BVBCET
K.L.E. Society
CREATING VALUE
LEVERAGING KNOWLEDGE

KLE Society's
B. V. Bhoomaraddi College of Engineering and Technology, Hubli

Annual Report 2013 -14

KLE Society's
B. V. Bhoomaraddi College of Engineering and Technology, Hubli

www.bvb.edu
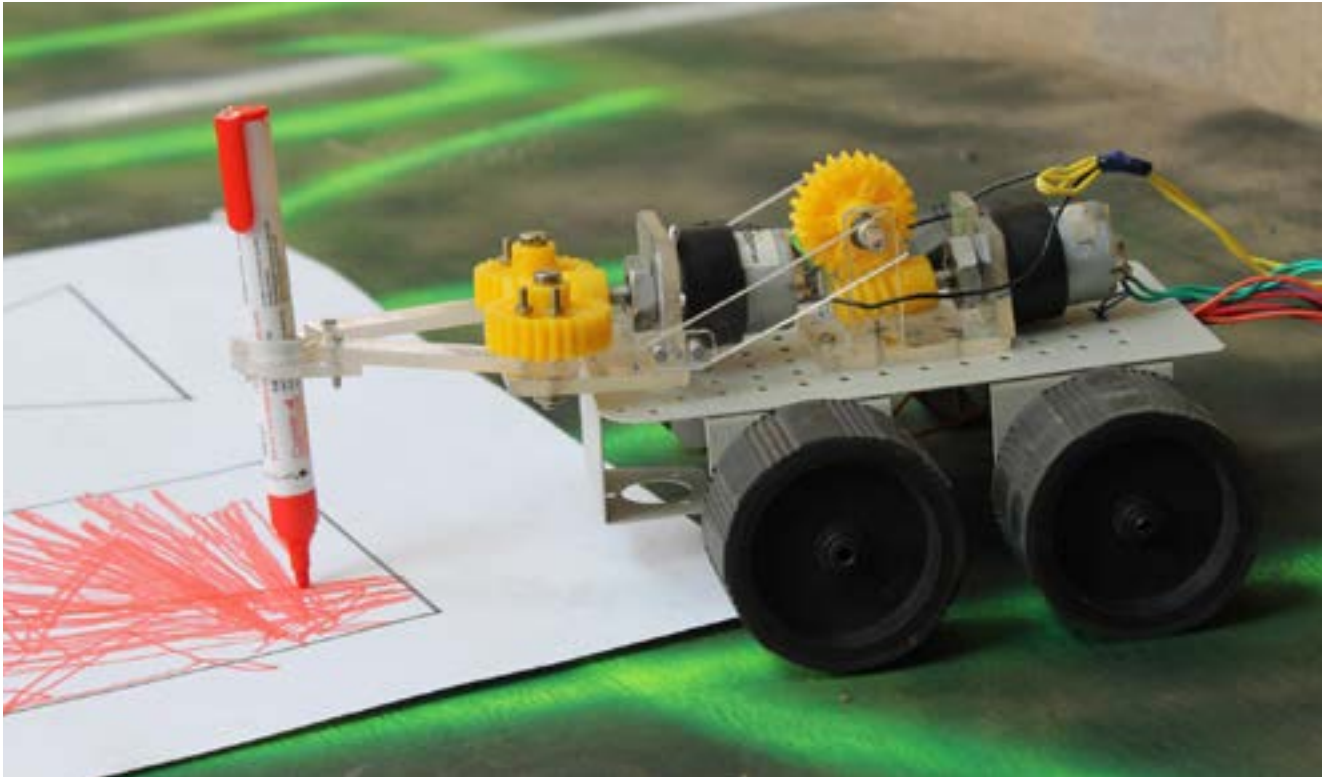
CONTENTS

Foreword

We are proud to present the annual report of K. L. E Society's B. V. Bhoomaraddi College of Engineering & Technology, Hubli, for the year 2013-14. This report summarizes the achievements and progress we have made over the last year to improve our academic offerings and student services.

Our faculty is making progress towards providing a truly world-class learning environment by adopting holistic curricular reforms and innovative pedagogical practices.We are working hard to create a dynamic research environment to promote research excellence. This year, we embarked on a significant governance reform initiative to adopt good governance practices.

We would like to extend our sincere thanks to our faculty, staff, students, alumni and industry partners for their continued support and remarkable contributions. Looking ahead, we will continue to work towards realizing our vision to be a leader in engineering education, and advancing research and innovation to support socio-economic development of the region.

Dr. Ashok S. Shettar
Principal

Dr. Prabhakar Kore
Chairman, BOG

Introduction and Our Organization

The versatile manifestations of engineering have had a profound and lasting impact on our civilization. From the grandeur of the pyramids and man's journey into space, to the recent information revolution, engineering continues to fascinate and enthrall.

The KLE Society's B. V. Bhoomaraddi College of Engineering and Technology (BVBCET), believes in kindling the spirit of this unique and creative discipline in every student who enters its portals, preparing them for a world in which their contribution truly stands apart. Established in 1947, BVBCET has achieved an enviable status due to a strong emphasis on academic and technical excellence. From a modest beginning with the college offering only Undergraduate program in civil engineering, the college has indeed come a long way with the college now offering 12 UG and 9 PG programs Affiliated to Visvesvaraya Technological University, Belgaum and is recognized by AICTE, New Delhi and accredited by NBA.

Current annual student intake for Undergraduate & Post Graduate programs is more than 1200. The continuous and painstaking endeavors and commitment towards education and scholarly activities of the extremely qualified and dedicated academicians and faculty members has resulted into college gaining Autonomous Status from the University and UGC.

The college has adopted Outcome Based Education (OBE) framework which catalyzes the curriculum to the needs of the industry and the society. An innovative pedagogical practice in the teaching learning process forms the academic ecosystem of the institution. The active involvement of faculty in research has led to the recognition of 13 research centers by the University.

To enable the students to evolve into dynamic professionals with broad range of soft skills, the college offers value addition courses to every student. Good industrial interface and experienced alumni help the students to become a complete employable engineer. The college is a preferred destination for the corporates looking for bright graduates. There is always a sense of vibrancy in the campus and it is perennially bustling with energy through a wide range of extra-curricular activities designed and run by student forums to support the academic experience.

Spread over the 68 acres of land, the luxurious and picturesque campus comprises of various buildings with striking architecture. A constant endeavor to keep abreast with technology has resulted in excellent state-of-the-art infrastructure in every engineering discipline.

Our Vision

As a college established by a premiere non-profit organization 'Karnataka Lingayat Education Society (KLE Society)', that took birth in 1916 with an aim of "Empowering the people through Education" , we will always strive hard to assume a place of pre-eminence among the institutions offering professional education. As an Autonomous College, B. V. B. College of Engineering and Technology is committed to offering high-quality undergraduate and postgraduate programs that continue to effectively respond to the needs of students and other constituents. Our graduates will be among the most sought after by the nation's best employers and will become leaders and accomplished professionals in their chosen work.

The college will be recognized by the quality and impact of its research and creative work. Our research programs will make important contributions to instructional programs through the involvement of graduate and undergraduate students and the faculty. In carrying out its research mission, the College will focus on the established areas of strength and areas that have future opportunities by establishing research clusters with the potential to develop into nationally and internationally recognized centers of excellence.

Research will also provide the knowledge base and capability to serve the society and address regional, state, national, and global challenges and opportunities.

To accomplish these educational goals, BVBCET will continue to attract faculty distinguished by this commitment to teaching, student learning and by achievements in research, both pure and applied. In the process of learning and discovery, our faculty and staff will find the highest levels of fulfillment and satisfaction as they collaborate to educate, guide and challenge students to use their intellectual skills, creativity, and belief to meet the challenges and opportunities that face the human community and lead lives of meaning and purpose. As a dedicated team of a premier technological institution, it will empower the college to contribute to the growth of socio-economic potential of the region.

The aspirations of our institution are reflected in our vision and mission statements.

Our Vision

To be one of the nation's premier engineering colleges by achieving the highest order of excellence in teaching and research. We will be the preferred choice of students seeking engineering and management education.

Our Mission

- To impart quality technical education that meets the needs of present and emerging technological world.
- Strive for student achievement and success, preparing them for life and leadership.
- To provide a scholarly and vibrant learning environment that enables staff and students achieve personal and professional growth.
- To contribute to advancement of knowledge, in both fundamental and applied areas of engineering and technology.
- To forge mutually beneficial relationships with governmental entities, industry, society and the alumni.

Strategic plan of BVBCET defines how we will be successful within a challenging and changing engineering education environment. The plan has been devised to enrich the experience of our students, staff and stakeholders, and has been developed with their involvement and support through an extensive consultation programme that has also engaged with alumni and external partners. The inputs from TEQIP–Project Implementation Plan document have been considered while formulating the strategic plan of the Institution.

Student Enrollment

Admission Process

Undergraduate Admissions

Admission rules of the college are as per the regulations of Karnataka State Govt. The students have to appear for the Common Entrance Test conducted by Govt. of Karnataka (CET/Mngt. Seats) or COMEDK Entrance Test (COMEDK/ Management Seats) or All India Engineering Entrance Examination (AIEEE – Management seats). Students willing to take admission in Architecture have to appear for an online test conducted by Council of Architecture, arranged in College in the department of Architecture. The intake to each of the programs is fixed by AICTE, New-Delhi.

The seat distribution as per Karnataka State Govt. regulations for various UG Programs is as follows :

Undergraduate seat distribution

Type of Program	Govt. Quota	COMEDK	Management Quota
Aided Programs	95%	--	05%
Unaided Programs	45%	30%	25%

Under un-aided programs, 30% of seats are allotted through COMEDK seat allotment and 25% directly under Management Quota.

Postgraduate Admissions

Admissions to postgraduate engineering programs (M. Tech) are on the basis of ranks obtained in the entrance test conducted by the Karnataka Examination Authority (KEA). Admissions for MBA & MCA programs are done based upon PGCET of KEA or KMAT ranks.

The admissions for the research programs (Ph.D and M.Sc.) are done according to the rules framed by the Visveswaraya Technological University , Belgaum.

Undergraduate Programs

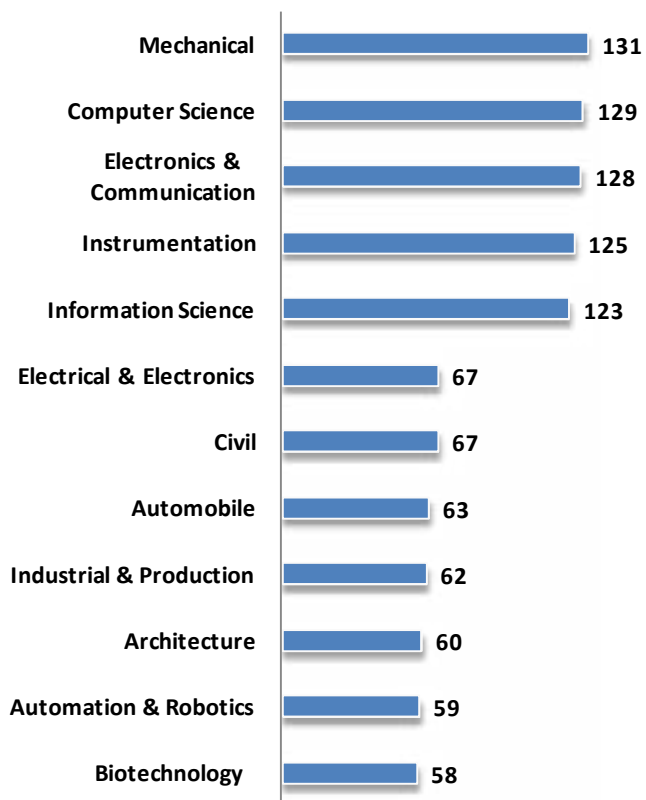| Sl. No.	Program	Intake
1.	Civil Engineering	60
2.	Mechanical Engineering	120
3.	Electrical & Electronics Engg.	60
4.	Electronics & Communication Engg.	120
5.	Industrial & Production Engg.	60
6.	Architecture	60
7.	Computer Science & Engg.	120
8.	Automobile Engineering	60
9.	Instrumentation Technology	120
10.	Information Science & Engg.	120
11.	Biotechnology	60
12.	Automation & Robotics Engg.	60

Postgraduate Programs

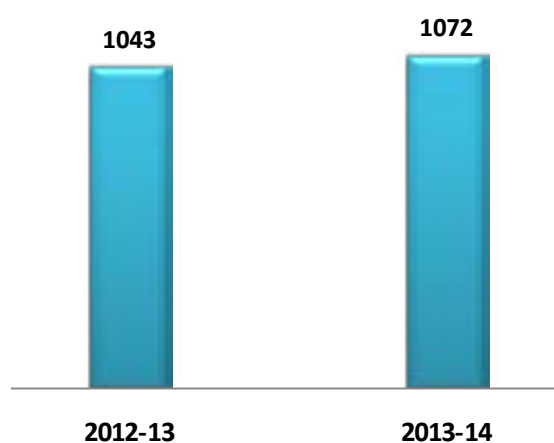| Sl. No.	Program	Intake
1.	Structural Engineering	18
2.	Production Management	18
3.	Energy Systems Engg.	18
4.	Digital Electronics	18
5.	Computer Science & Engg.	18
6.	VLSI Design & Testing	18
7.	Machine Design	18
8.	Master of Business Administration	60
9.	Master of Computer Application	60

Research Programs

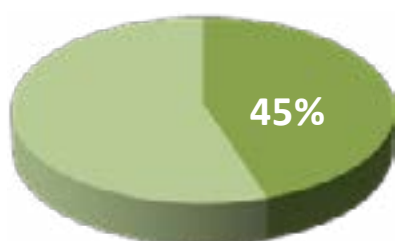| Sl. No	Department	`	
1	Civil Engg.	M Sc (Engg.) by research	PhD
2	Electrical & Electronics Engg.	M Sc (Engg.) by research	PhD
3	Electronics & Communication Engg.	M Sc (Engg.) by research	PhD
4	Mechanical Engg.	M Sc (Engg.) by research	PhD
5	Computer Science & Engg.	M Sc (Engg.) by research	PhD
6	Industrial & Production Engg.	M Sc (Engg.) by research	PhD
7	Biotechnology	M Sc (Engg.) by research	PhD
8	Physics	-	PhD
9	Chemistry	-	PhD
10	Mathematics	-	PhD
11	Automobile Engg.	M Sc (Engg.) by research	PhD
12	Instrumentation Technology	M Sc (Engg.) by research	PhD
13	Master of Business Administration	-	PhD

Student admissions for the year 2013-14

First Year Addmissions -2013-14

Department	Admissions
Mechanical	131
Computer Science	129
Electronics & Communication	128
Instrumentation	125
Information Science	123
Electrical & Electronics	67
Civil	67
Automobile	63
Industrial & Production	62
Architecture	60
Automation & Robotics	59
Biotechnology	58

Student Admissions (UG)

2012-13	2013-14
1043	1072

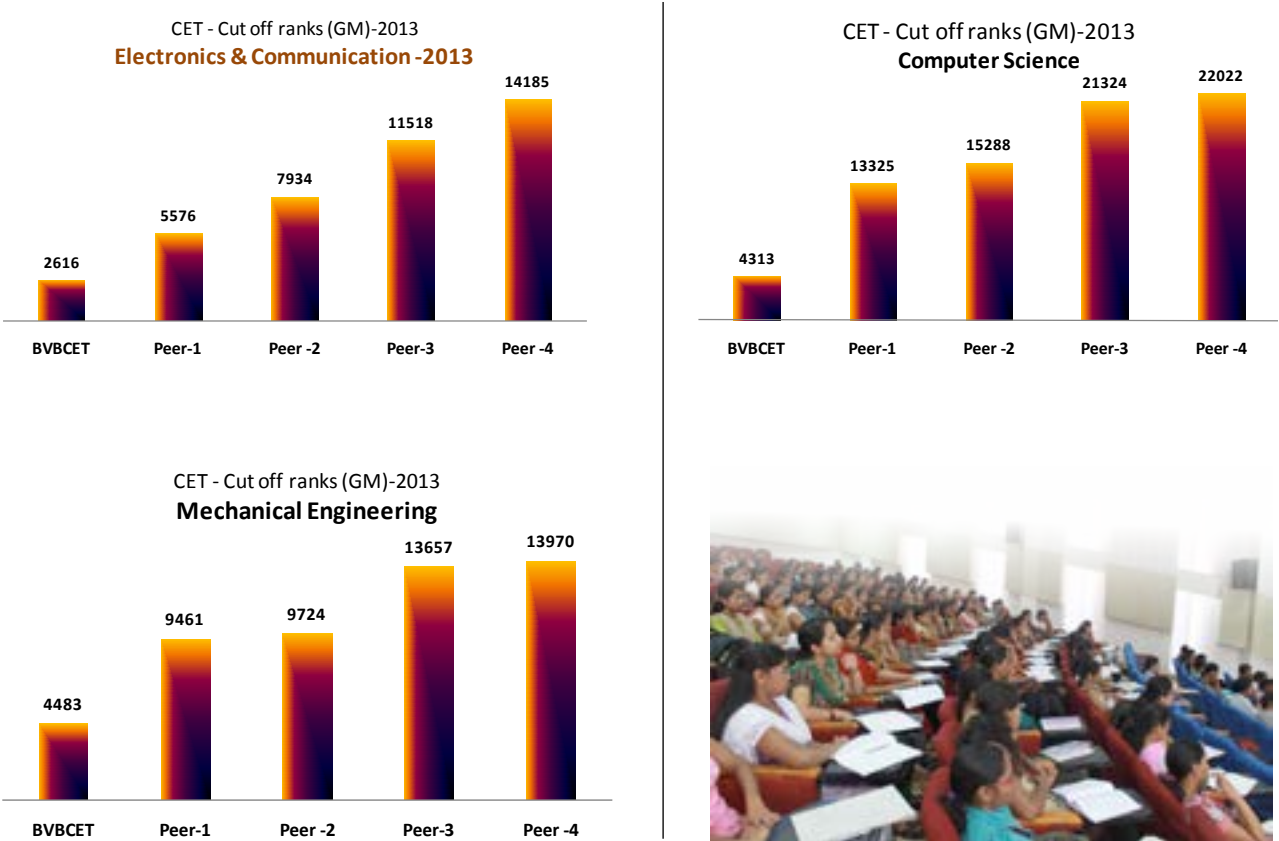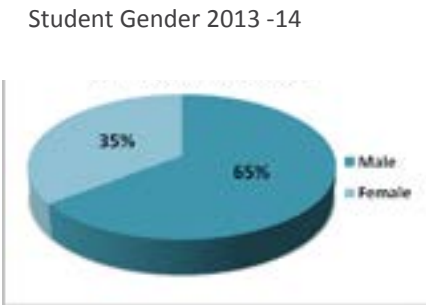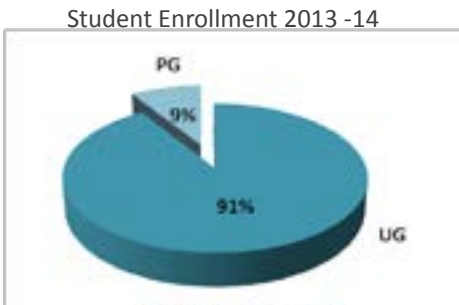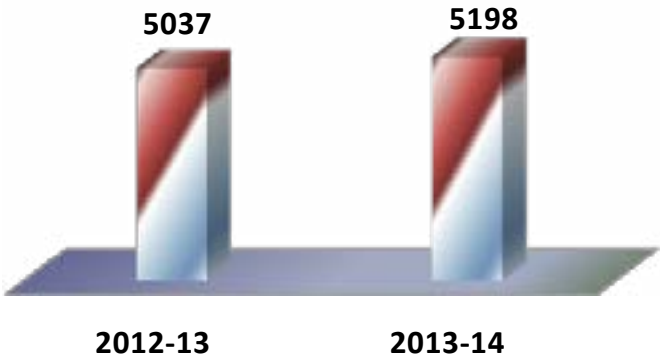### Admissions 2012 -13

45%

Admissions 2013 -14

52%
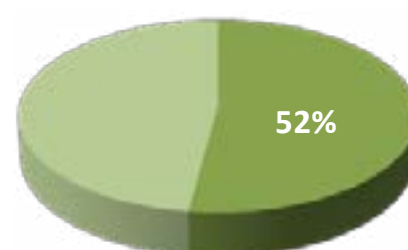
Top 20% ranks

The college continues to maintain its leadership in the North- Karnataka region in attracting the top merited students. This is demonstrated in the following graphs in which CET cutoff ranks for few of the programs are compared with four other peer colleges of more than 30 years standing.

CET - Cut off ranks (GM)-2013
Electronics & Communication -2013

Category	Value
BVBCET	2616
Peer-1	5576
Peer -2	7934
Peer-3	11518
Peer -4	14185

CET - Cut off ranks (GM)-2013
Computer Science

Category	Value
BVBCET	4313
Peer-1	13325
Peer -2	15288
Peer-3	21324
Peer -4	22022

CET - Cut off ranks (GM)-2013
Mechanical Engineering

Category	Value
BVBCET	4483
Peer-1	9461
Peer -2	9724
Peer-3	13657
Peer -4	13970

Total Student Enrollment

Year	Value
2012-13	5037
2013-14	5198

Student Enrollment 2013 -14

PG 9%
UG 91%

Student Gender 2013 -14

Male 65%
Female 35%

Academic Quality

Engineering education is going through a profound transformation driven by the new realities and opportunities created by the global knowledge society. To ensure the fitness of higher education system to negotiate new challenges, adaptation of proper academic frameworks and strategic interventions are necessary. Outcome Based Education (OBE) framework has emerged as a major reform model in the global engineering education scenario and has been mandated for accreditation of engineering programs for the Washington accord signatories. The OBE approach is based on a student centered learning philosophy and focuses on the output (outcomes) instead of the input (content). BVBCET attained autonomous status in 2007 and initiated curricular reform process by adopting OBE framework. The framework gives us an opportunity to build a culture of continuous improvement that strengthens our academic quality and inspires student achievement.
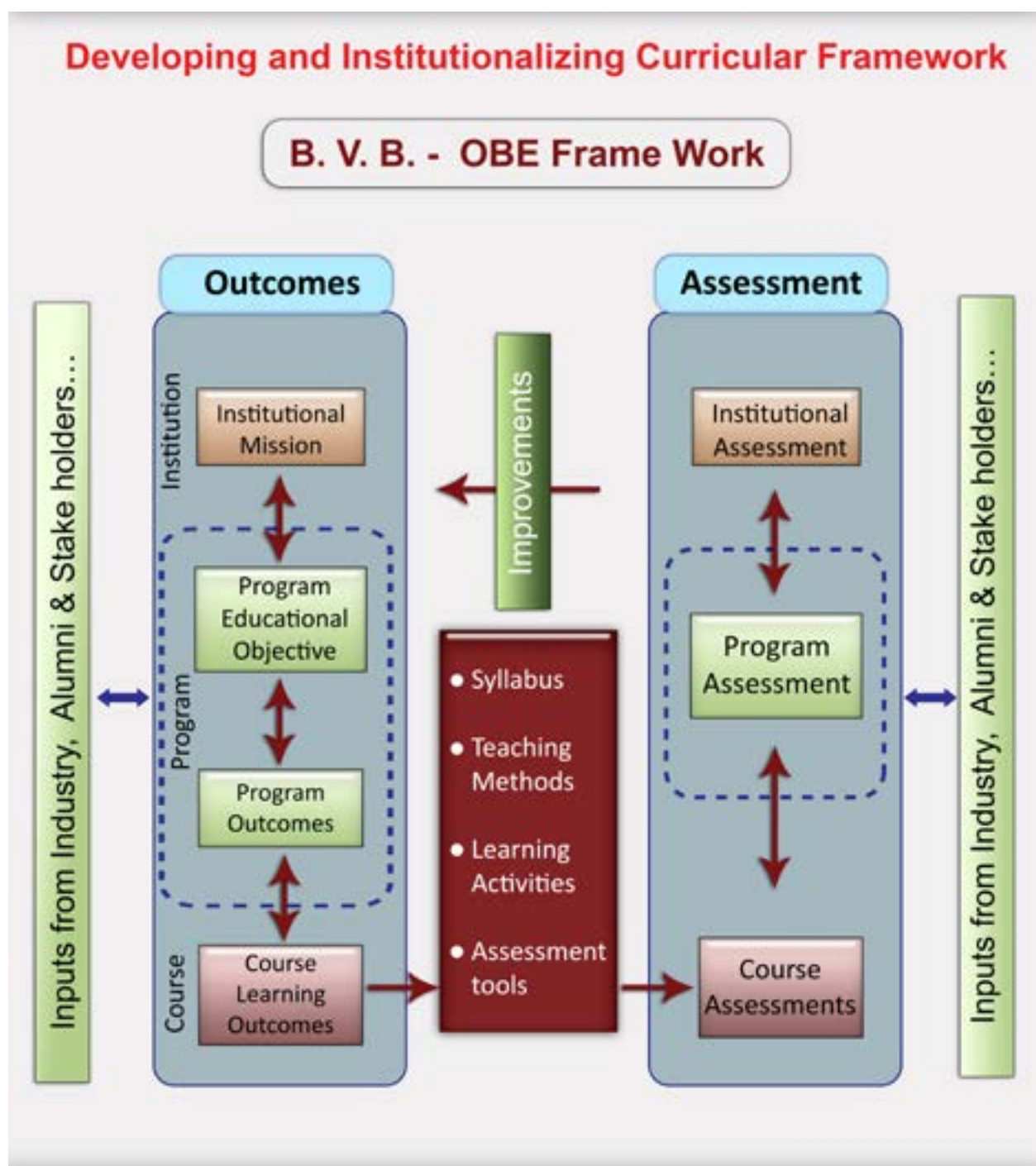
The initiatives undertaken to enhance the quality of education and student performance are presented under following three tenets of academic quality

Advances in Curriculum

Faculty Development

Student achievements

Advances in Curriculum

In the year 2009, the college undertook a comprehensive curricular reform process by adopting Outcome Based Education (OBE) framework. Each program formulated Program Outcomes (POs) in line with ABET EC 2000 Educational outcomes (a through k of criteria of 3). According to ABET, POs describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviors that students acquire as they progress through the program.

A methodology to map the outcomes through curriculum and assessment of attainment of outcomes is established by the college. For each course, a set of Course Learning Outcomes (CLOs) were defined and mapped to the POs. A method for assessing individual CLOs was developed. Overall success in attainment of each outcome is identified by analyzing combination of individual course reports and student works. The frame work adopted by the college is depicted in the Figure below.

Major Academic initiatives Undertaken:

The college continually works to bring about innovations in curriculum design, pedagogy and assessment to enhance the student learning. Few of the initiatives are:

Social Innovation:

A course on ' Social Innovation has been conceptualized and offered to the students of first year undergraduate engineering. The course was designed in association with ' Deshpande Foundation' with following objectives

a. To build students' capacity to use problem solving skills to address social issues through innovative solutions.

b. To transform students' perspective on the world around them by enabling them to identify areas ripe for innovation.

The course successfully implemented from last four years is first of its kind in India. Every year, over 200 projects in social space are done by First year undergraduate engineering students, which help them to connect with societal issues.

Research Experience for Undergraduates (REU):

This is an initiative to promote culture of innovation and research in undergraduate students by introducing 'Research Experience for Undergraduates' course. The course first of its kind in India, has created a lot of excitement in the students who want to pursue research as their career and has lead to substantial increase in the paper publications by students.

Introducing 'Calculus Reform Movement' in Engineering:

Understanding the difficulty students face in appreciating mathematics and mathematics related courses, lead the initiative to bring about reforms in mathematics teaching on the lines of ' Calculus reform movement' of Harvard University consortium. The pedagogy of mathematics teaching in the college follows rule of four i.e. every topic is dealt not only symbolically and numerically but also visually and contextually. Digital tablets with appropriate software help every student in visualising and contextualising mathematical concepts.
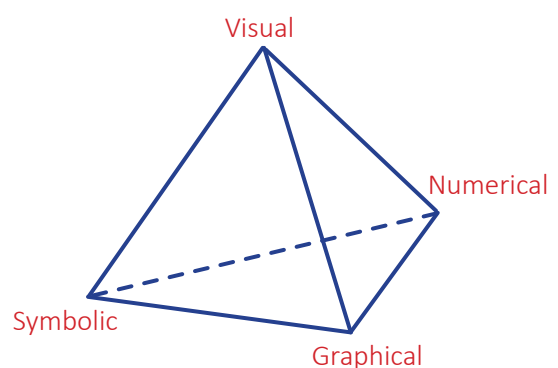
Emphasis on Experiential Learning:

Curriculum design puts high emphasis on experiential learning by introducing Course projects, Mini-Projects, and Industry Internships. Mini-projects vertically integrated with each of the curriculum threads of the program, are carried out by the students in the pre-final year and provide an opportunity to integrate knowledge and skills acquired in a set of courses belonging to the curriculum thread to solve complex engineering problems. Introduction of mini-projects also provides sufficient resolution to directly assess student learning outcomes in each of the curriculum threads. As these projects are carried out in teams, students are able to develop and demonstrate several professional competencies that are critical for engineering practice.

Engineering Problem Solving and Design Experience:

To solve complex engineering problems and develop solutions for real life situations, student needs to understand and practice engineering design process. To strengthen the design skills, the college has introduced 'Engineering Design' course across the major engineering programs. The course deals with problem solving approach to real life challenges that are generally ill-structured and open ended. It emphasizes on the creative problem solving, using structured approach. The student experiences in the course include: aspects of understanding the customer requirements, identifying the objectives, constraints, defining the problem, establishing the functions, generating alternate solutions to the problem, choosing the best alternative, modeling, analyzing and simulating, building prototype, testing and documenting.

Innovations in teaching learning processes:

Keeping in mind lack of focus on education research, the college started Centre for Engineering Education Research (CEER) with an objective of bringing out innovations in curriculum frameworks, pedagogy and assessment. The centre inspired by Indo-US Collaboration for Engineering Education (IUCEE) has enabled the college to adopt Outcome Based Education Framework (OBE) and carry out many innovations in teaching learning practices and assessment. The centre also undertakes outreach activities and has trained over 1000 faculty of other engineering colleges. A group of faculty headed by Principal is recognised by 'International Institute for Developing Engineering Academics (IIDEA)', USA as OBE trainers. (only group recognised in India) .
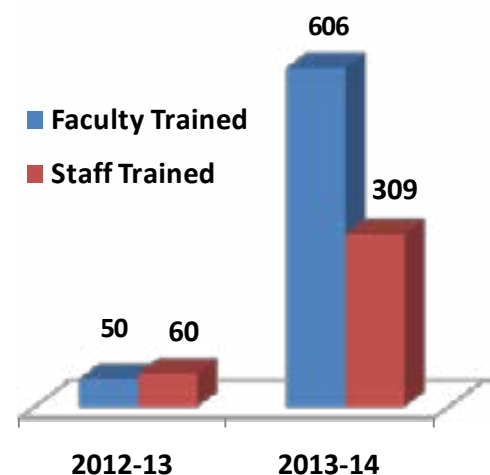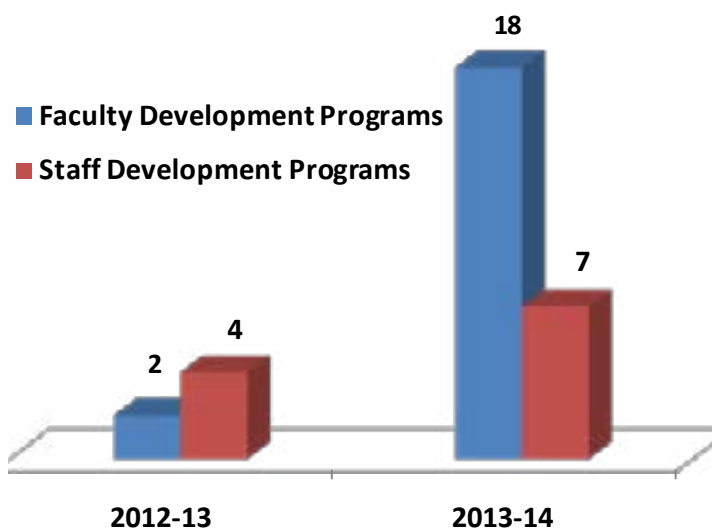
Faculty Development

In a rapidly changing technological world, it is imperative that the faculty and staff need to constantly upgrade their knowledge and skills to remain effective. For the success of any educational reform initiative, provision of high-quality professional development is necessary. In recognition of this, the college encourages faculty to go through a variety of short term and long term training programmes. Every department carries out Training Need Analysis (TNA) and comes up with the strategies for faculty development. The faculty and staff development focuses primarily on

Upgradation of technological knowledge, skills and qualifications

Pedagogical practices

Professional competencies

This is achieved through in-house development workshops run by the college and also through programs offered by reputed institutions and industry.

■ Faculty Development Programs
■ Staff Development Programs

	2012-13	2013-14
Faculty Development Programs	2	18
Staff Development Programs	4	7

■ Faculty Trained
■ Staff Trained

	2012-13	2013-14
Faculty Trained	50	606
Staff Trained	60	309

Student Achievements

Student achievements are presented through three parameters:

1. Academic performance : average CGPA of the graduating students (scale of 10)

2. Graduation rate

3. Number of students employed in the campus placements and number of students opting for higher studies.

Academic Performance

Graduation rate

Student Placements
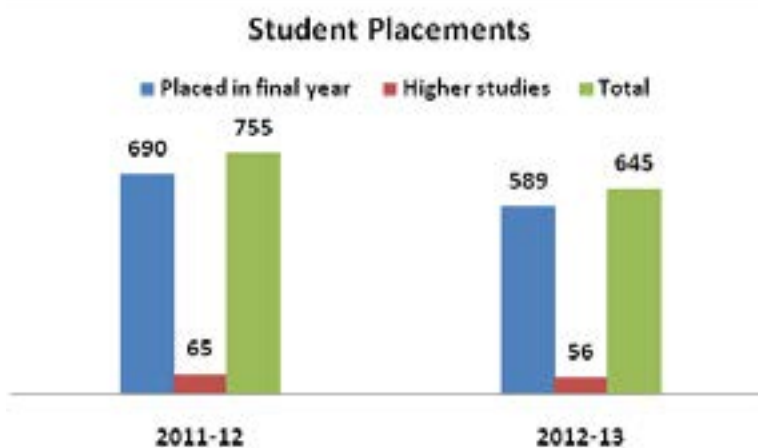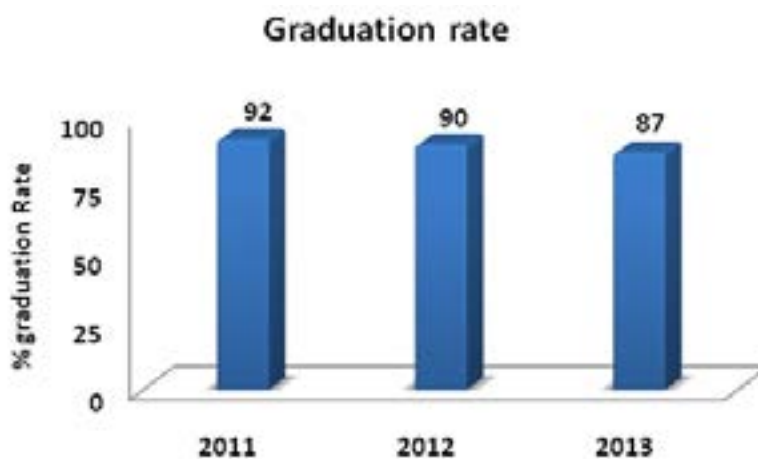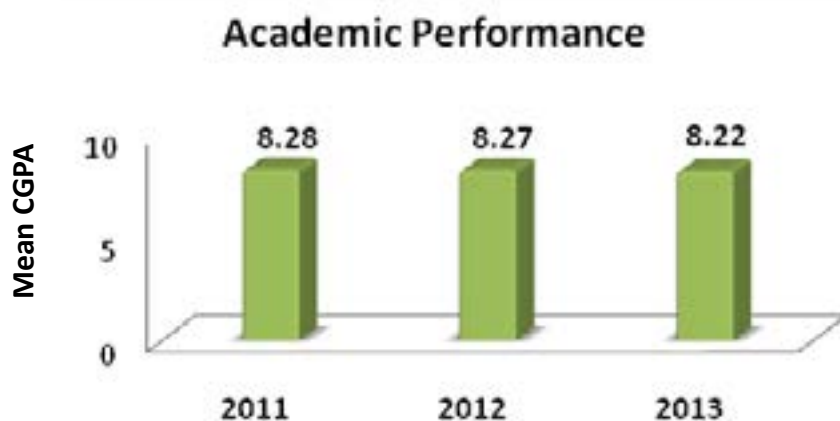
Research and Innovation

To meet its growth aspirations, one of the challenges faced by the college is to transform itself from a good teaching institute to an excellent teaching and research institute. It is important that we need to further the research and developmental activities for the following:

- To sustain academic and professional reputation in knowledge-based economy

- To attract and retain high quality faculty and students

- To maintain cutting-edge curriculum and create stimulating learning environment

- To improve undergraduate teaching, because a researcher; (i) is a better thinker and problem solver, (ii) can promote active teaching & (iii) can create enthusiasm

- To align academic activities with economic development of the region

The college has undertaken several strategic initiatives which are driven by 'Research and Development Promotion Council' (RDPC). The institutional research plan priorities are

- Match our strengths with opportunities

- Increase our research capacity

- Create a dynamic research environment to promote research excellence

The summary of present status regarding research activities with statistics of research centers, publications, funding received and some initiatives taken up to enhance the research activities in the college are presented.

Research centers

BVBCET has 13 research centers affiliated to VTU with 45 doctoral faculty guiding 99 registered doctoral students. Awarded Doctoral and MS candidates from these research centers are 26 and 2 respectively. The following table presents details about the research-centers.

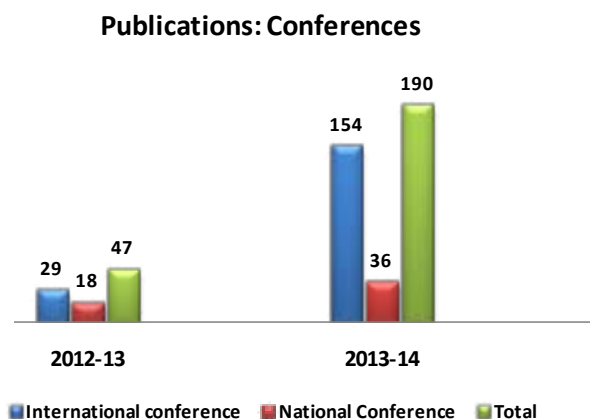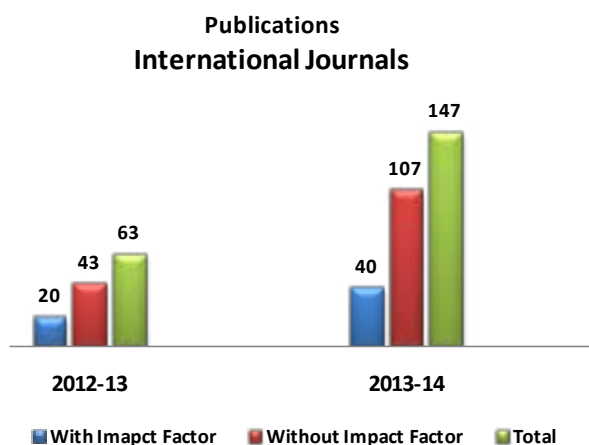**Table-1: Details of registered canidates at 13 research centers**

Sl. No.	Department	No of Guides	No. of PhD / MSc registered	No. of PhD / MSc Submitted	No. Degree PhD/MSc awarded
1	Automobile	3	2	00	00
2	Biotechnology	3	07+1	00	00
3	Civil	6	13	01	03
4	Computer Science	4	13	00	02
5	Electrical & Electronics	2	03	00	01
6	Electronics & Communication	7	27+1	00	04+1
7	Instrumentation Technology	1	00	00	00
8	Industrial Production	4	05	00	03
9	Mechanical	8	15+1	00	10+1
10	Physics	3	11	00	03
11	Chemistry	1	01	00	00
12	Mathematics	2	00	00	00
13	Master of Business Administration	1	02	00	00
	Total	45	99	01	26+2

Summary of publications

The following table summarizes the number of publications of research work in referreed conferences and journals at national and international level.

Table-2: Summary of papers published during 2012-13 & 2013-14

Year	Int Journal		National Journal	Int. Conference	National conference	Total	Impact factor
	Impact Factor (IF)	Without impact factor					
2012-13	20	43	01	29	18	111	Av. IF=1.630 Maximum=5.96
2013-14	40	107	07	154	36	345	Av. IF=1.510 Maximum=4.357
Total	60	150	08	183	54	456	117

Publications
International Journals

Publications: Conferences

With Imapct Factor   Without Impact Factor   Total

International conference   National Conference   Total

Summary of external funded projects
Research grants received: 2008-2012

Number of research projects	:	13
Number of modernization projects	:	3
Total Amount	:	96.3L+25.5L = 121.8 L
Funding agencies	:	DST, NRB, AICTE, VTU & VGST

Institute funded capacity building projects:
Capacity building projects are funded by the institute with the following objectives:

- To build research capabilities
- To provide the experience of carrying out the research project
- To facilitate the process of applying to external funding agencies

Sanctioned projects	Sanctioned amount	Utilized amount	REU Student benefited	PhD/ M.Tech Student benefitted	Papers published	Applied for external projects	External sanctioned projects
17	9.9L	8.48 L	09	17	08	5 DST + 1 NRB + 3 VGST + 8 AICTE	1 (10 L)
14	12.44 L	8.48 L	06	12	5+4com-municated	10 AICTE	1 (40 L)

Research Experience for Undergraduates (REU)

Undergraduate research opportunities help the student to experience and learn how to identify and define the problems and solve them, how to find and evaluate evidence, how to consider and assess competing interpretations, how to form and test their own analysis and interpretations and how to communicate their ideas and findings. These learnings enable them to take part in the research missions in their future career inside or outside academia.

Probably our college is the first institution in India to introduce 'Research Experience for Undergraduate (REU)s' in the curriculum as an optional course. The response from the students and faculty mentors has been overwhelmingly positive. The students and faculty mentors have devoted considerable time and effort to make the experience worthwhile and fruitful.

Summary of outcome of the REU course is reflected in the following table. In the first year, 19 REU students have published 25 papers in international conferences and journals, and 8 of them have either completed or doing post graduation. About 25% of the toal REU students from 2011-14 are doing post graduation either in India or abroad.

Year	Number of REU students	Number of Guides	Number of publications	Year	Number PGs from REU students
2011-12 (completed)	18	22	25	2011-12 (completed)	8
2012-13 (completed)	31	40	20	2012-13 (completed)	8
2013-14 (Completed)	3 0	44	15+8	2013-14 (Completed)	5
2014-15	46	51			

Setting up of Research clusters

To promote interdisciplinary research in emerging and high impact areas, the college has undertaken initiative to establish research clusters. Our aim is to develop these Clusters to a level of competency that, they can further emerge as centres of excellence. The objectives of research clusters are to enable focused research, attract funding, synergize the efforts of faculty and students to gain greater recognition for the institution at National and International level. Following three areas for clusters of competence have been identified based on present strengths and future needs.

Material Science
Energy
Electronic System Design

Material Science
Focus areas of this cluster are:

Composite Sections (Macro and Micro Level)
- Metal Based Matrix
- Polymer Based Matrix

Modeling and analysis for the newly developed composites.
- Commercial analysis
- Fracture Modeling and analysis
- Design of Experiments

Nano For Energy applications
- Nano-combustion
- Thin Films

Nano-Composites
- Structural applications (Civil Engineering)
- Structural applications (Mechanical Engineering)
- Degradation study of developed hybrid nanocomposite material
- Novel Composite Hybrid Membranes using nano-materials
- Pervaporation Separation
- Fuel cell
- Group III Nitride Nanostructure

Energy
Focus areas of this cluster are:

Solar Energy:

- Solar thermal Energy (Low and medium temp. range applications)
- Solar Photovoltaic Energy (Design of control systems)

Biomass energy:

- Gasifiers for thermal and engine applications
- Wood based gasifier stoves
- Kitchen waste biogas plant

Energy Conservation
(in lighting systems)

Wind Energy:

- Structural design
- Theoretical Predictions
- Control systems

Electronic System Design
Focus areas of this cluster are:

Vision Based Solutions

- Product Quality Analysis
    1. Object capturing
    2. Analysis
    3. Classification
- Disease Identification
    1. Environmental effects on crops
- Soil Salinity analysis (satalite images)

Network and Security

- Wireless sensor network systems for precision agriculture
    1. Capturing farm-data on hand-helds
        1. Nutrition
        2. Moisture
        3. Ph Value

High Performance Computing

- Real-time application in Industrial automation
    1. Quality analysis

Entrepreneurship

Centre for Technology Innovation and Entrepreneurship (CTIE):

Unleashing the vast potential of human resources in Tier –II cities by creating and supporting entrepreneurship can reshape the socio-economic landscape of the Nations. BVB has taken initiation to setup 'Center for Technology Innovation and Entrepreneurship' (BVB-CTIE), to drive, promote and support entrepreneurial community in the region.

The center aspires to emerge as a pioneering model for building entrepreneurial communities in Tier –II cities.

The mission of the CTIE is to set up a platform to,

- Create and Sustain a Culture of Discovery and Innovation
- Solve Socially relevant problems by inventing Valuable Solutions
- Develop Ability to Build Businesses around such Innovations and help Scale UP
- Identify and develop Mentor base and Financial resources
- Celebrate Impact on Personal, Regional and Global Ecosystem

CTIE has undertaken a twofold approach to build entrepreneurial ecosystem in the region:

STUDENT INITIATIVES: A seven step Strategic Framework – Cultivate, Create, Assess, Prepare, Launch, Manage, Prosper – is being followed. Under this framework, a variety of interventions have been built to identify, engage, empower and enable students.

ENTREPRENURIAL INITIATIVES: At the incubation level, we encourage external entrepreneurs to start their ventures on campus. Basic amenities are provided and businesses are encouraged to engage students through internships, projects and jobs. Currently 19 companies are incubating their ideas and 5 more are in the pipeline. Altogether 12,000 Sq. ft of furnished floor area is been utilized for this purpose.

CTIE has setup following performance goals to measure its impact:

1. Establish 50 startups on BVB campus by December 2017
2. Create 2000 jobs in the region by December 2017
3. Build a strong network of business mentors and coaches to help sustain the growth
4. Start / attract venture capitals to invest in our start-ups

CTIE Success Stories

Sl. No.	Organizations Incubated	Technology Vertical	Current Status
01	Sankalp Semiconductors	Semiconductor/VLSI Design	over 450 employees RED-Herring listing -Top 100 Companies in the world -2012 *
02	Navya Biologicals pvt. Ltd	Bio-technology, R&D	35 employees. 'Most Innovative Company' award by DBT, Govt. of India

CTIE interventions -
STUDENT FOCUSSED INITIATIVES:

Entrepreneurship Cell (E-Cell)

Entrepreneurship Cell (E-Cell), BVBCET is a student run organization, dedicated for promoting entrepreneurial thinking in students. As a part of E-Cell, student leads invite, various eminent entrepreneurs to deliver lectures and mentor students.

Business Plan workshops, Ideation Camps, Patent workshops, Entrepreneurship Summit and such enabling events will be conducted throughout the year.

CTIE-Intel Ideation Camp

CTIE- Intel Youth Enterprise program is a globally accepted intervention for developing and scaling ideas. The program consists of an idea framework that helps participants through stages of ideation, validation, development and lastly, testing in a real world environment. All through the workshop, there would be Buddy sessions, Energizers, peer-coaching, mentoring and such fun & exciting activities. Student teams would make B-plans and present them to win cash prizes. This is a regular event.

PUPA (End-to-end product development-marketing activity)

PUPA, a product development initiative for BVB students held in January 2014. Under this program, students are encouraged to take up any product of their choice and produce it such that it can be sold. Students would be given seed funding to develop and manufacture their product. This event is open for all engineering and management students of BVB. PUPA is a time bound initiative.

List of Products under PUPA 2013: Bean Bag, Car Sun Screen, LED Footwear, Fruit Plucker, Cake Board, Solar Mobile charger, Corn peeler, Banner Stand, Safe cracker igniter, Glass cleaner, LPG cylinder carrier, Hostel/ Mess Management tool.

One of the products 'CakeBoard' is now formally launched in the market after its initial success with technology students.

PUPA 2014 is completed with 32 teams participating not just from BVB Hubli, but also from other engineering institutions. The final product demo and exhibition was held on 13 March 2014.

Theme based Industry Visits:

In 2013, the theme was Import Substitution and over 80 students who participated in PUPA 2013 and from CTIE-Capstone Project batch, visited Manik Engineers, Pune. Students were given an overview of importance of import substitution. The entire process of product identification, market assessment, IP issues, production plans, material and testing requirements were discussed with specific examples from Manik Engineering product offerings.

Butterfly

A business plan competition open for all students of BVB. The pitch contest was held in two categories- one for the third year students and the other one for the rest of the students. 28 projects proposals were received for this event. An external entrepreneur was chosen as the judge to evaluate the validity of the B-plans. 13 projects are finally chosen for the CTIE Capstone project track for the year 2013-14. These teams shall be nurtured under CTIE and respective technology departments to design, develop and build the first prototypes. This is an annual event.

Product Design and Realization - Summer term course (3 credits).

Product design is a complex process requiring a cross-functional team consisting of not only design engineers from different engineering disciplines, but also, individuals from manufacturing, financing, marketing, and many more. In this course an attempt was made to provide an opportunity for the student to experience the complete product design and realization process, working in teams comprising of students from different

disciplines of engineering. 7 teams comprising of Electrical and Mechanical science students (4 in each) worked from ground up to successfully develop products. Teams were offered two design problems- A remote control for the elderly and a proximity sensing musical toy for toddlers. This is an annual event.

'Principles of Innovation and Entrepreneurship'

A three credit course offered in collaboration with University of Massachusetts, Lowell, (UML) USA. This course was a two week residential program attended by 30 students from BVB (from 9 engineering disciplines) and 9 UML students. This course was taught by both UML and BVB faculty. Student teams learnt entrepreneurship and ideation in a multicultural environment. The theme of this program was to make engineering solutions affordable.

Student Exchange program –
'Global Immersion in Entrepreneurship – the American experience':

BVB is offering its first student exchange program at UML,US, this summer. (June 16-27). This program exposes students to the entrepreneurial culture and research based product development capabilities of the US institutions. This Both UML and BVB faculty shall conduct the program sessions.

Executive speakers under CTIE

Following speakers addressed our young entrepreneurs on variety of entrepreneurial and technology issues.

i.   Ashok Kalbag, Secretary, PAN IIT Alumni – 3 May 2013 – on 'importance of entreornueship in education- a rural focus'.

ii.   Dr. Kalyan Swamy – Principal Secretary, Govt. Of Kerala – 5 May 2013 on 'IP and its implications to start-ups'

iii. Dr. Aravind Chinchure – VP – Innovations, Reliance Industries, Pune 8-9 July 2013, on 'IP and the rights of the IP holder, Innovation and Ideation in start-ups'

iv.   Karthik Shetty – Chartered Accountant 10 July 2013 – on 'Accounting basics from start-ups'

v.   Basavaraj Goud – Ex. VP marketing-Mindtree 11 July 2013, on 'Marketing 101 for new enterprises'.

x.   Mr. Sheshgiri Kulkarni- CA, Ms. Madhuri Deshpande- Expert on company laws – Financial discipline and regulatory compliance for Startups- 7 Feb 2014.

vi.   Prabhdeep Randhawa – Innovation Consulting- Bangalore, 13 July 2013, on 'Importance of Business communication'

vii. Dr. Vinay Dabholkar –MD, Catalign Consultants, Bangalore, 20-21 Sept 2013, on, Ideation, 8 steps to take the idea to markets'

viii. Pramod Kumar – MD, Arience, Project Management expert from Industry, 13 Dec 2013. On 'Imprtance of Project management for start-ups'

ix.   Dr. Hemant Kulkarni – Scientist-F and project Co-ordinator, Technology Development Board - 26 Dec, 2013. Evaluated the Business plans for CTIE incubation companies.

Industry Partnership

It is essential that the institute continues to strengthen its association with the industries to enhance its student learning experience and relevance of its research activities.

Curriculum intervention:

Board of studies of every program is having at least two senior members from Industries like Microsoft, GE, Tata motors, TCS, Samsung, Sankalp etc.

Industry Oriented Courses:

● **Automotive electronics:**

Has been offered in Collaboration with Robert Bosch and KPIT. This has led to increase in placements by 150 % for the companies in the field of automotive electronics in Bosch, KPIT, Continental and Delphi.

● **Aircraft Systems and Design of Aircraft Structures:**

Has been offered by the Mechanical stream departments in collaboration with Infosys.

● **Manufacturing technology:**

Has been offered for the Mechanical stream departments in collaboration with Quest Global (now Aequs).

Industry based projects:

Around 60 capstone projects have been carried out in collaboration with Industries like Sankalp, Ion Idea, Nano pix, Hi-wi etc. The project with Hi-wi has resulted in a Healthcare product for the Australian government catering to the needs of the aged.

MOU's Signed:

Several new MOU's have been signed with industries. One of the important collaborations is with Microsoft India GTSC in the field of Networking.

MOU with KPIT

Guest Lectures from Industries:

Every department has organized Lectures from the industry in the form of Expert Lectures, Co-teaching, & career guidance.

New labs set up with industry:

Microsoft has setup a Microsoft Technical Services lab at BVBCET, which is the only one in Karnataka and one among six in India.

PLM Enovia Lab has been setup in collaboration with Dassault Systems

Internships:

Nine students were offered full time Internship by Microsoft India GTSC with a stipend of Rs 25000/pm and were offered a salary package of Rs 9.03 lakhs/annum.

Mock interviews by alumni from the industries:

Every department has organized mock interviews by alumni to prepare the students.

PG Projects in Industries:

151 PG students have done their project in 40 industries.

Education Research

Centre for Engineering Education Research (CEER)

Background:

Academic Autonomy granted to BVBCET in 2007 offered an opportunity to innovate and excel in Engineering Education. This also came with the responsibility of performing to the expectations of all the stake holders including the regulatory bodies. It was at this time that the leadership of the system invested in collaborations to elevate itself to the next level of performance. The first such collaboration which gave the sound foundation was with Indo US Collaboration for Engineering Education (IUCEE). The faculty leadership institutes (FLIs) organised by IUCEE in 2008 and 2009 gave the exposure to global best practices of Engineering Education leading to sprouting of innovations in teaching –learning space showing visible results. Encouraged by this, Centre for Engineering Education Research was established in 2010 to encourage innovation and research in Engineering Education.

Vision:

To promote innovation and research in Engineering Education.

Objectives:

1. Empower faculty members with the best practices in curriculum design, teaching learning and assessment through training, workshop and allied activities

2. Encouraging innovation in curriculum design, teaching – learning and assessment

3. Facilitate research and systematic study of the impact of pedagogical practices

4. Conduct outreach activities like publication, workshops, trainings and conferences

Activities:

Faculty Conclave:

An annual event to showcase the innovations in curriculum design, delivery and assessment by faculty members of BVBCET being conducted since 04 years. "Faculty conclave 2014" was held on July 30-31, 2014. A total of 26 papers were presented by 58 faculty members.

This event is observed to be attracting and motivating faculty members to innovate and publish their work in Engineering Education resulting in improvement of quality of publication and deliberations over the years.

Faculty Induction Training:

This is also an annual event conducted in the first week of the academic year. Newly recruited faculty members are given orientation on the academic practices of BVBCET. This year's faculty induction training was conducted during July 24-25, 2014 and a total of 36 faculty members were benefitted by this.

Curriculum Innovation Grants:

This is a new initiative to promote culture of innovation in Engineering Education among faculty members and support them with funds up to Rs.10,000 per proposal. This year a total of 13 faculty members from 06 departments are given Curriculum Innovation Grants during the year 2014-2015.

Focused Program Outcome Attainment Initiative:

This new initiative is introduced in order to strategise and innovate in attainment of outcomes, collect best practices and institutionalize them. At institutional level, three program outcomes (POs b, c and g) are identified for the year 2014-2015 calling for special attention. Departments are encouraged to develop strategic plans and work towards attainment of these identified outcomes with a special focus. At the end of odd semester (December 2014), experience sharing leading to collection of best practices is planned.

Publications & Patents:

Engineering Education Research Publications:

There is a steady increase in the number of publications in Engineering Education Research which is evidenced in terms of conference and journal publications.

Patents:

IonCudos is a software product for designing curriculum using outcome based education framework. This product is developed by M/s IonIdea , using the domain knowledge of three faculty members of BVBCET (Prof. Ashok Shettar, Prof. Prakash Tewari and Prof. Gopalkrishna Joshi) who jointly own the intellectual property of the product.

Outreach Activities:

OBE Workshops:

The experience of practicing outcome based education is shared with community in the form of conducting workshops on 'Curriculum Design Using Outcome Based Education Framework". So far, 1000+ faculty members are trained by the team of resource persons from BVBCET lead by Dr. Ashok Shettar. These workshops are organized at institutional, regional as well as national level.

Webinars :

IUCEE invited resource persons from BVBCET for a special webinar series on Outcome Based Education in July 2014. A total of 04 webinars were offered by the team consisting of Dr. Ashok Shettar, Dr. Prakash Tewari and Prof. Gopalkrishna Joshi. More than 2000 faculty members have been benefitted by this series.

ICTIEE-2014:

The first international Conference on Transformations in Engineering Education (ICTIEE–2014) was hosted by BVBCET in collaboration with IUCEE during January 16-18, 2014.

Recognitions:

IIDEA:

An international forum lead by Dr. Lueny Morell has recognized the BVBCET team of experts (Dr. Ashok Shettar, Dr. Prakash Tewari and Prof.Gopalkrishna Joshi) for Curriculum Design using Outcome Based Education framework.

JEET Advisory and Editorial Board:

Dr.Ashok Shettar (member of Advisory Board) and Prof. Gopalkrishna Joshi (member of Editorial Board) are associated with Journal of Engineering Education Transformation being published by RIT in association with IUCEE.

NASSCOM Curriculum Design Initiative:

Dr. Prakash Tewari, Prof. Gopalkrishna Joshi and Dr. Uma Mudenagudi lead by Dr. Ashok Shettar are acting as resource persons for Mechanical, Computer Science & IT and Electronics streams for curriculum review and design initiative by NASSCOM.

Going Digital

The research data on learning styles of students suggests that large number of students are visual learners i.e., they learn better when visual representation of the concepts is presented to them. The digital tablet is emerging as a powerfull tool to bring in this aspect into the teaching / learning process.
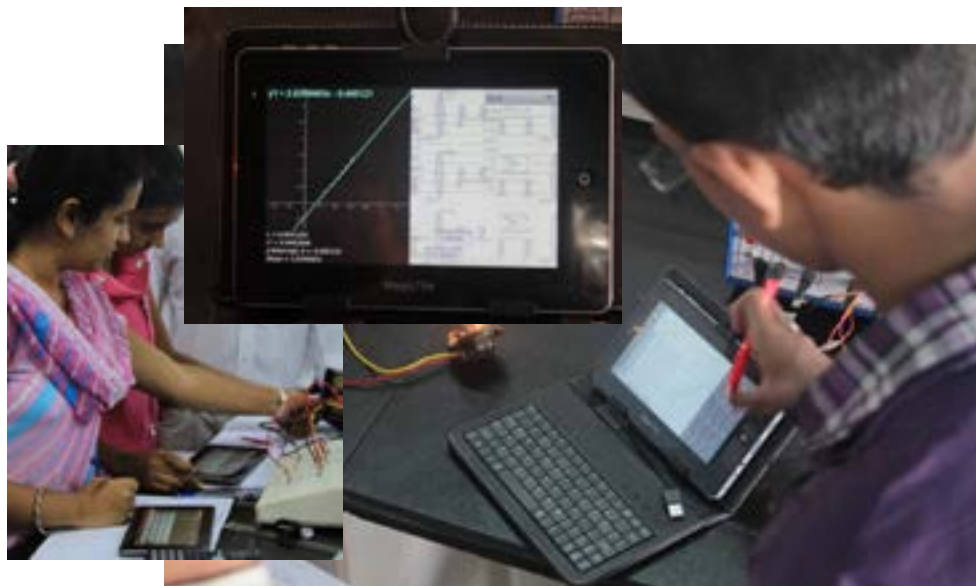
BVB started using digital tablets in its teaching learning process for the first year engineering students. Every student owns a 10" tablet running on android 4.2 and various application softwares are given by the college.

- The college follows 'Harvard Calculus Reform Movement' recommendations for teaching mathematics courses. The students visualize the mathematical concepts and solutions in the classrooms by simulating them on the digital tablets. This visual experience not only creates interest in them but also helps them to overcome the notion that mathematics is an abstract subject.

- Using the digital tablets, students practice C programming in the classrooms only. This helps the students in a big way because the students do not have to depend upon the laboratory hours to learn and practice programming.

- In the other courses also, digital tablets have been used to make the subject matter more interesting and engaging. For example in Elements of Mechanical Engineering, videos on the tablets can be used to understand how a four stroke engine operates. Attempts are being made to upload all the relevant videos and resources relevant to the topics covered in the courses on to the tablets.

- These tablets are also helping the college to become environment friendly by reducing the paper consumption by students. Usually the students write journals for the laboratory works and submit them to the teachers for evaluation. Every student will be using at least 100 pages per year. Now, this whole process of writing journals has been transferred to the digital tablets in first year engineering. The students prepare their journals on the tablets and submit them online avoiding the usage of any paper. It is estimated that this year itself about 100,000 papers have been saved because of this initiative. In next three years college students will be saving about 400,000 papers per year.

Capital and IT

Our infrastructure is the key enabler for us to deliver world-class educational experience for our students. A major building project construction of 'School of Mechanical Engineering' and 'School of Management Studies & Research' was completed in 2013. The new facility with a carpet area of 120,000 Sq.ft, built at a cost of Rs. 14 Crore, has state-of-the-art infrastructure that can transform learning experience and student engagement.

Doyen of Indian Industry Mr. Ratan Tata inaugurated the building on 29th January 2013. On this occasion, accomplished personalities like Mr. Narayan Murthy, Chairman Infosys, Mrs. Sudha Murty, Chairman Infosys Foundation and Dr. R. Mashelkar, former Director General CSIR were present.
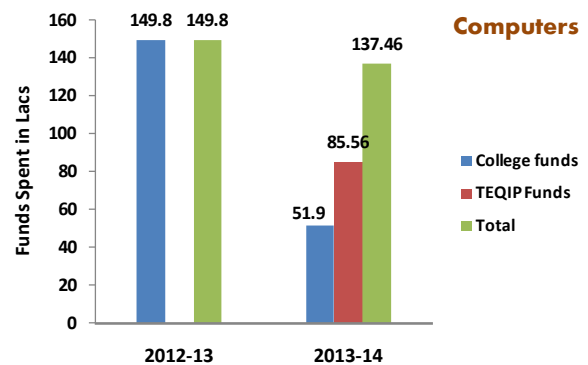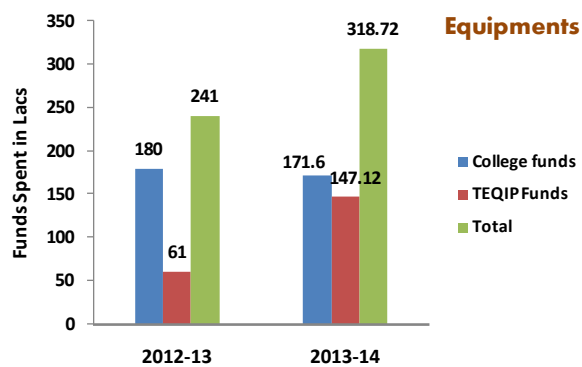
Continuing our efforts to develop ambient green campus, new landscape projects were undertaken. The new landscape focuses on creating informal interaction space for the students in the campus.

Laboratory Development

We continually strive hard to keep our laboratories and computer centers in tune with the latest technological advances. In the present year, apart from the college funds, the grants under TEQIP-II project helped us to establish several new laboratories and modernize the existing ones.

Equipments

- College funds
- TEQIP Funds
- Total

2012-13: 180, 61, 241
2013-14: 171.6, 147.12, 318.72

Funds Spent in Lacs

Computers

- College funds
- TEQIP Funds
- Total

2012-13: 149.8, 149.8
2013-14: 51.9, 85.56, 137.46

Funds Spent in Lacs

Campus Layout

IT Platforms and Services

In 2013, strengthening investment in IT platforms and services has lead to implementation of the following:

a. New end to end Information System Solution Automation of all the key processes of the institution

   1. Admissions / Registration

   2. Academics : Calendar driven Planning, progress monitoring and reporting system

   3. Examinations : Efficient, secure, confidential and process compliant examination process

b. Digital tablet enabled journal submissions for first year engineering students

c. Equiping all the classrooms with latest IT and visual aids

d. Setting up of new central server room with powerful servers

e. Project for state-of-the art high capacity campus fiber optic network with wireless hotspots

Microsoft Technical Services Laboratory

Microsoft IGTSC under its Microsoft Student Technical Services Program ("MSTSP")has setup a Microsoft Technical Services lab at BVBCET, which is the only one in Karnataka and one among six in India.

Microsoft has setup the lab with high-end servers and workstations catering to 60 users simultaneously. This lab is exclusively used for training the faculty and students on latest Microsoft technologies.
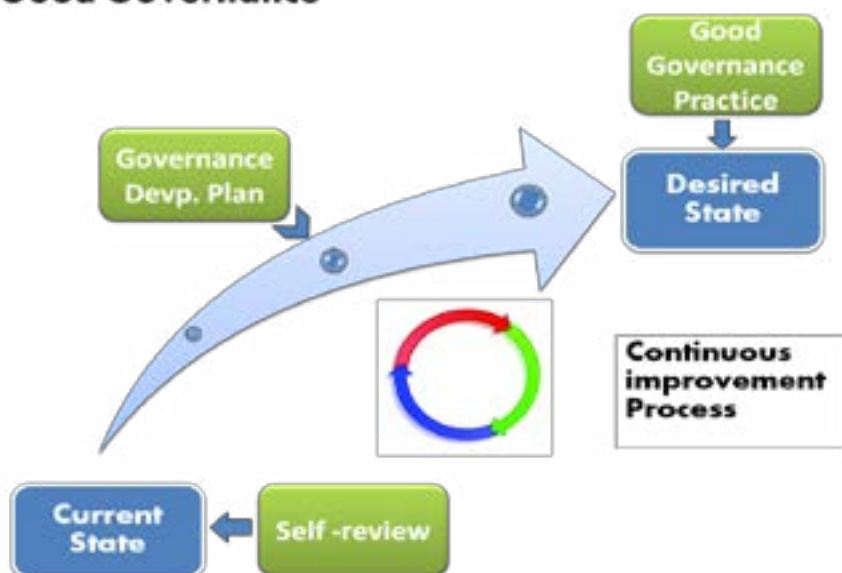
Governance

In 2013, a significant governance reform initiative was taken up in line with 'Good Governance Program' of World Bank (TEQIP-II). The following processes suggested by Expert Advisory Group (EAG) of National Project Implementation Unit (NPIU) were adapted:

1. Self-review of Current Governance practices of the Institution
2. Developing 'Institutional governance document' that brings-in good governance practices into the institutional framework.
3. Evolving Institutional Governance development plan to overcome the gaps in current governance practices.

The members of the governing council and executive leadership of the college worked systematically to accomplish the above task. We wish to record our gratitude to the members of EAG for mentoring us in the process of adapting good governance practices. The college is considered as one of the two pilot colleges in India by NPIU in implementation of Good Governance program.

The outcomes of the good governance initiatives are:

Development of "Institutional Good Governance document' based on "TEQIP Good Practice Guide for Governing Bodies December 2012". The document which gives clarity and focus to the present and future boards of the college was approved in the Governing Council meeting held on 15th Feb 2014.

Self-review report of current governance practices, to identify strengths and also any gaps and areas for development.

Institutional governance development plans which systematically lay out actions required to overcome the gaps and timelines by which they are to be accomplished.

Board of Governers

Chairman

Dr. Prabhakar B. Kore

Members of the Trust/Society/Management

Sri. M. C. Metgud

Sri. S. I. Munavalli

Sri Amit P. Kore

University Nominee

Prof M. I. Savadatti

UGC Nominee

Dr. S. A. Chary

State Government Nominee

Prof. H. U. Talawar

Educationalists/Industrialists

Dr. M. V. Atre

Sri. Vivek G. Pawar

Dr. Anant Koppar

Members from Institution

Prof. B. L. Desai

Dr. P. G. Tewari

Head of the Institution/Member Secretary

Dr. Ashok Shettar

Strategic Plan Progress:

Strategic plan of BVBCET for the period 2012-17 defines how we will be successful within a challenging and changing engineering education environment. The plan has been devised to enrich the experience of our students, staff and stakeholders, and has been developed with their involvement and support through an extensive consultation programme that has also engaged with alumni and external partners. The inputs from TEQIP–Project Implementation Plan document have been considered while formulating the strategic plan of the Institution. The progress of the activities undertaken to achieve envisioned developmental objectives are reported below.

■ (green)	Completed	■ (orange)	On-going (First Cycle not completed)
■ (yellow)	On-going (Year Cycle completed)	■ (red)	Not yet started

Goal 1: Students' Success

To provide a student-focused teaching and learning environment that enables them to excel in academics and enhances their competencies for a successful employment.

1.1 Strategic Initiative: Increased learning outcomes of the students

Developmental Objective 1.1.1 : To design and develop innovative and engaging curriculum that meets the expectations of stakeholders

Specific Objective		Activity	Status
1.1.1.1	1	Formulate program objectives and program outcomes, based on needs and standards	(green)
	2	Develop course learning outcomes and map with program outcomes	(green)
	3	Identify the gaps in achieving the outcomes and evolve strategies to address them	(green)
1.1.1.2	1	Establish Performance Indicators (PIs)for the desired outcomes	(green)
	2	Connect assessment strategies to the PI's	(green)
	3	Develop tools to measure attainment of program outcomes	(green)
	4	Establish processes to continually improve the attainment of program outcomes	(orange)

1.1 Strategic Initiative: Increased learning outcomes of the students

Development Objective 1.1.2 : To strengthen academic delivery and assessment strategies that address the changing needs of curriculum and expectations of students effectively

Specific Objective		Activity	Status
1.1.2.1	1	Introduce innovative teaching practices in a controlled way and share experiences	(yellow)
	2	Embed experiential learning through course projects, mini projects and case studies	(yellow)
1.1.2.2	1	Include open ended experiments in the curriculum	(yellow)
	2	Develop learning factory – an environment where students experience CDIO cycle	(orange)

1.1.2.3	1	Conduct continuous evaluation of students learning through quizzes, assignments and tests	
	2	Formulate the assessment tools to evaluate defined course learning outcomes	
	3	Develop assessment rubrics for theory and laboratory courses and projects	
1.1.2.4	1	Collect course specific formative and summative feedbacks	
	2	Formation of class committee to continually seek feedback through class committee meetings	
	3	Collect feedback from students at institutional level about student services and amenities	
	4	Analyze the feedback data and develop action plan	

1.2 Strategic Initiative: Improving employability of graduates

Development Objective 1.2.1 : *To enhance employment potential of all our students by equipping them with requisite knowledge, skills and attitudes*

Specific Objective		Activity	Status
1.2.2.1	1	Design and deliver value-addition courses to ensure that students acquire personal and professional skills that enhance their employability	
	2	Incorporate employability – related transferrable skills in academic curricula wherever appropriate	
	3	Offer a range of extra/co curricular activities for students which will enhance their personal development	
1.2.2.2	1	Deliver effective career education, information, advice and guidance to students	
	2	Conduct awareness and training programmes for higher education and entrepreneurship	

1.2 Strategic Initiative: Improving employability of graduates

1.2.3 Development Objective : *To develop meaningful relationship with industry, employers and alumni*

Specific Objective		Activity	Status
1.2.3.1	1	Widen and strengthen links with employers/industry to improve the industry exposure and placement opportunities for the students	
	2	Enhance alumni participation in strengthening industry-institute interaction and students' employment activities	

1.2 Strategic Initiative: Improving employability of graduates

1.2.4 Development Objective: *To develop targeted activities to improve the employability of disadvantaged students*

Specific Objective		Activity	Status
1.2.4.1	1	Initiate finishing school activities to prepare the weak students industry-ready	
1.2.4.2	1	Conduct specialized soft skill development training programmes to improve employment prospects of disadvantaged students who are not placed in the campus interviews	

Goal-2: Human Resources

To acquire, develop and retain quality human resources who will contribute effectively and to their best of their ability to student learning and organizational development.

2.1 Strategic Initiative: Faculty and staff development			
2.1.1 Development Objective: To strengthen recruitment and faculty development strategies			
Specific Objective		**Activity**	**Status**
2.1.1.1	1	Improve recruitment strategies for filling vacant positions in timely manner with candidates possessing desired qualification	■
2.1.1.2	1	Encourage and support professional development of faculty by deputing to higher education / continuing education program, seminars, workshops, conferences and industrial training	■

2.1 Strategic Initiative: Faculty and staff development			
2.1.2 Development Objective: To strengthen strategies for technical and administrative staff development			
Specific Objective		**Activity**	**Status**
2.1.2.1	1	Enhance the skill and competency of technicians, administrative and other staff to deliver better services to the students	■
2.1.2.2	1	Conduct personality development programs to address motivation for time and material efficiency and friendliness towards faculty and students	■

2.2 Strategic Initiative: Work environment			
Developmental Objective 2.2.1 : To create an environment in which all the faculty and staff work towards institutional goals and are valued for their efforts and contribution			
Specific Objective		**Activity**	**Status**
2.2.1.1	1	Conduct pedagogical trainings to all faculty by internal and external experts	■
	2	Conduct faculty induction program to provide pedagogical training to all newly recruited faculty	■
	3	Conduct subject/domain specific training programs for faculty	■
2.2.1.2	1	Provide training in leadership skills to selected faculty	■
	2	Create opportunities for faculty to lead department and institutional activities	■
2.2.1.3	1	Set the terms for career growth of faculty and staff	■
	2	Conduct formative and summative students' feedback on faculty performance	■
	3	Conduct faculty performance appraisal by HoD and senior faculty member of the department	■
	4	Conduct deans, department heads and centre heads performance appraisal by the principal	■
	5	Conduct head of the institute's performance appraisal by the GC	■

2.2 Strategic Initiative: Work environment			
Development Objective 2.2.2 : To establish a system to address employee grievances			
Specific Objective		**Activity**	**Status**
2.2.2.1	1	Establish employee grievances redress cell	■
2.2.2.2	1	Develop guidelines to address issues related to female employee	■

Goal-3: Post Graduate Programs and Researches

To create a supportive environment for strengthening postgraduate programs and research activities, raising the status of institute from a good teaching institute to an excellent teaching and research institute.

3.1 Strategic Initiative: Strengthening post-graduate education

Developmental Objective 3.1.1 : To strengthen existing and offer new post-graduate programmes

Specific Objective		Activity	Status
3.1.1.1	1	Attracting good students for PG programs in engineering by awarding teaching assistantship	🟩
	2	Design and update curriculum to meet the needs of industry and research	🟨
	3	Provide and update equipment and learning resources	🟩
3.1.1.2	1	Review and identify PG programs in engineering which have industry demand.	🟩
	2	Start new PG programs in engineering in phases which have industry demand	
3.1.1.3	1	Allocate teaching and assessment work of UG programs under teaching assistantship	
	2	Include research elements in PG projects	
	3	Encourage and evaluate the projects on original contribution	🟩

3.1 Strategic Initiative: Strengthening post

Development Objective 3.1.2 : To collaborate with institutes of higher learning and industries

Specific Objective		Activity	Status
3.1.2.1	1	Participation of industry in academic bodies	🟩
	2	Establish new labs in collaboration with industry	🟨
	3	Joint M.Tech and PhD programs	🟥
	4	Undertake collaborative projects from Industry	🟨
	5	Make visits to industry and institutions of higher learning as a part of curriculum	🟩
	6	Encourage co-guideship for projects from industry and institutes of higher learning	🟨
	7	Invite reputed industry personal for guest lectures	🟨
	8	Invite reputed Professors / Scientists from institutes of higher learning for guest lectures	🟨
3.1.2.2	1	Identify the training needs of the faculty members in emerging areas	🟩
	2	Depute the faculty for training in emerging areas	🟩

3.2 Strategic Initiative: Enhancing research and consultancy

Development Objective 3.2.1 : To improve facilities for research activities

Specific Objective		Activity	Status
3.2.1.1	1	Improve the facilities and resources in the areas of strength	🟨
	2	Seek sponsored research grants using the present strength	🟨
	3	Enroll more number of Doctoral students	🟨
	4	Attract good students for PhD program in engineering by providing research assistantship	🟨
	5	Provide incentives to the staff for guiding doctoral degree in engineering	🟨
	6	Encourage the collaborative research work with institutes of higher learning	🟨
	7	Provide financial assistance for conducting literature survey and small projects	🟨
	8	Extend financial assistance for publishing results	🟨

3.2.1.2	1	Identify the potential emerging areas of research	
	2	Collaborate with institutions of higher learning and industry to strengthen the capacity in the new areas	
	3	Obtain research centers status for the new areas from the University	
	4	Provide research grants to carry out the research work	
	5	Increase the infrastructure	
3.2.1.3	1	Establish focused research groups and research clusters	
	2	Seek grants to establish the centers of excellence	
	3	Provide guidance by experts to researchers in emerging areas	
	4	Provide guidance to the researchers about different financial assistances available to carry out research	
	5	Encourage the industry driven research activities	

3.2 Strategic Initiative: Enhancing research and consultancy

Development Objective 3.2.2 : To orient and support faculty towards consultancy activities

Specific Objective		Activity	Status
3.2.2.1	1	Establishment of multi-disciplinary Consultancy Cell at the institutional level	
	2	Communicating capabilities and facilities for consultancy / testing to industry and governmental agencies	
	3	Formalizing incentive policy for faculty and staff for undertaking consultancy projects	
3.2.2.2	1	Development of indigenous technologies	
	2	Patenting of research products	
	3	Commercialization of R&D output	

Goal-4: Support Systems and Services

To provide effective and efficient support systems and services, that meet the needs of academic programs, faculty and student body.

4.1 Strategic Initiative: State-of-the –art infrastructure for teaching and learning

4.1.1 Development Objective: To develop, build and maintain modern well equipped physical infrastructure

Specific Objective		Activity	Status
4.1.1.1	1	Update class rooms with instructional smart-media technology and access to internet	
4.1.1.2	1	Develop an ambient and environment friendly inclusive campus	

4.1 Strategic Initiative: State-of-the –art infrastructure for teaching and learning

4.1.2 Development Objective: To develop and strengthen well equipped and maintained state-of-the-art laboratories meeting curricula and research needs

Specific Objective		Activity	Status
4.1.2.1	1	Update and maintain laboratories to meet curricular needs	
4.1.2.2	1	Strengthen laboratories in selected thrust areas to initiate research activities	
4.1.2.3	1	Create laboratories facilities to achieve the status of centre of excellence in selected	

4.2 Strategic Initiative: Library and information technology

4.2.1 Development Objective: *To provide a library with rich collection of references material, a system that works effectively to enhance learning, teaching and research*

Specific Objective		Activity	Status
4.2.1.1	1	Strengthen library with adequate number of text books, reference books and technical journals	
4.2.1.2	1	Strengthen digital library with increased journal subscription and e-books	

4.2 Strategic Initiative: Library and information technology

4.2.2 Development Objective: *To develop infrastructure to effectively use information technology for enhancing the learning and for sharing of information across the institute and stake holders*

Specific Objective		Activity	Status
4.2.2.1	1	Expand and upgrade campus wide information technology infrastructure to support the instructional, research and learning activities of faculty, staff and students	
4.2.2.2	1	Leverage information technology to network with all the stake holders	

Major Events

Mr. Ratan Tata Inaugurates new Facility in the Campus

Jan -29th 2013, a great day in the history of our college, Chairman Emeritus of Tata Sons, Mr. Ratan Tata inaugurated the new building of 'School of Mechanical Sciences' and 'School of Management Studies & Research'. The new state-of the-art facility is built at a cost of over Rs. 14 Crores.

During his address to the students, Mr. Tata urged the students to find solutions to the problems of the country. "You are among those who have had good education and some of you might probably become leaders of the country. You have the added responsibility of providing a solution to problems around you and adding to the prosperity of the country," he said.

The programme was attended by Infosys Chairman Emeritus Mr. N. R. Narayana Murty, Smt. Sudha Murty Chairman Infosys Foundation, and Dr. Raghunath Mashelkar, former Director General of CSIR and KLE Society Chairman Dr. Prabhakar Kore.

Foundation stone laying for BVB-CTIE

Bharat Ratna awardee Dr. C.N.R. Rao layed the foundation stone for the new building of ' Center for Technology and Innovation (CTIE)' on 15th February 2014. The new facilty that is being built with donations from the alumni of the college will strengthen the efforts of the college growing the entrepreneurial ecosystem in the region.

During the inaugural function, Prof. Rao stressed the need of technological innovations and said that the country should utilize its youth power as it had the ability to become a world leader in technology innovation.

Prof. M. I Savadatti, former Vice- Chancellor Mangalore University, Dr. B. G. Mulimani, former Vice-chancellor Gulbarga University, Dr. Prabhakar Kore, Chairman KLE Society and office bearers of alumni association were present on the occasion.

International Conference on Transformations in Engineering Education (ICTIEE – Hubli 2014)

BVBCET pioneered an international conference in Engineering Education and hosted it as first International Conference on Transformations in Engineering Education (ICTIEE – 2014) in association with Indo US Collaboration for Engineering Education (IUCEE). The conference was designed and steered by eminent academicians including Dr. R. Natarajan, former Chairman of AICTE, Dr. Krishna Vedula, Dean, UMASS LOWELL and Executive Director of IUCEE and Dr. Hans Hoyer of IFEES. The conference earned the international status through the collaborations with International Federation for Engineering Education Societies (IFEES), Global Engineering Deans Council (GEDC) and American Society for Engineering Education (ASEE) and was able to attract participation from leadership of Engineering Education all over the world raising the total number of conference registrations to 415.

The Conference was sponsored by Technical Education Quality Improvement Program (TEQIP), National Program on Technology Enhanced Learning (NPTEL), National Instruments, Quanser and other industries.

The deliberations of ICTIEE – 2014 included six workshops on relevant themes by leaders in Engineering Education and Industry attracting 232 registrations, three Keynotes, seven Plenary Sessions, three Panel Discussions, Paper Presentations (52 oral and 39 poster) and Product Exhibitions.

The keynote address during the inauguration was by Dr. R. Natarajan. Dr. Michael Milligan, Executive Director of ABET, Dr.Hans Hoyer of IFEES, Dr. Stephanie Farrell of Rowan University, USA representing ASEE were present on stage along with Dr. Ashok Shettar and Dr. Krishna Vedula (both Co-Chairs of ICTIEE – 2014). The inaugural session was presided over by Dr. Prabhakar Kore, Chairman of KLE Society.

An MoU was signed between IGIP, IUCEE and BVBCET for training the faculty members on Engineering Pedagogy. Dr.Michael Auer signed this MoU for IGIP, Austria.

The conference opened avenues of possible collaboration with Virginia Tech USA for reforms in freshman Engineering curriculum.

Student accolades

Project of the Year Award
Mechanical Engineering Category.
KSCST (Karnataka State Council for Science &Technology).

Small scale chickpea harvesting Machine

IP
Mohammed Tauseef
Saraswati Rajpurohit, Prashant Salimath, Rohan Argekar
Guide : Prof. Sanjay Kulkarni

Project of the Year Award
Information Technology Category.
KSCST (Karnataka State Council for Science &Technology).

Controlling Air Conditioner (Temperature & Airflow) using Wireless Sensor Networks

ISE
Vineetkumar Patil, Karthik S K
Maheshwari M. Kittur
Suraj M. Halakatti
Guide: Dr. Meena S M

Project of the Year Award
Mechanical Engineering Category.

KSCST (Karnataka State Council for Science &Technology).

Exoskeleton for Human Performance Augmentation

Mechanical
Arun Bhat, Anil KaKhandki, Ashifali Nadaf, Nikhil Sherigar
Guide:
Prof. Mantesh Choukimath

Project of the Year Award
Civil Engineering Category.
KSCST (Karnataka State Council for Science &Technology).

Applications of Geopolymer in building materials & retrofitting

Civil
Basavaraj M. Malagimani
Santosh C. Satali
Suresh B. Masanagi, Kavita S
Guide: Dr. M V Chitawadagi

ACM-International conference SIGGRAPH held in Canada.

Only paper selected from Educational Institutes of India for the prestigious conference

3D Object Categorization using Metric Tensor and Christoffel Symbols

ECE
Sheryas Joshi, AltafGanihar
Guide: Dr. Uma K M

Cadence-National Level VLSI Design contest- 2nd Prize

Design of low drop-out, high PSRR LDO for RF Applications

ECE
Sripriya S, VaradaKanchi
Priya Vasanad
Guides:
Mrs. Sujata Kotabagi, Sumit Bhat, Abhijeet

Motorola Scholar Award 2013-14

Handifriend-Leading a Helping limb to People suffering from Reduced Mobility

ECE
B K Saroja

Best Action Plan Award
9th Global Student Forum 2013 held in Cartagena, Colombia

Engineering seeds of peace

ECE
Pranav Revankar

Impress IT State level competition - 2nd Prize
Govt of Karnataka, Dept of IT, BT

Gecko-Bot: A Wall Climbing Robot for cleaning App"

IT
Amit Kumar Gupta
Soumya Totar, Anusha Bhat
Avishek Gosh
Guide: Mr Ajit Samasgikar

Financials

K. L. E. Society's B. V. Bhoomaraddi College of Engg. and Tech., Hubli
Consolidated revenue income and expenditure statement for the year 2013-2014

INCOME	AMOUNT (Rs.)	REVENUE EXPENDITURES	AMOUNT (Rs.)
Grants	78,512,407.00	Salary to staff	263,668,106.00
Fees	286,488,863.00	Establishment Expenses	59,974,304.26
Specific Fees	56,906,043.00	Departmental Current Expenses	8,564,489.44
Interest on Bank Accounts	7,298,841.34	Expenses against Specific Fees	50,228,428.00
Rent	234,491.00	Repairs & Maintenance	5,748,794.00
Miscalleneous Receipts	2,212,283.00		
AICTE and Other Grant	3,184,200.00	Revenue Exp (Teqip Grant)	21,617,150.00
Teqip Grant	20,000,000.00		
Total	454,837,128.34	Total	409,801,271.70
		Revenue Expenditures Total	409,801,271.70
Revenue Surplus			45,035,856.64
GRAND TOTAL	454,837,128.34	GRAND TOTAL	454,837,128.34

K. L. E. Society's B. V. Bhoomaraddi College of Engg. and Tech.,Hubli
Consolidated income and expenditure statement for the year 2013-2014
(Includes TEQIP grants and Capital expenditure)

INCOME	AMOUNT (Rs.)	REVENUE EXPENDITURES	AMOUNT (Rs.)	CAPITAL EXPENDITURES	A M O U N T (Rs.)
Grants	78,512,407.00	Salary to staff	263,668,106.00	Building	18,117,352.00
Fees	286,488,863.00	Establishment Expenses	59,974,304.26	Equipments	17,158,576.60
Specific Fees	56,906,043.00	Departmental Current Expenses	8,564,489.44	Computers	5,188,934.00
Interest on Bank Accounts	7,298,841.34	Expenses against Specific Fees	50,228,428.00	Furniture's & Fixtures	4,383,189.00
Rent	234,491.00	Repairs & Maintenance	5,748,794.00	Library Books	502,262.00
Miscalleneous Receipts	2,212,283.00	Depreciation	42,426,823.36	H.T.Installation	1,491,232.00
AICTE and Other Grant	3,184,200.00	Revenue Exp (Teqip Grant)	21,617,150.00	Books & LR Software (Teqip Grant)	2,118,387.00
Teqip Grant	20,000,000.00			Equipments (Teqip Grant)	22,236,516.00
Total	454,837,128.34	Total	452,228,095.06	Total	71,196,448.60
		Revenue Expenditures Total	452,228,095.06		
To Deficit (Excess of Expenditure over Income)	68,587,415.32				
GRAND TOTAL	523,424,543.66	GRAND TOTAL	523,424,543.66		

Community Radio Station

KLE Dhwani BVB 90.4 fm

In line with our vision of serving the community in the region, the college started an FM Community Radio Statio. Through its programs, the radio station reaches out to the people of Hubli and Dharwad.

The radio station has taken up the cause of social service by airing community initiatives with due participation of all sections of society. It is firmly believed that KLE Dhwani would play a crucial role in putting Hubli on the development map of Karnataka.

KLE Dhwani BVB 90.4 fm community radio station brings to its listeners a host of benefits. We offer a wide range of programmes which target senior citizens, young turks, children, women, men, unemployed youth, home makers, roadside vendors, part-timers, professionals, & middle-aged men. KLE Dhwani BVB 90.4 fm is available on air for 8 hours from Monday to Sunday.

Alumni Association -Events

"BVB- GLOBAL ALUMNI MEET-13" in Bangalore

Alumni association of the college organized Global alumni Meet on 14th July, 2013 in JN Tata Auditorium in Bengaluru. Over 500 alumni participated in the event and generously announced the donations of Rs.70 lakhs for the 'Center for Technology Innovation and Entrepreneurship (CTIE)'.

Dr. Prabhakar Kore, Chairman, KLE Society, Belgaum with Smt. Sudha Murthy, Hon President of Alumni Association (Chairperson, Infosys Foundation), Sri. Murgesh Nirani, Former Minister, Government of Karnataka, and Prof. H. U. Talawar, Director of Technical Education shared the dais.

Dr. Ashok Shettar, Principal BVBCET presented the vision of the college to play a generative role in the economic development of the region by setting up 'Centre for Technology Innovation and entrepreneurship (CTIE)'.

Smt. Sudha Murty, Chairperson, Infosys Foundation, in her speech showcased the need of alumni contributions in some form to meet the obligations one has towards the alma mater.

Report on activities of Alumni Association was presented by Prof. T. Veeramahantesh Swamy, Secretary Alumni Association. Mr. M V Karmari, President, BVB Alumni Association Hubli welcomed the gathering, while Mr. Ram Kerur delivered vote of thanks.

CTIE Building under construction

BVB International Alumni Meet 2013 in PUNE

Alumni Association jointly with Pune Chapter has successfully organized "BVB International Alumni Meet 2013" in College of Engineering, Pune on 22nd December, 2013. The event was attended by nearly 250 BVBians from Pune, Mumbai and other parts of India and also from USA.

This event has been effectively driven by the Pune Chapter of our Association which was formed only in February, 2012 under the leadership and guidance of Dr. Anil Sahasrabudhe (Convenor), Mr. Anant Kembhavi(President), Mr. Satish (Vice President) and Mr. Dileep Miskin (Secretary) of Pune chapter.

Principal Dr. Ashok Shettar presented the "Transformations of BVBCET" in the recent years and the futre plans.

Dr.Prabhakar Kore Chairman KLE Society presided over the function and Prof. H.K. Abhyankar the most eminent personality in technical education and Vice President of B R Agarwal Charitable Trust delivered the keynote adress.

Prof. T. V. Mahantesh Swamy Secretary, briefed the activities of Association while Dr. Anil Sahasrabudhe, Director, College of Engineering, Pune and our alumnus presented a talk on how Industry and Institute can move closer to each other and create better Engineers of tomorrow. All alumni with rich experience in different industries along with Prof. B. L. Desai, Vice Principal and other heads of Departments and senior Professors from BVB deliberated on the preparation for the Institute to gear up the Industry demand in 2020. They assured their whole hearted support to bridge the gaps between Industry and Institute wherever necessary and actively participate in these relations proposed.

BVB Executive Leadership Team

Dr. Ashok Shettar
Principal

Prof. B. L. Desai
Vice-Principal

Deans

Dr. P. G. Tewari
Dean - Academic Affairs

Dr. B. B. Kotturshettar
Dean - Planning & Development

Dr. Uma Mudenagudi
Dean - Research & Development

Prof. S. B. Kurubar
Dean - Examinations

Dr. Anil Nandi
Controller of Examinations

Dr. Sanjay Kotabagi
Dean - Student Welfare

Center Heads

Prof. Nitin Kulkarni
Director, CTIE

Prof. Gopal Joshi
Director, CEER

Dr. Satyadhyan Chickerur
Coordinator, CIAP

Prof. C. D. Kerure
Placement Officer

Prof. Parikshit Hegde
Head, Infocell

Dr. M. R. Patil
Head, C & M Cell

Heads of Departments

Dr. Anil Badiger
Automobile

Prof. Gururaj Joshi
Architecture

Prof. A. C. Giriyapur
Automation & Robotics

Prof. L. R. Patil
Bio-technology

Dr. S. S. Quadri
Civil

Prof. K. R. Biradar
Computer Science

Dr. A. B. Raju
Electrical & Electronics

Dr. Uma Mudenagudi
Electronics & Communication

Dr. B. B. Kotturshettar
Industrial Production

Dr. Meena M
Information Science

Dr. Nalini Iyer
Instrumentation

Dr. P. G. Tewari
Mechanical

Prof. S. V. Seeri
Master of Computer Applications

Dr. S. V. Patil
Master of Business Administration

Dr. S. B. Kapatkar
Physics

Dr. B. S. Shettar
Chemistry

Dr. G. B. Marali
Mathematics

Dr. Sanjay Kotabagi
Humanities

Prof. T. V. M. Swamy
First Year

Campus Snapshots

Our Parent Organization:

Kranataka Lingayat Education Society (KLE Society)

Initiatives by private organizations and dedicated individuals have played a critical role in the growth of higher education in India. In 1916, a dedicated group of individuals enabled a dream. Their vision was to create a strong education base in the neglected areas of North Karnataka and Maharashtra. This resulted in establishment of KLE Society on 13th November 1916 at Belgaum. This society was started by seven dedicated teachers and three generous patrons. Their mission was to provide education, basically to the children of the farming community who constitute a significant majority in Karnataka. With the strong support by philanthropists and intellectuals of the area, the KLE society started to grow, and today, it has become an important entity in the educational scenario of the country.

Apart from establishing educational institutions, the KLE Society has earned the distinction in the field of health care and other community services. It has entered into collaboration with universities abroad in USA, UK & Malaysia. Through its 244 institutions, KLE Society is rendering services in the areas of:

- Health Care and Medicine
- Engineering and Technology
- Management Studies
- Agriculture
- Arts, Science and Commerce
- Teachers training
- Primary and secondary education
- Law

With a visionary leadership of Chairman Dr. Prabhakar Kore, and members of Board of Management, the society's institutions serve more than 100,000 students. Over 10,000 dedicated faculty and staff work together to meet the high standards set by the management.

KLE Society's

B. V. Bhoomaraddi College of Engineering and Technology
Vidyanagar, Hubli- 580 031, Karnataka- India
Tel. : +91- 836- 2374150, 2378123, Fax : +91- 836- 2374985, Email : infodesk@bvb.edu, website : www.bvb.edu