way to provide seamless access to e-journals, online lecture streaming and application software. The Data Centre also hosts e-mail and webservers of the institution. Additionally the CWN is supplemented with mobility aware wireless connectivity of wireless network enabled electronic gadgets of students and staff. APNIC, of which BMSCE is a proud member, has allotted three block of static IP addresses and ASNs. This facilitated the institution a global presence in the internet domain. In India BMSCE is the first educational institution to obtain APNIC membership and static IP addresses.

The number of High-end Blade Servers in the Data Center are 11 nos. with 4 TB Storage. The number of Flex Servers in the Data Center are 2 nos. with 16 TB storage. There is a dedicated 700 Mbps leased line. The Data Center provides 24/7 Internet facility to the college / hostels. The Data Center hosts College Website and official email Service & Messaging.

The total number of computers on network is 2082. The number of Printers is 416. There are 8 Licensed System Software's. There are 110 Licensed Application Software's. The Data Center has one Fortigate Fire wall 800 C, a Forti analyser, 3 Juniper Routers, 3 Extreme Core Switches, 100 Extreme Edge Switches, one Ruckus Wifi Controller, 62 Ruckus Wifi Access Points, 18 Extreme Access Points and one Network Access Controller. The Data Center has qualified technical support staff for effective maintenance.

There are several Auditorium's and Seminar Halls which are equipped with E Learning Solutions to support Computer, Internet access, training to teachers and students and any other programme for technology upgradation. They are BMS Auditorium, BSN Hall, Mechanical Seminar Hall, QEEE Room, CAD Lab, 3D PLM Lab, Faculty Development Centre, Principal Office, Boardroom, Placement dept. 3rd floor, MTech VLSI Center of Excellence and RF Lab (Keysight).

The Classrooms, seminar halls, conference halls, Auditoriums are equipped with LCD Projectors with all accessories. The college has an equipped Lecture Capture System. Totally, 15 Systems for each Dept installed in one classroom in the Dept is equipped with LCS and 3 Systems in BMS Auditorium, BSN Hall & Faculty Development Centre.

File Description	Document
Any additional information	View Document

4.3.2 Student - Computer ratio

Response: 2.66

File Description	Document
Any additional information	View Document

4.3.3 Available bandwidth of internet connection in the Institution (Lease line)

?50 MBPS

35 MBPS - 50 MBPS

20 MBPS - 35 MBPS

5 MBPS - 20 MBPS

Response: ?50 MBPS

File Description	Document
Any additional information	View Document

4.3.4 Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)

Response: Yes

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

Response: 40.46

4.4.1.1 Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
1470.32	1434.34	1630.83	1220.21	972.20

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document
Audited statements of accounts.	View Document

4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Response:

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 250 LPH (02 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.

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.

File Description	Document
link for additional information	View Document

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years

Response: 17.51

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1229	1367	612	989	455

File Description	Document
Upload self attested letter with the list of students sanctioned scholarships	View Document
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	View Document

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

Response: 2.32

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
130	147	114	112	108

5.1.3 Number of capability enhancement and development schemes –

- 1.Guidance for competitive examinations
- 2.Career Counselling
- 3.Soft skill development
- 4.Remedial coaching
- 5.Language lab
- 6.Bridge courses

7.Yoga and Meditation**8.Personal Counselling****7 or more of the above****Any 6 of the above****Any 5 of the above****Any 4 of the above****Response:** Any 4 of the above

File Description	Document
Details of capability enhancement and development schemes	View Document

5.1.4 Average percentage of students benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years**Response:** 40.14

5.1.4.1 Number of students benefited by guidance for competitive examinations and career counselling offered by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2523	1925	2350	1950	1805

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document

5.1.5 Average percentage of students benefited by Vocational Education and Training (VET) during the last five years**Response:** 10.35

5.1.5.1 Number of students attending VET year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
644	541	585	459	492

File Description	Document
Details of of students benefited by Vocational Education and Training (VET)	View Document

5.1.6 The institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

Response: Yes

File Description	Document
Details of student grievances including sexual harassment and ragging cases	View Document

5.2 Student Progression

5.2.1 Average percentage of placement of outgoing students during the last five years

Response: 67.12

5.2.1.1 Number of outgoing students placed year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
939	944	918	899	729

File Description	Document
Self attested list of students placed	View Document
Details of student placement during the last five years	View Document

5.2.2 Percentage of student progression to higher education (previous graduating batch)

Response: 7.49

5.2.2.1 Number of outgoing students progressing to higher education

Response: 107

File Description	Document
Details of student progression to higher education	View Document

5.2.3 Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 88.31

5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil services/ State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
65	49	41	25	23

5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: NET/SLET/GATE/GMAT/CAT, GRE/TOEFL/ Civil Services/State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
79	55	46	27	26

File Description	Document
Number of students qualifying in state/ national/ international level examinations during the last five years	View Document

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) during the last five years

Response: 97

5.3.1.1 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-wise during the last five

years

2017-18	2016-17	2015-16	2014-15	2013-14
34	28	14	11	10

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at national/international level during the last five years	View Document
e-copies of award letters and certificates	View Document

5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

Response:

BMSCE offers students the opportunity to participate in various types of academic and campus activities.

The student representatives are regularly invited to the BOG Meetings. The Views of students are considered while initiating of new courses, curriculum framing, teaching methodology etc. The students are invited to the brainstorm sessions regarding this. 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. The students participate in the feedback system. The Students provide feedback on faculty (4 times in a year), HODs & Principal (once in a year) and Institution (2 times in a year). 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. The Students are encouraged to carry out mini & major project work in house and in collaborations with industry and academia. Few Student Representatives from various branches are invited to Academic Council Meetings. 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, GRC, BoS, Women's Cell and other committees.

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 flavor for societal responsibility in their project work. Best project awards are given in every academic year. 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. 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. Students are also encouraged to form chapters like IEEE, ICT etc to organize activity based programme for students.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

5.3.3 Average number of sports and cultural activities / competitions organised at the institution level per year

Response: 25.4

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
30	30	25	21	21

File Description	Document
Number of sports and cultural activities / competitions organised per year	View Document
Any additional information	View Document

5.4 Alumni Engagement

5.4.1 The Alumni Association/Chapters (registered and functional) contributes significantly to the development of the institution through financial and non financial means during the last five years

Response:

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 20000 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, 60 students have benefited so far. A total loan amount of Rs.245.70 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.

The Alumni Association creates and maintains a life-long connection between the Institute and its alumni, who number more than 20,000. The Alumni Association works to connect alumni, support students and build an unforgettable Institute experience through a diversity of events, programmes and services.

5.4.2 Alumni contribution during the last five years(INR in Lakhs)

? 15 Lakhs

10Lakhs - 15 Lakhs

5 Lakhs - 10 Lakhs

2 Lakhs - 5 Lakhs

Response: ? 15 Lakhs

File Description	Document
Alumni association audited statements	View Document

5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

Response: 28

5.4.3.1 Number of Alumni Association /Chapters meetings held year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
6	4	4	6	8

File Description	Document
Number of Alumni Association / Chapters meetings conducted during the last five years	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the institution

Response:

B.M.S. College of Engineering (BMSCE) was established in 1946 as the first private engineering college in the country.

VISION

Promoting the prosperity of mankind by augmenting human resource capital through quality technical education & training.

MISSION

Accomplish excellence in the field of technical education through education, research and service needs of society.

The founders have envisaged the vision of providing skilled and competent workforce to society by imparting quality education and training.

The administration is overseen by the Board of Governors (BOG). The BOG is constituted as per the statutory provisions. Two faculty members (on rotation basis) are included as members of BOG. Governing body meeting is conducted in a transparent manner. The BOG meets regularly. The members of BOG make active contributions for academic growth and improvements in the service matters of the employees.

The BOG approves the strategic Plan, Vision & Mission, and the Budget based on the Strategic Plan. The implementation of the vision and plan is executed with the support and with the involvement of all the stake holders. The BOG ensures that all decisions on the matters such as admission, new programmes, infrastructure, Teaching & Learning Process and Placements are arrived based on the fundamental concerns of the Institution.

The Institution has brought out a Good Governance Document (GGD) prepared, adhering to the good governance practice guide of TEQIP.

Many senior faculty members occupy pivotal administrative positions like the Vice-Principal, Deans, Placement Officer, Hostel Secretaries, Wardens, COE etc., and are also members of various decision making and administrative bodies. Senior faculty members are made heads of various Academic/Administrative committees. The faculties are also deputed to various administrative training programmes. Regular academic and administrative audits are conducted.

The faculties are actively involved in decision making process. As part of Departmental Academic Committee, All the Head of the Departments are members of the Academic Council, College Council and

HODs Council where major Academic/Administrative decisions are being addressed. More academic/financial power is delegated to the Heads of the Departments. College follows good governance practices and to this effect a well prepared document is published. All appointments are done by the Board of Appointments (BOA), nominated by BOG and headed by the Donor Trustee of BMSET. Proceedings of Academic Council meetings, TEQIP, Finance, disciplinary & others are reviewed/ ratified by BOG.

Suggestions from all stakeholders are also given prominence for the improvement in the effectiveness and efficiency of all institutional processes.

Effective and participative decision making process is adopted to achieve the vision, mission and the goals of the institution and also in building effective organizational culture.

File Description	Document
Link for Additional Information	View Document

6.1.2 The institution practices decentralization and participative management

Response:

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.

Two faculty members (on rotation basis) and student representatives are invited to the BOG meetings and their view obtained and duly considered. Governing body meets regularly and is conducted in a transparent manner. 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 relevant information is shared with the employees through various meetings/circulars. The finance committee appraises the BOG pertaining to finances of the college. Budgetary provisions for the departments are made based on the requirements/inputs provided by the HOD. The Institution also publishes audited financial statements on its website for public information.

The Principal provides leadership for the academic administration and creates an effective environment conducive for learning. He ensures that quality education is imparted to the students that foster the holistic development of the students. He also ensures all-round development of the Institute and achievement of strategic plans of the institution.

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.

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.

Many senior faculty members occupy pivotal administrative positions like the Vice-Principal, Deans,

Placement Officer, Director, IQAC, Hostel Secretaries, Wardens, Controller of Examination etc. They are also part of various decision making administrative bodies. Senior faculty members are made lead various Academic/Administrative committees.

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 an advanced planning for senior leadership positions at all level. If the HODs of any department retire, a senior most teacher is appointed as head of the department. There is a smooth transition in changing over the responsibilities whenever those fall vacant. 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 the necessary guidelines for the nomination of faculty as HOD on rotation basis. The senior faculties are also deputed to various administrative training programmes.

At the department level, decisions are taken by various department level Committees. The faculty are actively involved in decision making process. As part of the Departmental Academic Committee [DAC], the faculty provide their inputs on all academic related matters.

File Description	Document
Link for Additional Information	View Document

6.2 Strategy Development and Deployment

6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

Response:

The strategic plan of the college has been developed involving all the stakeholders through focused group discussions and workshops by adopting a participatory approach both at institutional and department level. The plan is developed with an aim at achieving excellence by optimum utilization of resources. The Management conducts regular review of compliance to strategic plan (both Long Term Goals and Short Term Goals).

FACULTY WITH PhD QUALIFICATION AT ALL LEVELS & FACULTY RETENTION RATE

The Strategic management is a continuous process that is systematic and focuses on long term and short term objectives of the institution. The college is having one of the largest student population among engineering colleges in the state. It aims to conceptualize learning outcomes in more comprehensive terms and desires that its graduates possess distinguished academic and personal abilities.

The management feels that quality of faculty and diversified educational system has an important role to play in an institution to reach its full potential.

To have more Faculty with PhD Qualification At All Levels

To have a strong knowledge and its impact on Research and pedagogy, the management aims to have more number of faculty with PhD Qualification at all levels.

The management has introduced several Initiatives for enthusing faculty to pursue Doctoral Degree viz., Study leave with full salary for the faculty pursuing PhD under QIP, Reimbursement of fee paid for pursuing PhD under part-time, Research and Development Centre to enthuse faculty and students to take up research endeavors, Continuous augmentation of labs with state of art equipment and software, Collaboration with foreign Universities for Research activities etc.

There has been considerable increase in the number of faculty with PhD Degree during the assessment period. From 2012 to 2018 the number of PhDs increased. In chronological order the numbers are 70, 88,111,130,146,158 and 178 PhDs out of 276,292,318,336,341,346 and 351 respectively showing an increase in percentage from 25 to 51 over 7 years.

The institution encourages the existing faculty to advance their qualification. Moreover, as per the decision of the BOG in its meeting held on 12.07.2017, the institution is recruiting candidates who possess only PhD degree for all levels of faculty.

The institution aims to have 70% of faculty with Doctoral Degree qualification within next two years.

Faculty Retention

The Institution has excellent retention rate of faculty at all ranks. The institution has achieved the high retention rate by focusing on administrative stability, clarity, faculty investment and engagement, and various faculty development programs. The management has implemented several measures towards faculty satisfaction and retention. The faculty retention is 96.4% with average age being 43 years and average experience at 14 years.

File Description	Document
Any additional information	View Document
Strategic Plan and deployment documents on the website	View Document
Link for Additional Information	View Document

6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism

Response:

B.M.S. College of Engineering has many statutory and non-statutory bodies carrying out functions and responsibilities in pursuit of institutional mission and core values.

Governing Body

The administration is overseen by the Board of Governors (BOG). Governing body meets regularly and is conducted in a transparent manner. The BOG approves the strategic Plan, Vision & Mission and the Budget based on the Strategic Plan. The institution is well known for its good administrative practices and work culture.

Academic Council [AC]

The Academic Council is the highest academic body which decides and advises on all academic matters.

Academic proposals of BoS from each department are scrutinized and approved with or without modifications by the academic council. It also recommends/advise the BoG on proposals for new programme of study and other academic matters. Departments are advised on admission, sports, extra-curricular activities, maintenance etc. College is advised regarding institution of scholarships, studentships, fellowships, prizes and medals etc. Academic council performs such other functions as may be assigned by the BOG.

Academic & Administrative Committees

The institution has in place several Committees / Sub-Committees in addition to statutory committees to continuously monitor the academic and administrative activities. The committees comprise of key stakeholders.

Recruitment Procedure

The recruitment of faculty / staff is a crucial activity. The Board of Appointment (BOA) is constituted specifically for governing the recruitment procedure.

Promotional Policy

The faculty are extended with the revised AICTE scales (Sixth Pay Commission 2006 with DA). The eligible faculty members are given placement/promotion under Career Advancement Scheme [CAS] of AICTE as recommended by the Screening Committee.

The staff welfare measures include monetary benefits. Additional increments, reimbursement of fees for pursuing higher studies, depositions with financial assistance, Rewards system for research projects etc. The Non-Teaching staff members are extended with state scales of pay and eligible for earned leave benefits as per norms. The promotional benefits are extended on the basis of the KCSR [Karnataka Civil Service Rules] & C&R [Cadre & Recruitment]. Recruitment Rules of DTE by following the reservation roster and adhering to the prescribed staffing pattern. The Board of Governors has defined specific norms for the staff members. The Management continuously encourages staff training, updation of qualification, research endeavors etc.

Grievance Redressal System: The institution established Grievance Redressal Committee [GRC] on 27.08.2012 for the purpose of redressal of grievances of students and parents. The aggrieved students/parents and others represent their grievance to the convener of the Committee either in writing or email to grieveredresal@bmsce.ac.in or through link provided in the institutional website bmsce.ac.in.

The grievances/representations of the employees are received by the Principal and duly addressed. The

issues requiring Management approval/guidance are placed before the Governing Council of the College which decides upon the issue, based on facts.

File Description	Document
Link to Organogram of the Institution webpage	View Document
Link for Additional Information	View Document

6.2.3 Implementation of e-governance in areas of operation

- 1.Planning and Development
- 2.Administration
- 3.Finance and Accounts
- 4.Student Admission and Support
- 5.Examination

All 5 of the above

Any 4 of the above

Any 3 of the above

Any 2 of the above

Response: All 5 of the above

File Description	Document
Screen shots of user interfaces	View Document
Details of implementation of e-governance in areas of operation Planning and Development,Administration etc	View Document
Any additional information	View Document

6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions

Response:

Office Note:

The list of some of the committees (statutory and non-statutory) in vogue & one activity successfully implemented based on the resolutions is envisaged here under:

The table indicates one activity successfully implemented.

Name of the Committee	Number of Meetings held since 2012	Date	Resolution
Board of Governors	08	02.09.2015	Presentation on the status of implementation of Strategic Planning for the period from [April 2015 August 2015] was made.
Academic Council	11	25.06.2016	The council accorded approval to offer all the PG programs under Autonomous stream commencing from the academic year 2016-17 onwards.
Finance Committee	07	30.01.2014	The members had a detailed assessment of the budget utilization for 2013-14. The members expressed their overall satisfaction on the utilization of budget.
Sports & Cultural Committee	13	16.05.2013	The Committee approved the proposal for Laying of Synthetic flooring for the Indoor Sports Stadium for 7,600 sq. ft. at a cost of Rs.13.30 Lakhs
Board of Appointments	65	29.07.2013	01 faculty of the cadre of Associate Professor for MBA Department and 02 faculty of the cadre of Assistant Professor for the Department of Chemistry 02 for humanities and one for mathematics were selected.
Family Welfare Fund Committee	08	18.05.2017	The amount payable to Spouse or dependents of employees deceased enhanced from Rs.2,50,000/- Rs.3,00,000/-
Internal Quality Assurance Cell (IQAC)	08	11.05.2017	The Director, IQAC presented a report detailing the activities and progress the institute has made since July 2012 i.e. during the NAAC Cycle I period.
Women Cell	20	29.06.2016 19.02.2018	Resolved to install sanitary napkin vending machines and incinerators. Resolved to conduct free health checkup camps for the female housekeeping staff.
Grievance Redressal Committee	14	01.06.2017	The GRC shall meet at least once in 4 months and as & when grievance is reported give wide publicity regarding GRC among

	SC ST OBC Cell	01	14.03.2018	The Cell shall provide special inputs in an experience difficulties. To have more sessions with the students. The Cell shall the students to optimally utilize the benefits schemes offered by the Government and agencies.
	Anti-Ragging Committee	05	30.09.2012	It was suggested to make atleast 3 night random visit in a week, in team comprising one warden and one or two faculty members.
	Feedback Committee	09	18.08.2014	The committee resolved to arrange feedback programmes for faculty rated below 60% student feedback.
File Description		Document		
Any additional information		View Document		

6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures for teaching and non-teaching staff

Response:

WELFARE MEASURES FOR TEACHING STAFF

SNo	Teaching Staff
1	CAS: The benefits under CAS is being extended a
2	Encashment of Earned leave as per norms
3	Cash Incentive for writing Technical & Literat 15000/-.
4	Maternity Leave: 180 days
5	Paternity Leave: 15 days
6	Retirement benefits: GIA: Pension, Family pension, DCRG, Terminal e MGMT: EPF, DCRG, Terminal encashment.
7	Employees Family Welfare Fund: <ul style="list-style-type: none"> • In case of VRS – Rs. 75000/- Retirement – • In case of death – Rs. 300000/-
8	VRS: VRS is extended to the staff who have put in
9	Medical Insurance: Insurance coverage upto a limi

10	Festival & Medical Advance: Extended	
11	Laptop loan: Interest free loan provided	
12	Car loan: Upto a maximum of Rs. 9,00,000/-	
13	Providing Management Quota Seats to wards of te	
14	Personal loans from BMSET Employees Credit Co	
15	Providing cash incentives for research publications	
16	CII TDB T NET Centre to facilitate consultancy a	
17	Incentive of 5% from management funds (of the external agencies.	
18	Incentive scheme to enthuse faculty to take up Membership Fee in respect of any Indian Profess Foreign Professional Body	
19	National Pension Scheme (NPS) has been extended matching grants from the institution.	

WELFARE MEASURES FOR NON-TEACHING STAFF

SNo	Non-Teaching	
1	Time Bound increments to the staff on completion	
2	Encashment of Earned leave: This benefit is being	
3	Maternity Leave: Regular employees: 180 days	
4	Paternity Leave: 15 days	
5	Retirement benefits: GIA: Pension, Family pension, DCRG, Terminal e MGMT: EPF, DCRG, Terminal encashment.	
6	Family Welfare Fund : In case of VRS – Rs. 75000 In case of death – Rs. 300000/-	
7	VRS: VRS is extended to the staff who have put in	
8	Medical Insurance: Insurance coverage upto a limit	
9	Festival & Medical Advance: Extended	
10	Educational Aid: Rs. 10000/- p.a. for one child	
11	Two wheeler loan: Upto a maximum of Rs. 1,00,000/-	
12	Providing Management Quota Seats to wards with	

13	Personal loans from BMSET Employees Credit Co
File Description	Document
Link for Additional Information	View Document

6.3.2 Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years

Response: 63.47

6.3.2.1 Number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
197	249	208	227	193

File Description	Document
Details of teachers provided with financial support to attend conferences,workshops etc during the last five years	View Document

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Response: 63.6

6.3.3.1 Total number of professional development / administrative training programs organized by the Institution for teaching and non teaching staff year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
48	72	73	69	56

File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	View Document

6.3.4 Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

Response: 20.22

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
43	50	89	64	93

File Description	Document
Details of teachers attending professional development programs during the last five years	View Document

6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

Response:

The Institution has put great emphasis on staff performance. The annual Performance Report formats have been derived as shown hereunder:

The APRs are divided into Five parts namely Personal Data and Self – Assessment (to be filled by the employee) and Report, Review and Assessment to be filled by the Reporting authority, Reviewing authority accepting authority respectively. Separate Annual Performance Reports formats are being issued to the employees commencing from the cadre of Professor up to Mechanic & SDA cadre in the month of April every year to get their performance assessment for the previous year from April to March. Annual Performance Reports obtained from the concerned HODs/ Section Heads are reviewed and accepted by the prescribed authorities. After the completion of the evaluation process the duly accepted performance reports retain with the concerned custodian. In case of adverse remarks in the Annual Performance Report, the employees are counseled and provided training to improve efficiency.

Satisfactory Annual performance reports of the employees are being taken into consideration for extending the benefits like CAS promotions for teaching staff, Time Bound promotions of non-teaching staff and continuation of service & enhancement of consolidated pay of the employees. The annual performance review and the subsequent rating of an employee is an important factor in the grant of annual increments, performance awards and career advancement opportunities.

File Description	Document
Any additional information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

The Institute has a mechanism for internal and external audit to ensure financial compliance. The institutional accounts are regularly audited. The observation of the auditors if any are immediately corrected / rectified.

Internal Audit: The internal audit is an ongoing continuous process. Qualified Internal Auditors from external resources have been permanently appointed and a team of staff under them do a thorough quarterly basis check and verification of all payments, receipts & journals vouchers of the transactions cash books, ledger account review that are carried out in each financial year on an accrual basis system.

External Audit: The external auditor appointed by the college performs audit of the financial statements of the college. The financial records are audited by qualified chartered accountants after the end of each fiscal year is certified income & expenditures, balance sheet and prepared notes to accounts are certified.

Statutory financial audit of Institute is conducted in two sessions, first in the month of October November/ December for period of six months starting from 1st April to September and second in the month of May/ June for the period from October to March. Finalization of account is completed in June and audited statement is prepared in July. The audited statement is duly signed by Principal, Chairman and Chartered Accountant. All accounting systems are accrual basis computerized and maintained on Tally.

The Data Audit and performance audit of TEQIP II are conducted regularly. The half yearly and annual financial audit of TEQIP II and centre of excellence (COE) accounts till the completion of the project have been carried out by the Internal and Statutory auditors nominated by SPFU-Karnataka in addition to the auditors nominated by the college.

The Institution also publishes audited financial statements on the institutions website as information for the public.

Finance Committee: The Board of Management in its meeting held on 22.03.2011 constituted a Finance Committee as an advisory Body to advice the BOG on all matters connected with the finances of the college. The BOG reviews/ratifies the proceedings.

Budgetary provisions for the departments are made based on the requirements/inputs provided by the HOD. The departments propose their budgetary requirement for the particular year. In the capacity of the Member-Secretary of the Board of Governors, the Principal puts-forth proposals on finance related matters and seeks approval and ensures its apt implementation. Annual budget for institute is prepared at the beginning of financial year, considering potential income and expenditures (recurring and non-recurring) involved for the year.

File Description	Document
Any additional information	View Document

6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)

Response: 292.25

6.4.2.1 Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
50.65	60.54	69.74	55.03	56.29

File Description	Document
Details of Funds / Grants received from non-government bodies during the last five years	View Document

6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

Response:

Mobilization of funds in the institute is through several ways. The primary source is through collection of tuition fees and salary grants received from various bodies. The institute is a beneficiary of TEQIP a world bank assisted funding from the last five years. In addition, financial assistance is obtained through external research projects and carrying out extensive consultancy works. The institute is a part of the Global Initiative Academic Network approved by Government of India and is receiving funding through this segment also. The details of mobilization of funds are as shown below.

Tuition Fees & Salary Grants

The Maximum resource mobilization is through tuition and miscellaneous fees collected from the students.

Name of the Source	Year				
	2016-17	2015-16	2014-15	2013-14	2012-13
Student's Fees	388996286	353433278	312751444	277797721	231111111

Salary Grants

The aided programmes are covered under salary grants of the government. The salary grants received from

the Government for the past five years are provided here under:

SNO	Year	Amount in Lakhs
1	2012-13	995.40
2	2013-14	1133.38
3	2014-15	1338.51
4	2015-16	1409.96
5	2016-17	1667.26
Total		6544.51 Lakhs

Other Sources:

SNO	Name of the Source	Year				
		2016-17	2015-16	2014-15	2013-14	2012-13
1	Bank Interest	6412259	5159488	3774899	5536663	4954899
2	Misc Income	3832100	7631580	2619750	2363866	3123866
3	Funds from BMSET	284048754	285077793	270757555	189871026	189871026
Total (Amount in rupees)		294293113	297868861	277152204	197771555	197771555

Technical Education Quality Improvement Programme [TEQIP]

The Institution is a beneficiary of Technical Education Quality Improvement Programme [TEQIP] a world Bank assisted project launched by the Union Ministry of Human Resources and Development. Out of TEQIP I, TEQIP II and TEQIP-III projects, a total grant of Rs.2422.20 Lakhs has been received during the assessment period

Revenue through External Research Projects

The institution receives funding through research projects both from Govt. and Private sectors. The details of grants received through various government and non-government agencies during the assessment period is noted hereunder:

Year	No. of projects	Amount (in Lakhs)
2013	6	555.75
2014	8	104.28
2015	6	35.28
2016	42	497.17
2017	39	391.15
2018	05	176.08
Total	106	1759.71

Presently 23 projects worth 1026.90 Lakhs are ongoing

Revenue through Consultancy Projects

The institution also encourages revenue generation through variety of activities such as testing services, consultancy and research, usage of infrastructure for academic activities, etc. The revenue generated through consultancy during last five years is shown hereunder:

IRG through consultancy		
Year	No. of Projects	Amount (in lakhs)
2012-13	80	63.04
2013-14	80	63.43
2014-15	79	41.16
2015-16	83	41.86
2016-17	129	40.00
2017-18	93	47.35

GLOBAL INITIATIVE OF ACADEMIC NETWORKS (GIAN)

Govt. of India has approved a new program titled Global Initiative of Academic Networks (GIAN) Under this initiative, a total amount of Rs.76.16 Lakh worth projects has been granted to the institution during the assessment period.

6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

Response:

As per the guidelines of NAAC, an Internal Quality Assurance Cell [IQAC] has been established as a post-accreditation quality sustenance and enhancement measure. The Cell is presently headed by Dr.Mangala Keshava, Faculty, Department of Civil Engineering. The Director, IQAC is part of all major committees and other bodies and extends support to all the academic activities and recommends student centric core procedures. The Cell has ensured enhancement and coordination among various activities of the institution and institutionalizes all good practices.

Two Best Practices

1. Facilitating Conduct of Academic Audit of Departments

The IQAC believes that the academic audit provides an opportunity for a regular strategic overview of teaching-learning process. The academic audit is conducted exclusively for first year engineering courses, for higher semesters and for post graduate programmes. The audit is conducted at faculty level, department level and at the institute level. The first level is the self-analysis by faculty handling the respective course. The audit comprises of around 10 parameters namely the course outcomes defined for each course, the CO-PO mapping, Assessment tools followed, assessment analysis, CIE Bar graph representation, SEE grade distribution, CIE-SEE correlation factor, CO attainment and best practices followed. The second level of audit is conducted by the respective department academic audit committee. The audit comprises of five

auditing parameters namely the best academic practices of the department, courses which need COs to be redefined, courses where the CIE distribution is of concern, courses where CIE-SEE correlation is of concern and any other aspect of the department. The third level audit is conducted by IQAC at the institute level where in a team comprising of senior professors is formed to audit the various departmental academic activities. This audit comprises of observations with regard to best academic practices of the institution and suggests areas for improvement. Finally a summary of the audit is prepared and is placed for action plan to be suggested to improve the quality of academic activities.

1. Young Educator's Program (YEP)

Young Educator's Program (YEP) is an initiative to train the faculty members who have joined the institution since AY 2010-11. The faculty are introduced to the methods of teaching, pedagogy to understand student Psychology and approaches for teaching the concepts and fundamentals in Engineering and Technology. All the faculty members (98 members) are formed into single large group using Edmodo social learning tool under the name "YEP" and further divided into 20 groups based on the department they belong to. Some of the expectations of the group members include implementation of Outcomes Based Education (OBE), how to teach innovatively, coordinated and collaborative content delivery, implementation of ICT tools in Teaching learning process etc., Overall the faculty members are in the process of evolving themselves as per the current trends in teaching with new directions and challenges ahead.

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms

Response:

The IQAC has significantly contributed towards improving Academic Environment, Teaching, and Learning Process, Curriculum and Evaluation Methods and Research environment in the institution.

Academic Audit of Departments

The academic audit provides an opportunity to enhance the quality in teaching-learning process in the college. The academic audit is conducted for the first year engineering courses, for higher semester under graduate Engineering Programmes and for post graduate programmes. The audit is conducted at three levels namely at the faculty level, department level and at the institute level. The first level is the self-analysis by faculty handling the respective courses. The audit comprises of around 10 parameters namely the course outcomes defined for each course, the CO-PO mapping, Assessment tools followed, assessment analysis, CIE Bar graph representation, SEE grade distribution, , CIE-SEE correlation factor, CO attainment and best practices through the course. The second level of audit is conducted by the respective department academic audit committee. The audit comprises of five auditing parameters such as the best academic practices of the department, listing of, courses which need COs to be redefined, courses where the CIE distribution is of concern, courses where CIE-SEE correlation is of concern and any other aspect of the department. The third level audit is conducted by IQAC at the institute level where in a team comprising of senior professors is formed to audit the various departmental academic activities. This audit comprises of observations with regard to best academic practices of the institution and suggests areas for improvement. Finally a summary of the audit is prepared and is placed for outlining an action plan to

improve the quality of academic activities. Academic audit is normally conducted once in a semester.

Phase-shift: Annual inter-collegiate technical symposium is conducted in collaboration with Industry partners, Research institutions and academic professionals. Product displays by varied industry collaborators, Student project display, technical talks, paper presentations, technical quizzes, seminars and workshops are conducted on diverse and latest topics. The symposium aims to develop scientific temper and hence the knowledge, be able to apply both knowledge and the relevant skills to produce masterpieces well beyond our time. Students from different institutions and more than 70 industries participate.

Question Paper Audit-In order to maintain uniform assessment of internal and terminal examinations, question papers are audited periodically. Question papers of internal tests are audited at the respective department level. Semester end examination question papers are audited by experts who are invited from other institutions. Corrective actions are taken based on audit.

Disclosure of Answer Scripts: students are provided with an opportunity to see their answer scripts (of each course) after completion of evaluation and announcement of results. This is aimed to bring more transparency and also reduce the number of re-totaling/re-valuation cases.

6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

Response: 15.4

6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
24	25	12	9	7

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	View Document
IQAC link	View Document

6.5.4 Quality assurance initiatives of the institution include

1. Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements
2. Academic Administrative Audit (AAA) and initiation of follow up action
3. Participation in NIRF
4. ISO Certification
5. NBA or any other quality audit

Any 4 of the above

Any 3 of the above

Any 2 of the above

Any 1 of the above

Response: Any 4 of the above

File Description	Document
e-copies of the accreditations and certifications	View Document
Details of Quality assurance initiatives of the institution	View Document
Annual reports of Institution	View Document

6.5.5 Incremental improvements made during the preceding five years (*in case of first cycle*) Post accreditation quality initiatives (*second and subsequent cycles*)

Response:

The Institution established an Internal Quality Assurance Cell (IQAC) as a post-accreditation quality sustenance measure adhering to the structural guidance of NAAC.

In the last five years, five new programs have been added. In 2013, two PG programs namely Bio-Chemical Engineering and Bio-Medical Signal Processing & Intn. With an intake of 24 were added. Later in 2014 two more PG programs namely Manufacturing Science & Engineering and VLSI & Embedded Systems with same intake were added. In 2018, one UG program namely Aerospace Engineering with an intake of 60 was added.

The Intake was enhanced from 1142 to 1686. All the UG Programmes are accredited from NBA in the Tier-I Format. The UGC granted extension of autonomous status from 2014-2015 to 2015-2016 and from 2015-16 to 2021-2022. The AICTE approved Variation of intake for UG programmes of CV, ME, EC, IS, IE, ML Programmes. The PG programmes are offered under autonomous Stream from the AY 2016-2017. The academic performances of the students have been excellent with 90% (avg.) results. The Department of Telecommunication was recognized as Research Centre by the University (VTU).

The campus facilities were continuously augmented and strengthened. A good number of Innovative TLP were introduced. The Outcomes in terms of Research and Consultancy have increased considerably. The Institution fostered Linkages with many reputed industries to facilitate Industrial exposure to students and subsequently help in placement of graduates. Eight students have started their own companies and become Entrepreneurs since 2012. Number of faculty enhanced from 259 (2012) to 338 (Present) and Faculty with PhD from 64 (2012) to 166 (Present). The Institution received many Distinctions in recognition of its contribution in the field Technical Education. The Institution is proud of these achievements.

Centers of Excellence/Incubation Centers/Innovative Labs established. A funding of Five Crores has been granted under TEQIP towards establishing Centre of Excellence in Advanced Materials Research. E-Governance Cell, primarily responsible for computerization of all academic, financial and administrative activities related with the College, was established during March 2013. A Full-fledged Language Laboratory for the use of all the Departments was established. The Students are provided intensive courses in communication skills in English and basic proficiency in local language as well.

Many initiatives were introduced to promote Research culture. External Projects worth of Rs. 1710.21 Lakhs has been obtained for the period from 2013-14 to 2017-18. The institution adopted two Government schools as part of ISR. The Institution received Guinness World Record certificate for largest diabetes awareness lesson with 8814 participants (2017). Many of the faculty and staff have been bestowed with awards both at State and National Level in recognition of their contribution in various fields. To commemorate 70 years of its journey in promoting engineering education, BMSCE conducted seven international conferences.

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

Response: 22

7.1.1.1 Number of gender equity promotion programs organized by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
6	9	3	2	2

File Description

Document

List of gender equity promotion programs organized by the institution

[View Document](#)

7.1.2 Institution shows gender sensitivity in providing facilities such as

- a) Safety and Security
- b) Counselling
- c) Common Room

Response:

The institution makes sincere efforts to empower women faculty and students. BMSCE Women Cell is working towards women empowerment. Members are constantly putting effort towards organizing events which largely benefit the society and ladies in particular. In the past, we have organized several awareness programs and walkathon, free health checkup for ladies in BMS Hospital. The sanitary napkin incinerators as well as sanitary napkin vending machines are installed for the health and hygiene maintenance for the girls. The women cell interacts with students on various gender problems and personal distress, so as to develop the sensitization of students and solve the social issues. Two ladies common room facility are made available. The Women Cell celebrates international women's day every year.

The college Anti-Sexual Harassment Committee (ASHC) holds several interactions with the students and faculty during academic and non-academic activities of the college.

A student counselor has been working since April 2016 in BMSCE. So far 207 sessions have been conducted. Joint sessions with parents are also conducted whenever it was felt necessary. The issues addressed are maladjustment, academic performance anxiety, decision making, under achievement, peer pressure, relationship handling, women issues, absenteeism, mal practice, low self-esteem, emotional instability etc. Some of the cases were referred to Psychiatrist for further needful. Students who attended sessions felt comfortable and emotionally secured at the end of the sessions.

BMSETH considers safety and security of the girl students as paramount and has initiated many fool-proof measures. The Hostels are installed with CCTV surrounding the building to monitor the movements. The hostels are fenced and gated properly. Further, the inward and outward movements of outsiders are recorded and monitored by professional Security personnel. Apart from this, students are mandated to wear their IDs and monitored by the full time vigilant security personnel guarding the gates. To facilitate more secure environment, BMSETH mandates and maintains timings for the student's entry into Hostel and attendance in their hostel. Lady Security Guards watch the activities of the hostel 24/7. There will be lady guards available throughout the year. Ambulance is available in the hostel campus and is available at any time.

The Anti-ragging committee and squads monitor and ensure that the campus and hostels are ragging-free. Anti-Ragging Helpline is established in the college. The Women Hostel is monitored and is under the constant vigil of Women Warden and staff. The entry register is maintained in all hostel blocks to monitor the movement of the students. The college has in place all necessary measures to ensure girl student safety.

File Description	Document
Any additional information	View Document

7.1.3 Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: 41.38

7.1.3.1 Annual power requirement met by renewable energy sources (in KWH)

Response: 600

7.1.3.2 Total annual power requirement (in KWH)

Response: 1450

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	View Document

7.1.4 Percentage of annual lighting power requirements met through LED bulbs

Response: 56

7.1.4.1 Annual lighting power requirement met through LED bulbs (in KWH)

Response: 70

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 125

File Description	Document
Details of lighting power requirements met through LED bulbs	View Document

7.1.5 Waste Management steps including:

- Solid waste management
- Liquid waste management
- E-waste management

Response:**Solid Waste Management:**

The dry solid waste is put by the respective departments in a collection pit located within the campus. This 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 Control Board norms. Sufficient quantity of waste bins, clearly marked as Dry Waste and Wet Waste, are placed at a number of places within the campus for the students to dispose the Dry and Wet Waste.

Liquid Waste Management:

After initially neutralizing and minimising the chemicals in the laboratory, Liquid waste i.e. chemicals are treated through Effluent Treatment Plant (settling tanks). Chemical Treatment is done using chemical reagents like slaked lime Ca(OH)_2 or coagulants like FeCl_3 , $\text{Al}_2(\text{SO}_4)_3$ etc. H_2SO_4 & HCl is used for PH neutralization if it is alkali waste, implies low PH. NaOH , Na_2CO_3 , CaCO_3 and Ca(OH)_2 is used if waste is acidic, implying high PH. Polyelectrolyte is used for sludge Coagulation and sedimentation. Decolorant is used for decolouring solution. Sodium hypochlorite is used to kill harmful bacteria.

The chemicals Alkali Waste (Low PH) [Use H_2SO_4 , HCl], Acidic Waste (High PH) [Use NaOH , Na_2CO_3 , CaCO_3 , Ca(OH)_2] and Chemical Coagulations [Use polyelectrolyte, Al_2SO_3 (alum), FeCl_3] are used for neutralizing a chemical. The Tests Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Total dissolved Solids (TDS), PH and Colour are conducted to dispose of chemicals being used. Apparatus required for testing chemicals are kept in laboratories.

E-Waste Management:

E-Waste is being disposed through outsourcing. BMSCE has entered into MOU with M/s CORAL Communications and Networks Pvt Ltd., Bengaluru who recycle the materials/equipment as per Environmental protection act and Hazardous waste management rules and issue Recycling certificate.

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. A separate user friendly toilet for Physically Challenged ladies and gents is functional with all the necessary fittings and attachments. All the toilets are approachable through covered corridors during all seasons. Roof top rain water harvesting system with recharge pit has been implemented.

Chemical Waste:

The quantity of Chemical Waste generated is very minimal. However, small masonry tanks have been constructed in the four departments which generate chemical waste. A certain amount of coagulants are added to facilitate precipitation of the suspended/ dissolved particles. The treated effluent is drained 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.

File Description	Document
Any additional information	View Document

7.1.6 Rain water harvesting structures and utilization in the campus

Response:

Rain water harvesting structures and utilization

Rain water harvesting has been in place to assure an independent water supply during water restrictions. The College rain water harvesting system has a capacity of **13 cumec**. The same water is being used for gardening purpose. The RWH is also being implemented in the Hostel premises of the College. The unit NH3 has RWH tank of **1,00,000 litres**. The roof top harvesting of rain water with necessary plumbing work has been implemented in the western and northern wings. The collected water from the roof top is let through a filter system into a sump tank of 30,000 litres capacity. The stored water is initially used for gardening and then pumped to overhead tank for use in bathrooms and toilets. The roof top of unit **GH4** is also implemented with RWH with necessary plumbing work. The harvested rain water is let through a filter system directly into the open well.

Bore Well Water Consumption And Rainwater Harvesting

There are 3 Nos bore wells. All three bore wells are well maintained. It gives a yield of approximately 1.5 Lakh litres. These bore wells are supplying water to all bath rooms and common areas including Hostels at BMSCE Campus. There are two numbers of underground sumps of capacities 30000 litres and 1 Lakh litres for rain water harvesting. The water harvested from rains and bore wells are used for gardening. The RO's of 10 LPH, 25 LPH, 40 LPH and 250 LPH are used for drinking at BMSCE Campus including Hostels and Dining Halls. AMC of 10 LPH & 25 LPH are done by M/s Aqua Pro vide work order No. BMSCE/BS/SBS/29/2017-18 dated 12.10.2017, 40 LPH is done by M/s Aqua Pro vide work order No. BMSCE/BS/SBS/30/2017-18 dated 12.10.2017, 250 LPH is done by M/s Watech Inc vide work order No. BMSCE/BS/SBS/06/20-17-18 dated 25.05.2017 and 250 LPH is done by M/s. Watech Inc. vide work order No. BMSCE/BS/SBS/31/2017-18 dated 23.10.2017.

File Description	Document
Any additional information	View Document

7.1.7 Green Practices

- **Students, staff using**
 - a) **Bicycles**
 - b) **Public Transport**
 - c) **Pedestrian friendly roads**
- **Plastic-free campus**
- **Paperless office**
- **Green landscaping with trees and plants**

Response:

Green Audit and Energy Audit of the campus are done. Steps towards carbon neutrality, e-waste & hazardous managements, conservation of energy and water are undertaken.

GREEN PRACTICES:

The campus has aesthetically designed buildings, surrounded by greenery creating good ambience for learning. The campus also houses separate hostels for men and women. Dustbins have been provided along all major corridors for collection and disposal of waste. Water services have been provided both for gardening and drinking. Firefighting services have been installed all around the campus as per the regulatory norms suggested during the approval for the building plans. A separate engineering division (Building Section) in the institute ensures maintenance of the campus with sufficient human resources. The campus has adopted Rain Water Harvesting and has lush green lawns and well grown trees, thus making the institute, eco-friendly.

CARBON NEUTRALITY:

Plantation drives, environmental awareness programs, energy saving initiatives are undertaken to achieve green status within the campus. The vehicle traffic is restricted within the campus in view to reduce carbon emission. Well grown plants around the campus are maintained to reduce the effect of pollution. The greenery initiation has been implemented in a phased manner. The institute has planted tree saplings to commemorate the 125th Birth Anniversary celebrations of Bharat Ratna Dr. B. R. Ambedkar on 25th May 2016.

PLASTIC FREE AND PAPERLESS OFFICE:

Signage boards saying “Plastic Free Zone” in each block are put for non-usage of plastics in BMSCE Campus”. Awareness programs on ill-effects of usage of plastics and other environmental hazards are conducted by the College. The college conducts anti plastic awareness every year on occasion of the annual Kadlekai Parishe (Annual fare) and produced an educational video to discourage the use and distribution of plastic bags. Mails are extensively used to ensure that the office is paperless to a large extent. Most of the verbal communication in the college is done through the intercom facility which is

available in all laboratories, offices, faculty rooms as well as canteen and hostels. Most of the official communications like notices, programme communications, minutes are shared through emails. Most of the office files are shared through softcopies on computers.

PEDESTRIAN FRIENDLY ROADS:

The campus comprises of a good network of bitumen roads with shoulders paved using paver blocks. As the shoulders are wide and maintained regularly, it is very safe for the users in the campus. A neatly marked divider on the roads ensures lane discipline and pedestrian friendly roads. The NSS Unit of the college conducts many eco-friendly and go-green initiatives. The NSS unit also conducts campaign against harmful honking effects with an aim to make campus honk free. Institution is providing many accessible facilities to take care of the physically challenged students and elderly persons viz., Lifts, Ramps/Rails, Special Toilets, Wheelchair Facility etc. The Differently Abled Service Cell of the college strives to empower the Differently abled students with an aim to promote equal accessibility to all facilities.

File Description	Document
Any additional information	View Document

7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

Response: 0.27

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
9.00	8.85	8.00	8.02	9.00

File Description	Document
Green audit report	View Document
Details of expenditure on green initiatives and waste management during the last five years	View Document

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

- 1. Physical facilities**
- 2. Provision for lift**
- 3. Ramp / Rails**

- 4.Braille Software/facilities
- 5.Rest Rooms
- 6.Scribes for examination
- 7.Special skill development for differently abled students
- 8.Any other similar facility (Specify)

A. 7 and more of the above

B. At least 6 of the above

C. At least 4 of the above

D. At least 2 of the above

Response: A. 7 and more of the above

File Description	Document
Resources available in the institution for Divyangjan	View Document
Any additional information	View Document
link to photos and videos of facilities for Divyangjan	View Document

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

Response: 22

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
04	04	09	05	00

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	View Document

7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)

Response: 22

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
04	04	09	05	00

File Description**Document**

Report of the event

[View Document](#)**7.1.12****Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff****Response: Yes****File Description****Document**

Any additional information

[View Document](#)

URL to Handbook on code of conduct for students and teachers , manuals and brochures on human values and professional ethics

[View Document](#)**7.1.13 Display of core values in the institution and on its website****Response: Yes****File Description****Document**

Provide URL of website that displays core values

[View Document](#)**7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations****Response: Yes****File Description****Document**

Details of activities organized to increase consciousness about national identities and symbols

[View Document](#)

Any additional information

[View Document](#)

7.1.15 The institution offers a course on Human Values and professional ethics**Response:** Yes

File Description	Document
Any additional information	View Document
Provide link to Courses on Human Values and professional ethics on Institutional website	View Document

7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions**Response:** No

File Description	Document
Provide URL of supporting documents to prove institution functions as per professional code	View Document

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years**Response:** 149

7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
32	36	37	36	8

File Description	Document
List of activities conducted for promotion of universal values	View Document

7.1.18 Institution organizes national festivals and birth / death anniversaries of the great Indian personalities**Response:**

National Festivals are celebrated with enthusiasm. Every year the institute organizes national festivals and birth / death anniversaries of the great Indian personalities viz., social reformers and freedom fighters. These National festivals are celebrated to make the students aware about their contribution to the nation. The Institution conducts multiple extension activities and services like tree plantation etc.

Birth Anniversary of Bharat Ratna Dr B R Ambedkar
Teachers Day – Birthday Celebrations of Dr.S.Radhakrishna
Engineers Day – Birthday Celebrations of Sir M Visvesvaraya
Independence Day
Republic Day

Name of the activity	Date	Number of teachers participated in such activities	par
Republic Day	26.01.2013	150	
Independence Day	15.08.2013	170	
Independence day celebration	15.08.2014	2	
Karnataka Rajotsava Celebration	01.11.2014	2	
Childrens day Celebration	14.11.2014	2	
Republic Day	26.01.2014	160	
Independence Day	15.08.2014	150	
Ambedkar Jayanthi Celebration	15.04.2015	200	
Martys Day	30.01.2015	1	
Independence Day celebrations	15.08.2015	2	
Independence Day celebration	15.08.2015	2	
Republic Day	26.01.2015	150	
Independence Day	15.08.2015	170	
Representation in the State Republic Day Parade	26.01.2016	-	
Women's Day Celebration	12.03.2016	30	
Independence day celebration at Lakshmipura	15.08.2016	2	
Republic Day	26.01.2016	150	
Independence Day	15.08.2016	160	
Independence Day at Lakshmipura urban slum	15.08.2017	1	
Republic Day	23.01.2017	150	
Independence Day	15.08.2017	170	
Ambedkar Jayanthi Celebration	21.04.2017	250	
Children's Day celebration at government schools	15.11.2017	1	

7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

Response:

Administrative Functions

The administration is overseen by the Board of Governors (BOG). Two faculty members (on rotation basis) are included as members of BOG. Similarly, student representatives are invited to the BOG meetings and their view are duly considered. Governing body is conducted in an open manner. The BOG members directly participate in various activities of the Institution and spend quality time to encourage the faculty, staff and students. The BOG adopts transparent governance mechanism. The minutes of the BOG, Academic Council and Annual Report is published on college website. The relevant information is shared with HODs, faculty and staff through various meetings/circulars. The Management has brought out a handbook to ensure transparency and to guide the staff to discharge their responsibilities with ease and efficiency.

Financial Functions

The finance committee appraises the BOG on all matters connected with the finances of the college. The Institution also publishes audited financial statements on its website for public information. More academic/financial power is delegated to the Heads of the Departments.

Curriculum Design

The initial version of the curriculum is prepared through discussions with stakeholders. The curriculum is then placed for discussion/approval by the department level body, DAB (Department Advisory Board) and/or a BOS (Board of Studies) constituted as per prevailing norms, and has industry, academic experts in addition to faculty as members. The curriculum (suitably revised based on suggestions by DAB/BOS) is then placed for approval during the Academic Council (AC). The Curriculum is finally approved (after incorporating suggestions by AC if any). The Curriculum is designed to ensure that the students have the required domain knowledge, skills and attitude.

At the department-level, decisions are taken through various department-level Committees. The faculties are actively involved in decision making process. As part of the Departmental Academic Committee [DAC], the faculty provide their inputs on all academic related matters.

Financial Functions

The BOG in its meeting held on 22.03.2011 constituted a Finance Committee as an advisory Body to advice the BOG on all matters connected with the finances of the college. The BOG reviews/ratifies the proceedings. The institute has a mechanism for internal and external audit to ensure financial compliance. The institutional accounts are regularly audited. The observation of the auditors if any are immediately corrected / rectified. The Budgetary provisions for the departments are made based on the requirements/inputs provided by the Departments. The Institution also publishes audited financial statements on the institutions website as information for the public.

E-Governance

With a view to deliver transparent, efficient and cost effective services for its stakeholders the institution introduced various e-governance initiatives. Electronic governance (e-governance) has been implemented to improve administration and management especially in the process of registration, admission, and student information, calendar of events, classes and reports. Admissions, Course Registration, Registration for Institutional Electives, Online Payment/wire transfer, Notifications of academic activities, Generation of Hall Tickets etc are some of the student support activities implemented through e-governance.

7.2 Best Practices

7.2.1 Describe at least two institutional best practices (as per NAAC Format)

Response:

Best Practice-1

1.Title of the Practice

Imagine, Innovate and Implement.

2. Objectives of the Practice

Centre for Innovation, Incubation and entrepreneurship (CIIE) is established to facilitate Innovation through Research and collaboration for translating domain expertise into products or technologies. The Centre aims at fostering entrepreneurial spirit, promote start-ups by providing appropriate incubation facilities, offer consultancy services and improve industry institute interaction. It envisages creating products and technologies that address the societal needs and also nurture the innovative minds. Create an ecosystem for innovation and entrepreneurship through incubation support, facilitation of technology transfer for commercialization by multidisciplinary approach. To provide the opportunity for students to use their learning to solve complex engineering challenges, through projects.

3.The Context

Promote culture of entrepreneurship through various activities - Entrepreneurship Awareness Camps (EAC), Entrepreneurship Development Programmes (EDPs), education, training, Summit, FDP. MDP, Discussion Forums) that facilitate creativity and innovation.

Transform prototypes and proof of concepts into Product/Technology/Service across the campus. Become a hub for entrepreneurial activities across the state. Build strong network of Mentors/Advisors across the verticals. Provide necessary infrastructure support to incubate to progress in their ideas. Facilitate interaction between industry, institution and funding agencies to transform concept to commercialization

Leverage schemes of the Government bodies towards promoting entrepreneurship.

Foster and sensitize family business through education, awareness and mentoring and also encourage

social entrepreneurship.

Assessment of General Enterprise Tendency (GET)* of Students and Faculties, initiate Motivational Talk. Conduct Design Thinking, unmet need analysis, Design Innovation Rapid Prototype, Enterprise Development and Business Modelling, Market Research Tools Workshops. Create awareness about IPR & Technology from Reimbursement strategy

4.The Practice

The Practice and its uniqueness in the context of **Imagine, Innovate and Implement** at BMSCE is truly reflected by the several Innovating setup that are performing in the campus.

Centre for Innovation in Medical Electronics (**CIME**) has been set up with the objective of creating a FORUM FOR INDUSTRY, INSTITUTION AND HOSPITALS to WORK TOGETHER for DEVELOPING AFFORDABLE INNOVATIVE HEALTHCARE DEVICES and Encouraging Faculty/Student RESEARCH DRIVEN ENTREPRENEURSHIP.

- The projects getting incubated at CIME are expected to mature into a viable Business Enterprise at the end of the Incubation period.
- The final outcome will also depend on the type/stage of Project taken up for Incubation

PROPEL LAB on 3D PRINTING

To become a centre of excellence in the field of additive manufacturing & new product development. To help students, researchers, Start-Ups & Industries in bringing ideas into real world objects. Areas of applications:

- Automotive Industries
- Architecture Industries
- Aerospace Industries
- Electrical & Electronics Industries
- Medical Industries
- Manufacturing Industries

Product Innovation centre:

Product Innovation Lab was jointly established in BMSCE with Dassault Systems, France and 3D PLM India aiming at training highly skilled industry ready engineers and entrepreneurs to the society.

Training the in-house faculties for the hands-on in the latest software-3D Experience for the research work and subsequent product development. It will provide relevant guidance and required experience in training the research scholars and students who are carrying out their projects. It covers a wide area of field of study like Mechatronics, CAD/CAD, CAE, Systems Engineering, and Product Life Cycle Management.

Aerospace Propel lab

To Create Awareness about the Exciting Fields of Aviation and aerospace. To provide the opportunity for students to use their learning to solve complex engineering challenges, through projects and competitions.

Teams of Aero BMSCE

- Design Team
- Analysis Team
- Manufacturing Team
- Safety and Testing Team
- Finance and Management Team

Propel Lab-Robotics and Embedded Systems

To create a platform to connect people interested in Robotics and Embedded Systems and Develop products for societal usage

Major Areas of Research:

- Internet of Things(IoT)
- Machine learning
- Robotics

BMSCE STARTUP Cell

Start-up cell has organized motivational talk on “Tired of telling yourself your billion dollar idea? Meet the people who believe in it” and “Medical Device Innovation to Commercialization in Industry & Academia”. Owing to the prevalent situation of unmet needs, the participants were introduced to the clinical / designer / engineer equation in India. Responsibilities of individuals in addressing the issues.

5. Evidence of Success

Provide evidence of success such as performance against targets and benchmarks, review results. What do these results indicate? Describe in about 200 words.

- *CIME*
 - *Development of Digital X-Ray Machine - Prototype ready*
 - *Development of Oral Cancer Screening Device - Ready for marketing*
 - *Balance Assessment tool - Over 98 installations*
 - *Cardio-Connect Emergency Response Platform - Field testing*
 - *Device for Intrapartum Materno Foetal Care - Prototype ready*
 - *Smart Eye Kiosk for Community (SEK-C) - Prototype shipped to Singapore*
- *3D Printer lab*
 - *Built Delta based 3D printer, I Bot, Tooth Scanner, bi-stable chair, 3d quad copter, Casing unit for watch*
- *Product Innovation Lab*
 - *SLA Printer*
 - *Hyper loop Transportation System*
 - *Self-Balancing Robot*
 - *Structural Analysis of Hydraulic Valve*

- **AEROSPACE**
 - Secured 23rd rank, SAE Aero Design East 2012, Atlanta, USA.
 - Secured 18th rank, SAE Aero Design West 2013, Los Angeles, USA.
 - Secured 15th rank, SAE Aero Design West 2014, Texas, USA.
 - Secured 14th rank, SAE Aero Design West 2015, Los Angeles, USA.
 - Secured 13th rank, SAE Aero Design West 2016, Van Nuys, USA.
 - Secured 15th rank, SAE Aero Design East 2017, California, USA.
- **Robotics and Embedded Systems**
 - Sustainable irrigation
 - Ubiquitous lab
 - Generic IoT platform
 - R.O. Water plant monitoring
 - Autonomous Robot Development Open Source Platform

6. Problems Encountered and Resources Required

Any Innovation to take the product shape, there is need for Involvement of multiple departments. The product is usually a multidisciplinary effort. The facilities and expertise in BMSCE is now at different department. The culmination of an effort to bring these innovating centres and facilities under single umbrella happened with formation of Centre for Innovation Incubation and Entrepreneurship (CIIE).

CIIE is hosted in the new Platinum Jubilee academic block. It is housed in the Ground floor of the building. The total area is 50,000 sqft. There are 20 incubation cells and many discussion rooms, Board rooms, think lab, seminar halls and auditoriums. The other facilities. It also has access to the large library area of 50,000 sqft housed in the first floor of the new academic block.

It is therefore envisaged that the whole institution will get together to Imagine, Innovate and implement to find solution for the societal needs.

Best Practice-2

1. Title of the Practice:

Effective Implementation of Outcomes Based Education

2. Objectives of the Practice:

Since 2014, India is recognized as a signatory of the Washington Accord, and students graduating from accredited programs of Tier-I Institutions (Autonomous Institutions) shall have global recognition. Since, our institution has academic autonomy, focused efforts were in place towards ensuring graduating engineers from all programs demonstrate expected skill and competency leading to their global recognition. This task towards global recognition of our graduates became easy, as the expected global attributes were embedded through the Program Outcomes (POs), defined by the National Board of Accreditation (NBA). Hence, all activities on campus (academic, activities beyond curriculum, co-

curricular and extra-curricular) were focused on developing the POs leading to an effective implementation of Outcomes Based Education (OBE), as it would then lead to global recognition of our graduates.

3. The Context

The academic heads of the college realized the need to embrace OBE in the true sense, as it was a shift from an input based education system towards a student-centric/ student learning education system. Accordingly, there was a need to define, develop, implement and measure student learning through the attainment of various outcomes: Course Outcomes (COs), Program Outcomes (POs) and Program Specific Outcomes (PSOs). The campus has a large number of student forums, both technical and non-technical which helps in the overall development of the students, especially the student outcomes related to skills and attitude (beyond the engineering knowledge). However, the contribution and development of the student skills through these components was not measured. With a shift in the parameters for teaching-learning, and with a need to implement OBE, every association of the student both regular academics through curriculum and activities beyond curriculum was defined and measured. The campus witnessed the introduction of the annual state level technical symposium (Phase-shift) leading to further development and measurement of the student competencies beyond curriculum.

4. The Practice

India was a provisional member of the Washington Accord, and in the process of attempting to become a signatory. This process required the need to embrace OBE in the true sense. Accordingly, at the National Level, the parameters for accreditation were redefined, and were aligned to meet the minimum expected global standards. It is to be recalled that among the initial accreditation visits conducted by NBA, there included a team of International observers, to oversee the accreditation processes. In this context, our Institution had the opportunity to represent a sample institution in the Private Engineering College category. It is with pride we would like to mention that the first accreditation visit for five of our Undergraduate engineering programs in the Tier-I format (to assess effective implementation of OBE), had International observers, with two of the five UG programs getting full accreditation. Hence, since 2013 the institution has embarked on the journey of effective implementation of OBE.

This initiative by the Institution lead to innovations in the class room by teachers in the delivery methods, innovation by faculty in assessment tools and hence, contributing to the overall development of the student learning, with conscious efforts in developing the expected program outcomes defined by NBA, and hence ensuring our graduates have global recognition. This improved competency of the students resulted in enhanced student performance both when on campus and after graduation as our alumni.

We would like to add that this journey of embracing OBE was a collective effort by all stakeholders, both direct and indirect. The initial learning was from the series of training programs conducted by NBA. This was then followed by series of brain storming sessions to comprehend and implement the processes of OBE. The academic leaders were able to perform with unconditional with support from management.

To conclude, there were no constraints or hurdles in this path of adopting OBE. In addition, all academic leaders have willingly shared this journey and learning experience in various platforms, to help other institution of higher education to grow and contribute to the progress of the nation. Few are listed below:

- Conducted various Faculty development programs in the domain of OBE (one of the FDP was supported by NAAC)

- Uploaded the OBE content on the college website
- Delivered several invited talks on OBE
- Delivered webinars on OBE
- Published papers in the domain of OBE in National and International forums (WOSA by NBA, MITE by IEEE, ICTIEE by IUCEE, WEEF, ASEE etc)
- Published book on OBE (by Dr K Mallikharjuna Babu)
- Recognized Master trainer for OBE by NBA (Dr R V Ranganath)
- Recognized as evaluators by NBA
- Delivered a series of two day workshops in the North-East region of the Nation through the TEQIP initiative
- Recognized as a mentor for the University in Bareilly towards their accreditation through implementation of OBE, by TEQIP

5. Evidence of Success

Focused efforts by faculty in truly embracing OBE, happened through small innovations in the teaching learning process, innovations in assessment tools and ensuring that every student has the expected knowledge, skills and attitude. Faculty contribution towards successful implementation of OBE reflected in enhanced student performance. Few parameters that are considered as evidence towards successful implementation of OBE through faculty contribution are:

- Enhanced quality of projects
- Enhanced number of student publications
- Enhanced professional body activities (both quality and quantity)
- Enhanced number of awards secured by students in National and International technical competitions/professional body activities
- Improved performance in cultural contests held in-campus and outside campus
- Improved performance in sports both individual and team events held at State, National and International levels
- Improved performance in National and International competitive examinations (GATE/CAT/GRE/TOEFL etc)
- Enhanced on-campus placements
- Enhanced off-campus placements
- Continuous improvement in the average and highest pay package offered
- Marginal improvement in number of successful entrepreneurs

The above evidence of improvement in student performance can be attributed purely to faculty contribution in effective implementation of OBE.

This effective implementation of OBE, leading to improved student performance through faculty contribution eventually resulted in all the Under Graduate programs getting accredited by NBA in the Tier-I Format. In addition most of the PG programs are accredited.

6. Problems Encountered and Resources Required

The academic leaders of the institution realized the need to comprehend and implement OBE during 2013. Accordingly faculty in large numbers were deputed to training programs conducted by NBA on OBE. This initiative resulted in faculty understanding the true essence of OBE, and the need to consciously plan and

develop the POs defined by NBA, together with a need to compute the attainment of various outcomes.

During the process all faculty realized that through conventional fixed duration closed book examinations, one can address only the first five POs, and to effectively address the higher POs (PO6 through PO12), there is a need to go beyond conventional assessment tools. Accordingly, through approval by the Academic Council, every course faculty was empowered to define and implement a flexible assessment tool also known as the alternate assessment tool (subject to a maximum of 40% of the internal evaluation component). This modification resulted in faculty including assessments like: course seminar, assignments, term paper, open ended experiments, mini-projects, concept videos, partial reproduction of research work, oral presentation of research work, group activities, etc. This small modification in the assessment pattern contributed significantly to the effective implementation and development OBE. Hence, there was no need for any additional resource either in infrastructure or financial towards achieving the set aim of implementing OBE.

7.3 Institutional Distinctiveness

7.3.1 Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

Response:

VISION: Promoting Prosperity Of Mankind By Augmenting Human Resource Capital Through Quality Technical Education & Training. The founders have envisaged the vision of providing skilled and competent workforce to society by imparting quality education and training. The institution follows systematic educational practices determinant for producing quality engineers for technology transfer and human capital augmentation. Some of the measures are envisaged hereunder:

The institute specially emphasises on Outcome Based Education (OBE) and Experiential Learning. Special focus is given for bridging the gap between Industry and Academia through Industry Institution Interaction. A variety of teaching and learning techniques are employed to impart knowledge and skills to students. The campus facilities are continuously augmented and strengthened. Innovative Centres of Excellence/incubation Centres and cutting edge laboratories in collaboration with industry give the required industry blend to the students. The Institution has consciously put efforts in encouraging and adopting innovation in Teaching and Learning processes.

The institute has Good campus placements. The departments have Laboratories equipped with state of the art infrastructure facilities. The institute strength is Well-Qualified, Experienced & Dedicated faculty and staff members. Special focus on Promoting Research, Innovation & entrepreneurship through dedicated forums/cell is given.

BMSCE has nurtured and produced plethora of famous alumni who had positive impact on the society through their contribution to the country and also contribute to the development activities of the Institution.

Dr. H C Viswesvaraya [1950 Civil] was recognized with the Padmashree from Government of India in 1991. Dr. V R Gowrishankar [1975 Electrical], Chief Executive Officer and administrator of Sringeri

Sharada Peetham was Awarded with Padma Shri, in 2008, for his contributions to society. Dr H R Nagendra [1963 Mechanical], Vice Chancellor of SVYASA university, Bengaluru was Awarded Padmashree and he is also on the Board Member of Advisors of Yoga Bharati. Professor H P Khincha [1966 Electrical] worked as Vice Chancellor of Visvesvaraya Technological University, Belgaum. Professor S S Murthy [1967 Electrical] Worked as Vice Chancellor of the Central University of Karnataka, Gulbarga.

Col H S Shankar [1964 Electrical], (Retd) VSM, took part in both 1965 and 1971 Wars against Pakistan. He was awarded VISHITA SEVA MEDAL (VSM). Prof A Ramachandra Rao [1960 Civil] worked as Principal Investigator, School of Civil Engineering Purdue University. Dr Manamohan Kalgil [1979 Civil], Immediate Past President at Indian Concrete Institute and he was Chairman of ICI - Karnataka (Bangalore) Centre, Vice President (South) of ICI, Secretary General, ACCE (I), and Vice President, Indian Association of Structural Engineers. Mr Yoganarasimha [1965 Mechanical] worked as VP at Wipro R&D department. He is the founder member of Fluid power Society of India (Regd).

Dr N K Anand [1978 Mechanical] contributed as James M. and Ada Sutton Forsyth Professor, Regents Professor, Executive Associate Dean of Engineering, Associate Director, Texas A&M Engineering Experiment Station. Mr Seethapathy Rao [1963 Mechanical] has been the Head of the Precision Engineering (Fluid Power) business of Wipro Corporation. Mr. Hari Rao R C [1955 Mechanical] has been the Director of Vantage Agora since inception in 2004. Prior to that, he was the Senior Vice President for Titan Industries & GM for HMT Limited. Mr R Sundaram [1951 Civil] is the Chairman & Managing Director - Sundaram Architects Pvt. Ltd. Some of his notable work include the 5000 seating capacity Kanteerava Indoor Stadium, the International T.A. Pai Auditorium" Convention Centre at Mangalore. Mr Srinivas shirgurkar [1970 Mechanical] is the Co-Founder of Ace Designers Limited and serves as its Managing Director. He is a recipient of the "Lifetime Achievement Award" from IMTMA.

Dr V Setty Pendakur [1954 Civil] worked as Professor Emeritus, University of British Columbia, Senior Counselor, State Council of the PRC , Honorary Professor, China National Academy of Sciences, Associate, US National Academy of Sciences and the Institutes of Medicine. Mr Lakshminarayan M [1967 Mechanical] was the Managing Director of Harman International (India) Pvt. Ltd. Mr. Rama Murthy [1971 Mechanical] worked as Member, Panel of Scientific Advisors, Patent office, Govt of India; Chairman, Steering committee, IPFC- NRDC, Bangalore. Professor Vijay Vittal [1977 Electrical] was the Ira A. Fulton Chair Professor. Prof Vijay Vittal joined the ASU faculty in 2005. Foundation Award for Outstanding Achievement in Research (2003); IEEE Power Engineering Society Technical Council Committee of the Year Award (2000-2001); Outstanding Power Engineering Educator Award, PES, IEEE (2000); Warren B. Boast Undergraduate Teaching Award (2000). Professor Balakrishna Haridas [1990 Civil] works as professor in Biomedical Engineering, Director of the National Center for Therapeutics Manufacturing, and Executive Director of the TEES Division of Entrepreneurship & Commercialization with expertise in development of products for minimally invasive laparoscopic and endovascular surgery. Mr Binod Hampapur Rangadore [1985 IEM] served as Head of Quality Unit and Government Relations at Infosys Limited.

Dr Purna Prasad [1984 Electrical] works as VP/ Chief Technology Officer, Northwell Health. Dr. Purna Prasad, Ph.D., offers more than two decades of accomplishment-laden experience pertaining to Clinical Technology and Biomedical Engineering. Mr Kumaran Venkatesh [1987 IEM] is an Active member of the Ministry of Defense task force and is working on developing India's Defense Electronics policy, he heads the strategy and operations at an Industry body on electronics and semiconductors. He has curated 16 IOT start-ups across MedTech, Wearables and Energy. Ms Shobha Kulavil [1993 IEM] works as Head of

Engineering Outsourcing with Rolls Royce India. Ms Reema Poddar [1993 MCA] works as Senior Vice President-Global Product Development & Technology Innovation|Digital transformation |Cloud|IOT|Data &Analytics. Jyotsna Pattabiraman [1995 ISE] is the Founder and CEO of Grow Fit. Founded in September 2015, Grow Fit is a mobile health companion that uses artificial intelligence (AI) to help its users achieve their peak wellness. Ali Asgar Kagzi [2007 Telecom] is the Co-founder and Director of Genext Students, India's 1st Hybrid Tutoring Platform. Mr Sujith B Somasundar [1994 CSE] is BMSCE's most successful cricketer. Sujith Represented the State and Country. Bhawana Kanth, [2014 Medical Electronics] is one of the first female pilots of India inducted into IAF in 2016. She was declared as the first combat pilot along with two of her cohort, Mohana Singh, and Avani Chaturvedi.

NAAC

5. CONCLUSION

Additional Information :

Recognizing the contribution of the institution many awards and recognitions have been bestowed upon. Some of the awards/recognitions/rankings during the assessment period are enumerated hereunder:

2013-14

Careers 360 Magazine has rated BMSCE with AAA+ Grade

2014-15

- Ranked No.1 amongst Engineering Colleges in the State of Karnataka by The NAK Press
- AAAA Grade by Careers 360 Magazine
- Rated 12th among top 100 engineering & 2nd among top 50 private engineering colleges in India by Times of India

2015-16

- Ranked 13th among top 100 engineering colleges & 3rd among top 50 private engineering colleges in India by Times of India
- AAAA Grade by Career 360 Magazine
- Campus Preparedness Award for Global Excellence: Nominated by VTU
- Recognized as Best College for its contribution to higher studies; presented by VIT University

2016-17

1. BMSCE ranked 4th among top 75 Private Engineering Institutes in the Country and 10th among top 150 Engineering Institutes
2. AAAA+ Grade by Career 360 Magazine
3. India Today Ranking of Best Colleges in India BMSCE has been ranked at 18th position amongst all the engineering colleges in the Country.
4. Ranked 52nd by NIRF

2017-18

- The Times of India ranked BMSCE 6th among top 100 Private Engineering Institutes in the Country, 14th among top 150 Engineering Institutes (Overall ranking),, 3rd among top private engineering institutes on Placement & 4th Among Top Engineering Institute on Research capability
- AAAA+ grade by Career 360 Magazine 2018
- Ranked 10th position amongst all the Top Private engineering colleges in the Country by The WEEK – Hansa Research Survey 2018
- The **India Today-MDRA Best Colleges Ranked BMSCE at 8th position among top 165 Private Engineering Institutes in the Country, Ranked 5th in South Zone in Zone-Wise top 5 Private engineering Colleges, Ranked 2nd among top 10 private engineering colleges offering best average**

annual salary

- NIRF Ranked 67th among top engineering colleges
- Beneficiary of GOI-MHRD/AICTE funding for GIAN

Received Guinness World Records Certificate of Participation in recognition of a largest diabetes awareness lesson with 8814 participants

Concluding Remarks :

B.M.S. College of Engineering, with existence of more than 70 years, has carried a legacy of imparting excellent education to thousands of students. Over the years it has grown from strength to strength with the expansion both in academic field and infrastructure. The vision and mission of the founders are the guiding lights for the stake holders of the college.

Good governance has been the crux for the excellent growth shown by the college in the field of education. Management is leading the path to enhance teaching and learning process and knowledge dissemination by magnanimously giving grants to all the departments to upgrade the labs and R&D facilities.

Although the college was started with UG programs, presently it is catering not only to UG and PG students but also to researchers. Presently all the UG programs are accredited by NBA under Tier-I (WA). This reflects the quality of education being imparted to the students. All the departments have become research centers under VTU and even recognized by MHRD as QIP centers. With enhanced research and consultancy facilities, fund mobilization through research grants and consultancy have crossed few crores of rupees.

The autonomous status has amplified the quality of education that is being imparted with proper design of curriculum with due participation from the industry people. No effort is spared to reduce the gap between the institution and Industry. Students are being sent for internship in industries, which later become spring boards for the students to reach higher levels in training and knowledge and make them employable. Placements for the students have been very good and several of our alumni have occupied key positions both in India and abroad. Hence many leading magazines and NIRF have ranked BMSCE very high. We are now in the process of becoming an independent university. The Institution believes that NAAC certification will be a measure to evaluate and guarantee the standard of education provided at BMSCE. It is hoped that the NAAC accreditation further elevates the institutional image.

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification																				
2.1.2	<p>Demand Ratio(Average of last five years)</p> <p>2.1.2.1. Number of seats available year-wise during the last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>1300</td> <td>1408</td> <td>1408</td> <td>1408</td> <td>1468</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>1468</td> <td>1408</td> <td>1408</td> <td>1408</td> <td>1300</td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	1300	1408	1408	1408	1468	2017-18	2016-17	2015-16	2014-15	2013-14	1468	1408	1408	1408	1300
2017-18	2016-17	2015-16	2014-15	2013-14																	
1300	1408	1408	1408	1468																	
2017-18	2016-17	2015-16	2014-15	2013-14																	
1468	1408	1408	1408	1300																	
2.1.3	<p>Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years</p> <p>2.1.3.1. Number of actual students admitted from the reserved categories year-wise during the last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>434</td> <td>392</td> <td>418</td> <td>426</td> <td>399</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>622</td> <td>591</td> <td>621</td> <td>609</td> <td>555</td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	434	392	418	426	399	2017-18	2016-17	2015-16	2014-15	2013-14	622	591	621	609	555
2017-18	2016-17	2015-16	2014-15	2013-14																	
434	392	418	426	399																	
2017-18	2016-17	2015-16	2014-15	2013-14																	
622	591	621	609	555																	
2.5.2	<p>Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years</p> <p>2.5.2.1. Number of complaints/grievances about evaluation year-wise during the last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>36</td> <td>32</td> <td>46</td> <td>97</td> <td>91</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>265</td> <td>160</td> <td>157</td> <td>38</td> <td>45</td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	36	32	46	97	91	2017-18	2016-17	2015-16	2014-15	2013-14	265	160	157	38	45
2017-18	2016-17	2015-16	2014-15	2013-14																	
36	32	46	97	91																	
2017-18	2016-17	2015-16	2014-15	2013-14																	
265	160	157	38	45																	

Remark : Revised as per clarification given by HEI. However Minutes of the Grievance cell or any other relevant body not provided.

3.3.4 Number of start-ups incubated on campus during the last five years

3.3.4.1. Total number of start-ups incubated on campus year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
1	4	0	1	0

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
1	0	0	0	0

Remark : 1. No E copy of sanction order of the University for the Start Ups on campus available.
2.The supporting documents does not have details mentioning the facilities extended by the institution to the company

3.4.3 Number of Patents published/awarded during the last five years

3.4.3.1. Total number of Patents published/awarded year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
7	6	5	8	6

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
7	6	4	1	3

Remark : Copyrights not considered

5.1.3 Number of capability enhancement and development schemes –

1. Guidance for competitive examinations
2. Career Counselling
3. Soft skill development
4. Remedial coaching
5. Language lab
6. Bridge courses
7. Yoga and Meditation
8. Personal Counselling

Answer before DVV Verification : 7 or more of the above

Answer After DVV Verification: Any 4 of the above
 Remark : Revised as per supporting document. Considered Guidance and competitive Exams, 2. Remedial coaching 3. language lab and Bridge courses

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) during the last five years

5.3.1.1. 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-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
31	35	14	18	12

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
34	28	14	11	10

Remark : Revised as per HEIs claim. However many certificates are not very clear to validate the years. Few of the certificates of appreciation and participation certificates

6.3.2 Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years

6.3.2.1. Number of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
198	248	208	227	193

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
197	249	208	227	193

Remark : Insufficient document upload

6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)

6.4.2.1. Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
4.50	63.68	66.32	44.23	35.29

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
50.65	60.54	69.74	55.03	56.29

Remark : Revised based on the supporting document. Insufficient document support and the supporting document is neither signed by a chartered accountant of senior finance officer

7.1.16	<p>The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions</p> <p>Answer before DVV Verification : Yes Answer After DVV Verification: No</p> <p>Remark : Professional code as prescribed by statutory body not found as landing page in college website and has a mention as a part of M.Tech Civil Engg</p>
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2.Extended Profile Deviations

ID	Extended Questions																				
1.2	<p>Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during the last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <tr> <td>2017-18</td> <td>2016-17</td> <td>2015-16</td> <td>2014-15</td> <td>2013-14</td> </tr> <tr> <td>475</td> <td>454</td> <td>453</td> <td>454</td> <td>421</td> </tr> </table> <p>Answer After DVV Verification:</p> <table border="1"> <tr> <td>2017-18</td> <td>2016-17</td> <td>2015-16</td> <td>2014-15</td> <td>2013-14</td> </tr> <tr> <td>732</td> <td>672</td> <td>678</td> <td>661</td> <td>577</td> </tr> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	475	454	453	454	421	2017-18	2016-17	2015-16	2014-15	2013-14	732	672	678	661	577
2017-18	2016-17	2015-16	2014-15	2013-14																	
475	454	453	454	421																	
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