KLE Society's

B. V. Bhoomaraddi College of Engineering & Technology

ANNUAL REPORT

2015-16

www.bvb.edu

Our Parent Organization:

Karnataka 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 254 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 1,25,000 students. Over 16,000 dedicated faculty and staff work together to meet the high standards set by the management.

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Foreword

We are proud to present the annual report of K. L. E Society's B. V. Bhoomaraddi College of Engineering & Technology, Hubballi, for the year 2015-16. 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. Prakash G. Tewari
Principal

Dr. Prabhakar Kore
Chairman, BOG

Introduction and Our Organization

Creating Value
Leveraging Knowledge

The KLE society in its efforts to continue to serve the cause of education, has established 'KLE Technological University, Hubballi' by upgrading one of it's prestigious institutions 'B. V. Bhoomaraddi College of Engineering and Technology, Hubballi' to the status of University, through the Act enacted by the Karnataka State Legislature, 'KLE Technological University, Act 2012'.

Accordingly, the established KLE Technological University started functioning from the academic year 2015-16. The University status provides a greater opportunity to create a learning experience that is flexible and responsive to the demands of emerging competitive industrial and economic environment.

We strongly believe that KLE Technological University will play an important role in the socio-economic development of the region through entrepreneurship and research activities.

Dr. Prabhakar Kore, a visionary leader, spearheading a phenomenal transformation brought about by KLE society in the field of education and healthcare, has taken over as Chancellor of the 'KLE Technological University, Hubballi'. The University has the privilege of having eminent personalities like Prof. R. Natarajan, former Chairman AICTE and former Director of IIT Madras and Mrs. Sudha Murty, Chairman Infosys foundation, on the Board of Governors. With their able guidance, the University aspires to grow as a world-class institute. Dr. Ashok Shettar, has taken over as the first Vice- Chancellor of the University.

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.

Student Enrollment

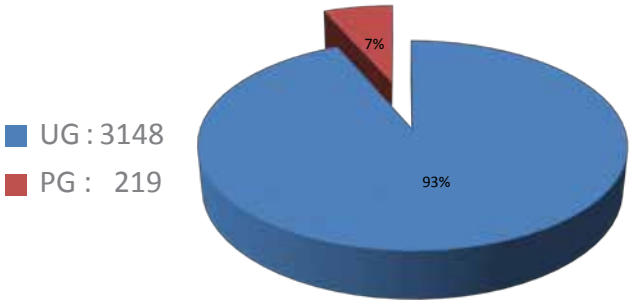
B. V. Bhoomaraddi College of Engineering and Technology, Hubballi has been elevated to the status of University, through the Act enacted by the Karnataka State Legislature, 'KLE Technological University, Act 2012', which has started functioning from the academic year 2015-16.

Total Student Enrollment

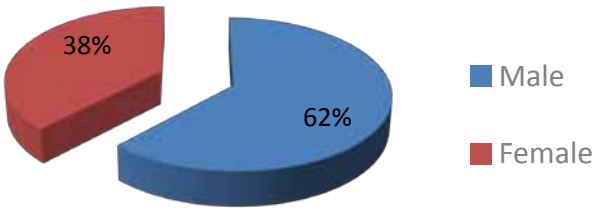
IInd Year to IVth Year Enrollment

	Male	Female
UG	1961	1187
PG	130	89
Total	2091	1276
Total Enrollment	**3367**	

Student Enrollment 2015 -16



Student Gender 2015 -16



Undergraduate Programs

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

Postgraduate Programs

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

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

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.

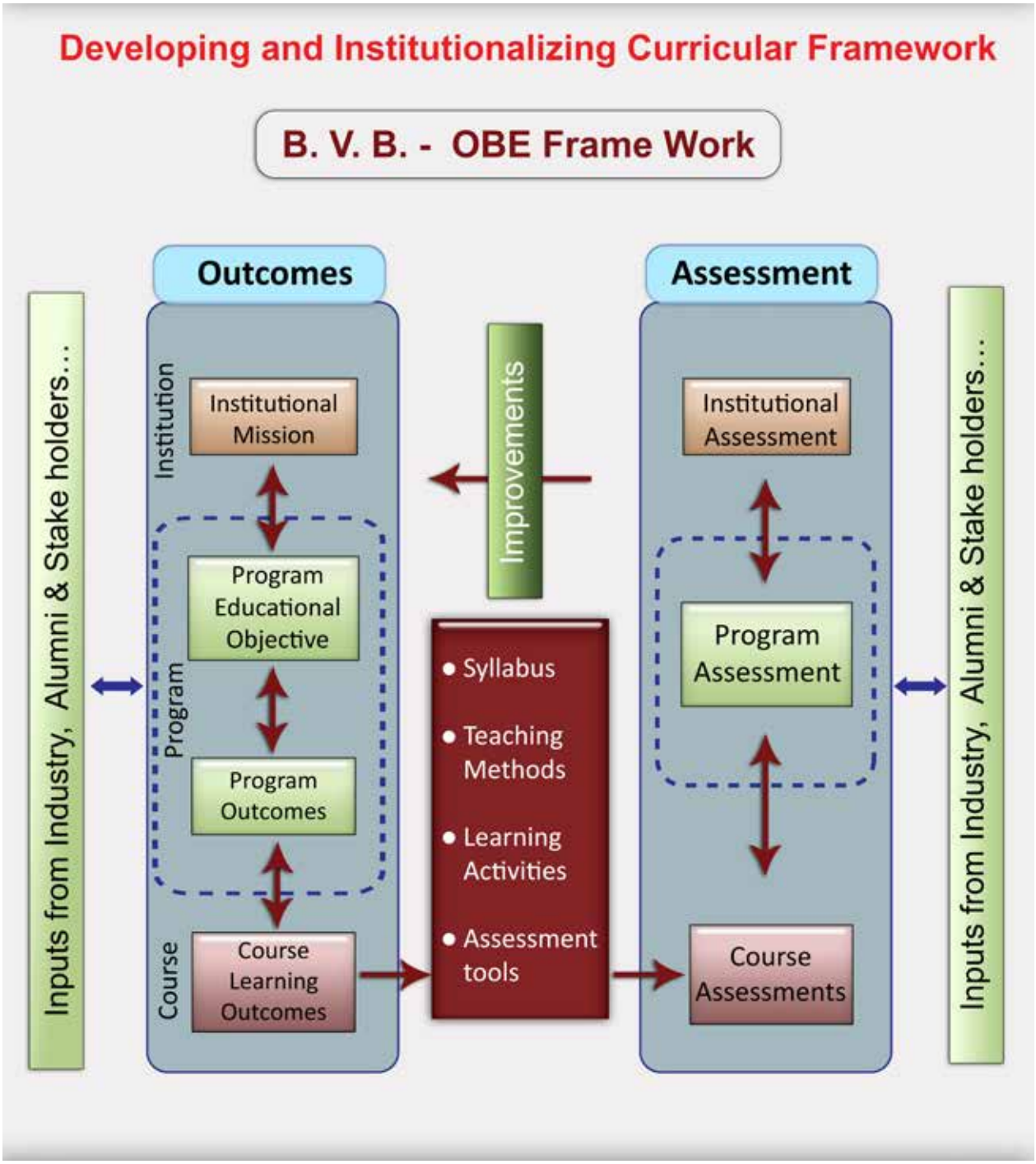
The initiatives undertaken to enhance the quality of education and student performance are presented under following three tenets of academic quality

- 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.

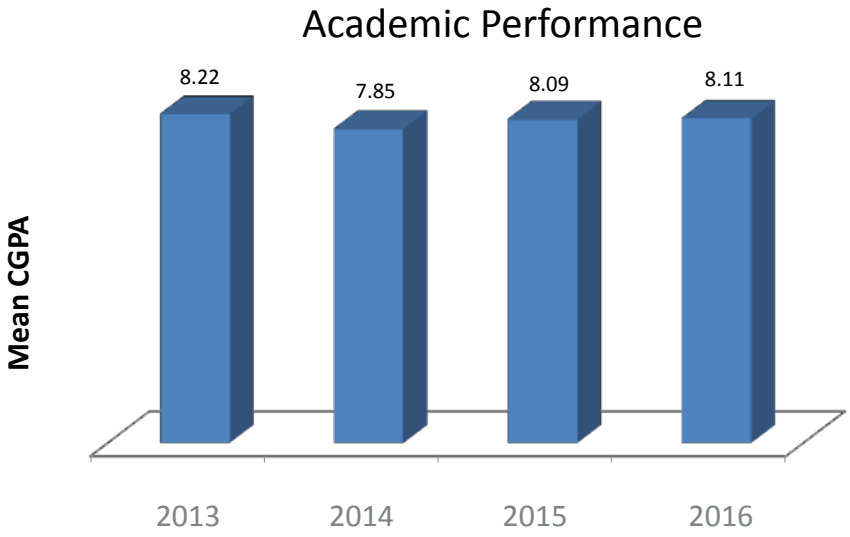
A methodology to map the outcomes through curriculum and assessment of attainment of outcomes is established by the college. For each course, a set of Course Learning Outcomes (CLOs) were defined and mapped to the POs. A method for assessing individual CLOs was developed. Overall success in attainment 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.

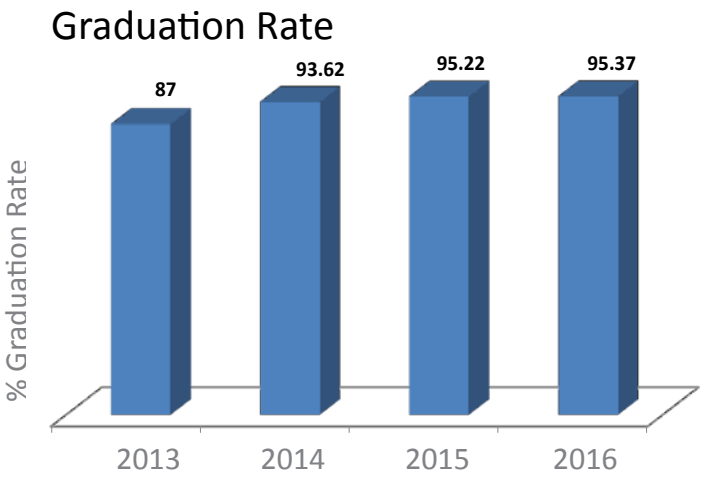


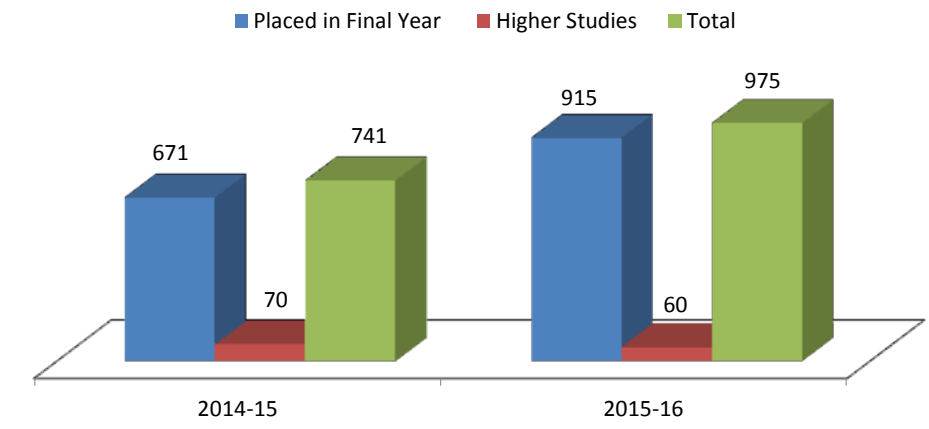
Student Achievements

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.







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.

Research centers

BVBCET has 13 research centers affiliated to VTU with 56 doctoral faculty guiding 159 registered doctoral students. Awarded Doctoral and MS candidates from these research centers are 28 and 2 respectively. The following table presents details about the research-centers.

Table-1: Details of registered and awarded candidates at 13 research centers

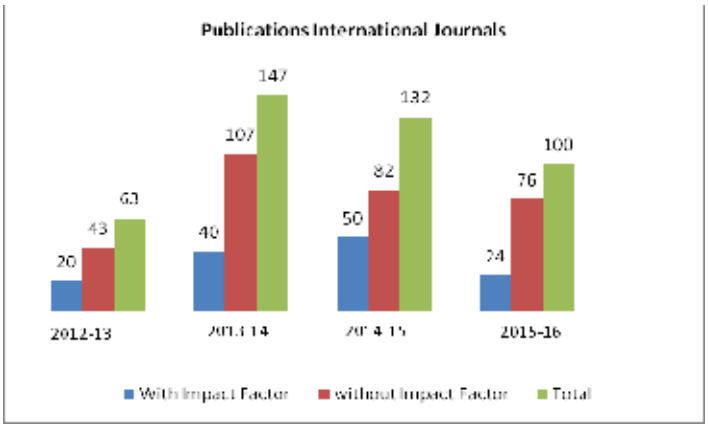
Sl. No.	Department	No. of Faculty with PhD	No. of PhD / MSc registered	No. of PhD / MSc Submitted	No. Degree PhD/ MSc awarded
1	Automobile	2	2	00	00
2	Biotechnology	2	7	00	00
3	Civil	10	20	00	03
4	Computer Science	7	26	00	02
5	Electrical & Electronics	2	6	00	01
6	Electronics & Communication	7	37	00	04+1
7	Instrumentation Technology	1	12	03	00
8	Industrial Production	5	6	01	03
9	Mechanical	5	24	03	10+1
10	Physics	3	9	00	03
11	Chemistry	5	1	00	00
12	Mathematics	6	5	00	02
13	Master of Business Administration	1	4	00	00
	Total	56	159	07	28+2

Summary of publications

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

Table-3: Summary of papers published during 2013-14, 2014-15 & 2015-16

Year	Int Journal		National Journal	International Conference	National Conference	Total	Impact factor
	Impact Factor (IF)	Without Impact Factor (IF)					
2013-14	40	107	07	154	36	344	Av. IF=1.510 Maximum=4.357
2014-15	50	82	16	120	58	326	Av. IF=1.84 Maximum=5.510
2015-16	24	76	10	141	20	271	Av. IF=1.01 Maximum=5.46
Total	**114**	**265**	**33**	**415**	**114**	**941**	



Summary of external funded projects

Research grants received: 2008-2016

Number of research projects : 16

Number of modernization projects : 05

Total Amount : 175.65L+46.9L = 222.55 L

Funding agencies : DST, NRB, AICTE, VTU & VGST

Summary of external funded projects

Research grants received: 2012-2016

SI.NO	Year	Number of projects	Amount sanctioned	Funding Agency
1	2012-2013	01	20.0 L	VGST
2	2013-2014	05	81.64 L	AICTE, DRDO, DST,VGST
3	2014-2015	03	14.0 L	UAS,VGST
4	2015-16	02	23.31 L	UAS, Continental Ltd Bangalore
	TOTAL	11	138.95 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 learning's 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, 18 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 total REU students from 2011-15 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 (Completed)	46	48	26	2014-15 (Completed)	4
2015-16 (Completed)	67	54	31	2015-16 (Completed	6

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.

ESDM Cluster

Focus areas of this cluster are:

1. Internet of Things
2. Agriculture
3. Industrial Automation

Outcomes:

- Total project proposals sent in 2015-16: 4
- Number of products in progress: 1
- Number of Industry and Institute collaborations: 2



Centre for Material Science

Focus areas of this cluster are:

1. Composites for Structural, automotive and Energy applications

a. Nano-composites for structural applications

b. Nano-composites for tribological/automotive applications

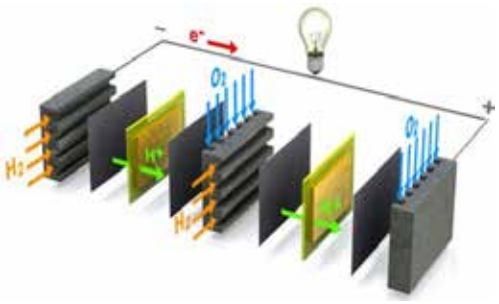
c. Machining applications

d. Pre-cast slab panel cement composites

2. Biosynthesis of Nano particles for Gas sensing, biological applications

a. Multi gas sensors

b. Agricultural applications



3. Membranes for fuel cell and Pervaporation applications

a. Fuel Cell Membranes

b. Pervapouration Membranes

c. Gas membranes

4. Bio-plastic production

a. Bioplastic material

b. Environmental applications

5. Biochemical Sensors using III-nitride nanostructures

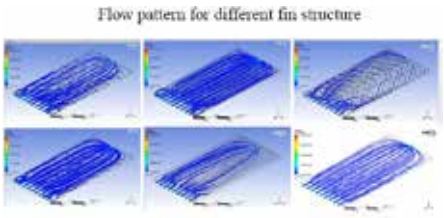
Outcomes:

- Total Publications in 2014-16: 20
- Total patents in process+ applied in 2014-16: 07 (as on date)
- Total project proposals sent in 2014-16: 14
- Total fund received in 2014-16: Rs.70 Lakhs (External)
- Number of products in progress:02
- Number of Industry and Institute collaborations: 01

ENERGY CLUSTER

Focus areas of this cluster are:

- Development of solar wind hybrid systems
- Development of solar multi-crop dryer
- Development of Biomass fuelled cook stoves



Outcomes:

- Total Publications in 2015-16 : 20
- Total patents in process+ applied in 2015-16 : 01
- Total project proposals sent in 2015-16 : 04
- Total fund received in 2015-16 : Rs.6.00L (in progress)
- Number of product development (in progress) : 03
- Number of Industry and Institute collaborations : 04

Entrepreneurship

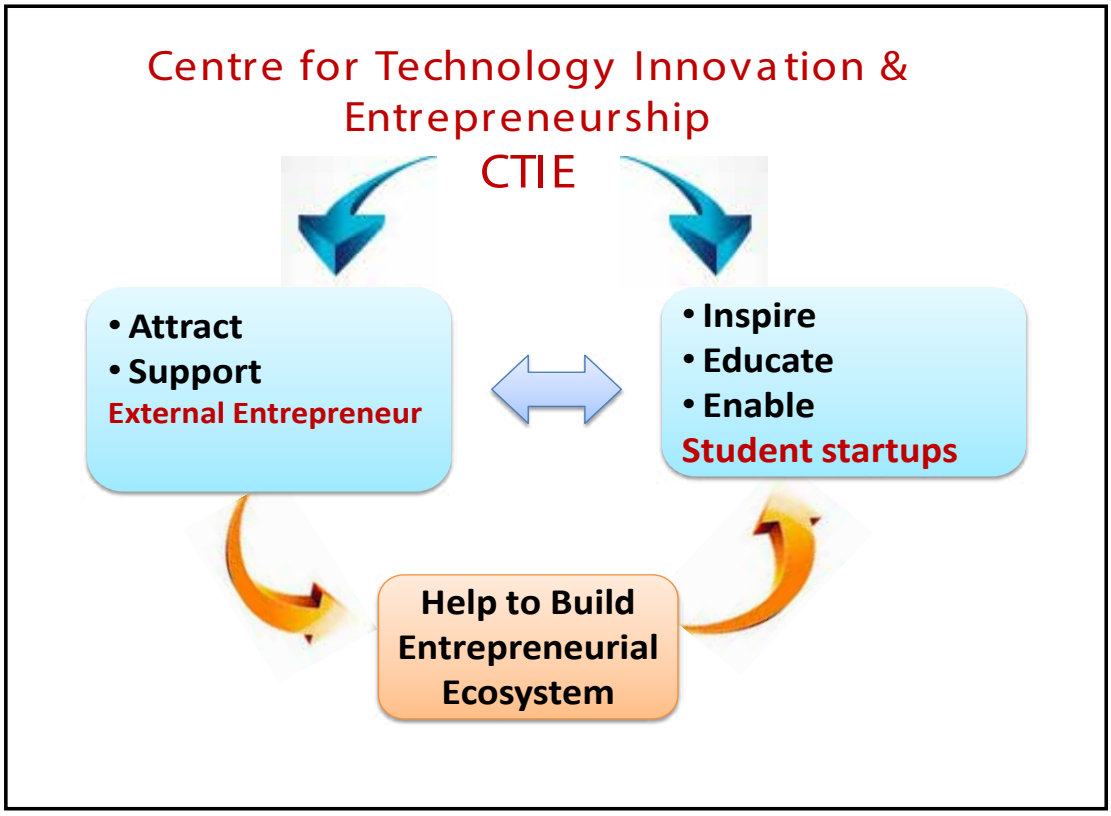
Centre for Technology Innovation and Entrepreneurship (CTIE):

Entrepreneurship is the key driver for development and job creation in any nation. Higher the entrepreneurship orientation of people, more can be innovative solutions, improved quality of life and better economic development of its citizens. Centre for Technology Innovation and Entrepreneurship -CTIE at KLE Tech aims to build this culture of startups at the University. Using a seven step framework to build technology ventures, KLE Tech-CTIE boasts having 38 companies at its University campus and is growing.

- Develop entrepreneurial thinking and liking in the mind of students
- Excite students to take on socially relevant challenges and help build solutions
- Develop ability to build business around tech. solutions
- Engage entrepreneurially aligned people to come together to be a part of the business ecosystem

CTIE Strategy:

To help build a technology entrepreneurship ecosystem, CTIE followed a two pronged approach. The first is to encourage external entrepreneurs with a good business plan and cultural fit to start their business on University campus. This enabled quick ramping up of companies with commercial interest that served as a beacon to engage students in a variety of collaborative activities. Alumni of BVB responded to this call effectively and many businesses made CTIE as their home. Simple and no strings- attached policies of CTIE helped to attract serial entrepreneurs and young engineers to build their ventures.The



second path focused on building the pipeline of eligible students who are open enough to experience career of an entrepreneur. A good mix of credit based and non-credit activities were undertaken as a part of this approach.
The entrepreneurship interventions designed at BVB focused mainly on, Building entrepreneurship culture on campus Opportunity identification and technology solutions Commercialization strategies As a result of such blended approach to entrepreneurship, CTIE has following to claim.

- 38 technology companies on campus
- 25% of these are student/fresh graduate start-ups
- Over 18,000 sq. ft of incubation space given away
- Over 9000 Sqft Techpark / Accelerated
- Over 230 plus jobs created

Noteworthy CTIE Start-up successes:

Kooki Consumer Electronics

A CTIE incubated company is now valued at over Rs. 3.5 Crores.

Navya Biological

Selected to be one of the 35 start-ups from India, as a part of the Nasscom, TiE, IIM-A hosted First India-U.S. Startup Konnect in the Silicon Valley -with Indian Prime Minister Narendra Modi on September 27, 2015, to highlight the strengths of Indian Start-up ecosystem.

LabInApp

Received venture funding of Rs. 1 Crore from Unitus Seed Fund for its product in the field of education.

CTIE Student Interventions:

PUPA

It is an accelerated product development and marketing experience for students from all branches and years. PUPA started in 2013 and in its current version, it has over 800 students participate from all across the region. Student teams are given seed capital to make a product which they mandatorily have to sell to realize profit. This is a time bound and focused event which has led to many product innovations.

MIB - (Make in BVB)

a student body under CTIE, dedicated to student development and entrepreneurial initiatives in campus. MIB has been instrumental in holding events like, PUPA, Ideation Camp, E-Summit and many more value added programs.

Ideation Camps:

Intel Youth Enterprise program is a globally accepted workshop format for developing and scaling ideas. The program consists of an ideas framework that helps participants, through the stages of ideation, validation, development and lastly, testing in a real world environment. All through the workshop, there are Buddy sessions, energizers, peer-coaching, mentoring and many such fun and exciting activities. Student teams make B-plans and pitch them to judge panel from Industries to win cash prizes.

Butterfly:

It is a business plan competition open for all students of BVB. The pitch contest is held with external entrepreneurs as judges. Selected business plans are qualified to take part in CTIE capstone project track for one year. During this one year, students are expected to conduct literature survey, and competitive analysis of the proposed solution. Eventually they make the proof of concept ready for field demonstration. Capstone projects go through intense reviews 3 times during the year by external entrepreneurs as judges. Students work on building value proposition, through their novel products and learn the challenges associated with it. It teaches how important it is to keep the customer at the centre while making business decisions. It is an experiential learning experience where in they get to interact with mentors and technology guides to solve the problem undertaken.

Product Design and Realization- (PDR) - Summer term course

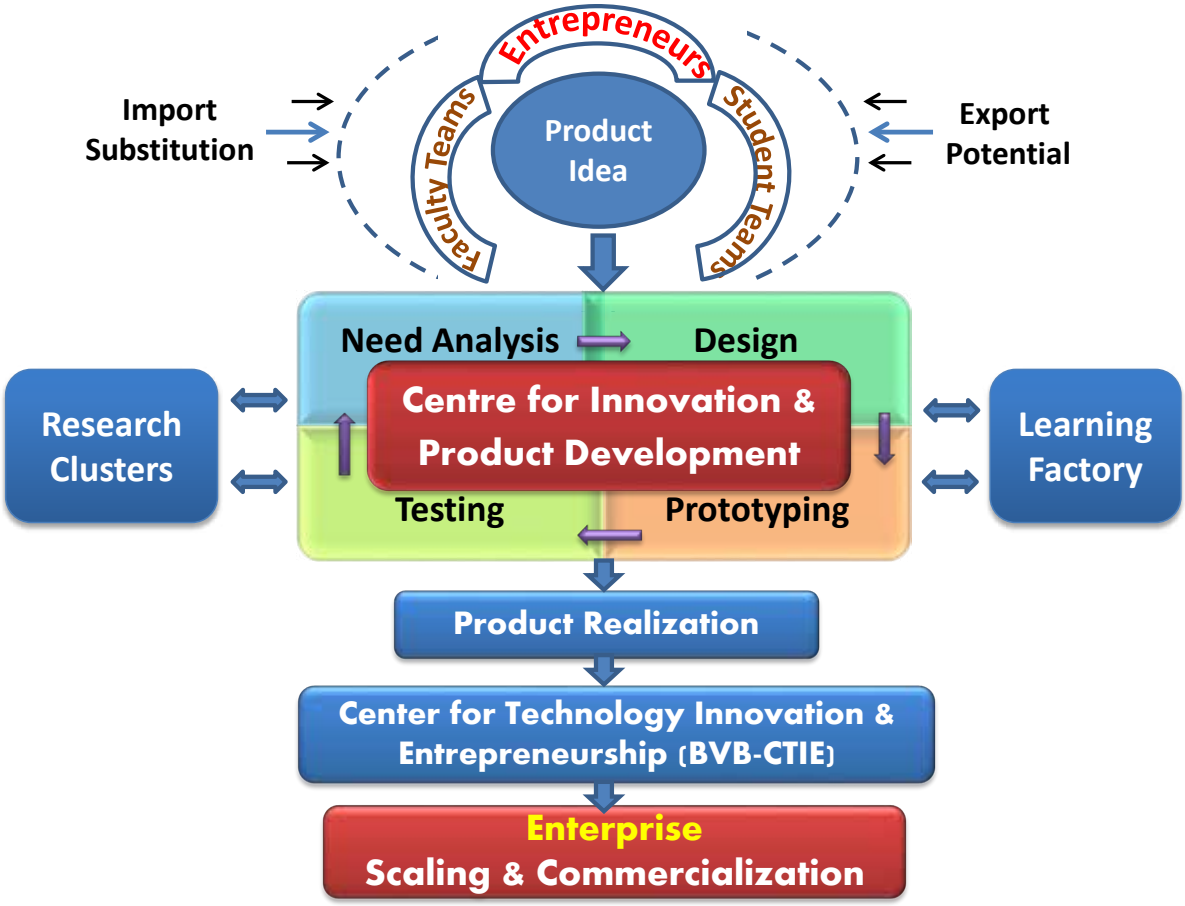
Product design and building is a complex process requiring cross-functional teams from design, manufacturing, financing, marketing and many more. PDR as head start course provides an opportunity for the students to experience the complete product design and realization process, working in teams comprising of students from different disciplines of engineering. PDR essentially intends to achieve two things – first is, to collaborate with engineers from other disciplines to achieve a common goal, second is, to understand the design/ product hand off stages between various development phases.

Global Innovation and Entrepreneurship:

This is a multi-disciplinary and multi-cultural team activity, where in students from University of Massachusetts and BVB Hubli come together to build a business model for a chosen technology solution. The two week residential course emphasizes on literature survey, global business standards and regulations, competition evaluation, financial and market viability of the chosen solution. Students develop a business model and pitch it to an external jury panel. Teams comprises of students from engineering, business, economics, health sciences and nursing and other disciplines. Since 2014 the emphasis of this program is on a multi-nation experience, wherein students from Japan, China, Thailand and Guyana, US and India have taken part. Till date over 200 students from BVB have graduated out and remarkably many have started their ventures at BVB.

Over arching philosophy of CIPD:

KLE Tech Centre for Innovation & Product Development [BVB - CIPD]



Learning Factory is a place:

Where students, technicians and faculty interact

Where theory and knowledge are put into practice

Built around a flexible structure

Learning Factory Facilities:

Machines at glance in Learning Factory

Universal Tool & Cutter Grinding Machine

Universal Cylindrical Grinding Machine

Laser Cutting Machine

FARO 3D Imager

CUBEPRO 3D Printers
(Duo & Trio)

Vertical Screw Type
Injection Molding Machine

Plasma Cutting Machine

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:

Active Directory Services:

Has been offered in Collaboration with Microsoft IGTSC for the students of CSE, ISE and EC branches.

Computer Networks : Certification program was conducted in association with Juniper Networks

Parallel Computing and Applied Parallel Computing:

Has been offered In Collaboration with NVIDIA for UG and PG courses of CSE and ISE.

Fundamentals of IT:

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

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.

Manufacturing technology:

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

Guest Lectures from Industries:

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

Internship at various industries

Sami Labs	4
Biocon Analytical Division	5
True Tech	2
Kaiga	1
Biozeen, Bangalore	4
Prajna Biosciences	2
Cipla, Goa	1
Prosetta, Mysore	1
Stelis Biopharma Pvt Ltd	1
Informatica	2
Infosys	15
Microsoft	7
Robert Bosch	15
Hiwi(GDV) ,BVB Campus,Hubli	2
INSZoom	3
Sankalp	4
CrimsonLogic	1

Mock interviews by alumni from the industries:

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

PG Projects in Industries:

150 PG students have done their project in 42 Industries

MoU's Signed with

1. Reliance Jio Infocomm Limited
2. World Alumni Network Pvt. Ltd.
3. MMRFIC Technologies
4. Juniper Networks

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:

International Conference on Enabling 'Make in India':

Challenges & Opportunities for Engineering Education

University organized its first international conference on 'Enabling Make in India: Challenges and Opportunities for Engineering Education'.It was organized during January 6-8, 2016. Honourable Minister for Defence Sri Manohar Parrikar inaugurated the conference. More than 70 top colleges of the country and more than 15 expert speakers from four countries (USA, France, South Korea and Singapore) participated in the conference. Total numbers of delegates participated in the conference is 425.

The aim of the Conference was to bring about greater understanding of the issue involved in Make in India, sharing of world-wide best practices and experiences in this area and evolve a broad framework for the transformative process that enables the initiative.
The conference was inaugurated by Sri.Manohar Parikar, Hon. Defence Minister, Government of India.

The themes of the conference are:-

1. Creating Transformative Educational Experience
2. Building Strong Design and Product Realization Skills
3. Facilitating Realistic Production Environment in the Campus
4. Enabling Entrepreneurial Ecosystem in the Campus
5. Manufacturing Reinvented – Convergence of Technologies
6. Skilling India: Industry and Government Perspectives

Case Studies

Countries across the world have undertaken initiatives similar to 'Make in India', to create jobs and boost their economies. Several efforts have been made by the academic institutions and Universities to contribute to these initiatives in their respective countries. The case studies to be presented in the conference will focus on, sharing of successful practices / models that are evolved by the academic institutions across the world to positively impact similar movements like 'Make in India'

1	Prof. Devdas Shetty Dean, School of Engineering and Applied Science, Professor of Mechanical Engineering, University of the District of Columbia Washington, DC 20008, USA	Case Study on designing and creating smart products through "maker movement"
2	Prof. Lueny Morell , MS, PE President, Lueny Morell& Associates &Founder & Director of InnovaHiEd	The Learning Factory "Working Together to Develop Talent for Manufacturing"
3	Dr. S K Ramesh Ph.D Dean, College of Engineering and Computer Science & Professor of Electrical and Computer Engineering, California State University, Northridge, CA 91330-8295	CSU Northridge Initiatives in Advanced Manufacturing, Entrepreneurship and Innovation
4	Prof. Wonjong Joo Professor Wonjong Kim Accreditation of Engineering Education in Korea (ABEEK)	Development and Practices of Innovation Ecosystem in Engineering Education: Role Plays of Universities, Industry, and Government

Engineering Education Publications and participation in ICTIEE – 2016

In the third International Conference on Transformations in Engineering Education (ICTIEE'16), which was co-organized by IUCEE (Indo-US Collaboration for Engineering Education) and College of Engineering, Pune, during January 8-12, 2016, 99 authors from our institution presented 49 papers.

KLE Tech - IUCEE Webinar course on Outcome Based Education

The understanding and experience of practicing outcome based education in our Institution is being shared with the community of engineering educators in the form of workshops and courses. KLE Tech has started offering an online certificate course on Outcome Based Education in collaboration with Indo Universal Collaboration for Engineering Education. Dr.Ashok Shettar, Dr.Prakash Tewari and Dr.Gopalkrishna Joshi are the resource persons for this course.

1st IUCEE Gurukuls Summit

KLE Tech is emerging as a leader and a role model in Engineering Education. And many Institutions in the country are showing interest in learning from our practices. IUCEE is spreading this through formation of cluster of Gurukuls, which is a group of Engineering Institutions with demonstrated capabilities and aspirations to raise their level of performance.

The first IUCEE Gurukuls Summit-2016 was organised at KLE Technological University, Hubballi on 28-29th July, 2016. The IUCEE Gurukuls for Learning and Outcomes Based Education (iGLOBE) program addresses this vital need for institutions to develop self-reliance towards achieving excellence in engineering education. IUCEE will facilitate these Gurukuls (i.e. Centers for Excellence) which will be modeled as a blend of the Centers for Engineering Education and Centers for Teaching and Learning around the world.

This summit witnessed about 65 participants from 20 Gurukuls belonging to different Engineering institutions across the country. The discussions of the two day workshop culminated by identifying the following prioritized themes for collaboration:-

A. Building Engineering Education Research Culture
B. Developing Institutional Strategic Plan
C. Building collaborations with Industry/external experts/institutions
D. Adopting Outcomes Based Education (OBE)
E. Innovating Curriculum (Content, Delivery, Assessment)
F. Preparing faculty leaders for future
G. Encouraging Entrepreneurship and Social Engagement
H. Attaining autonomous status
I. Updating Infrastructure

Faculty Conclave 2016

Faculty Conclave – the in-house annual event which provides a forum for the faculty members to showcase their innovative experiments and share their experiences was conducted on July 27-28, 2016 at KLE Tech., Hubballi. The sixth in the series – "Faculty Conclave 2016, saw a total of 40 papers authored by 111 faculty members. The papers belonged to the broad themes of Curriculum Innovation, Experiential Learning, Outcomes Assessment, Graduate Program Experiences and Pedagogies in Engineering Education.

Workshop on "Pedagogy Training for Engineering Educators"

A five days workshop on "Pedagogy Training for Engineering Educators" was organised and conducted at BVB College and Technology, Hubballi during July 18-22, 2016. This program was organised for faculty members of Engineering Colleges and Polytechnics and supported by State Project Facilitation Unit (SFFU), GoK, as part of TEQIP.

This workshop aimed at equipping faculty members with the knowledge and skills required to practice engineering education effectively. All twenty sessions were woven around the philosophy and practice of OBE.

Summary	
Number of participants	55
Number of participants from Polytechnic colleges	37
Number of participants from Engineering colleges	18
Number of colleges	14
Number of Polytechnic colleges	10
Number of Engineering Colleges	4

CAPITAL & IT

New infrastructure

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 Electronics is being undertaken.

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.

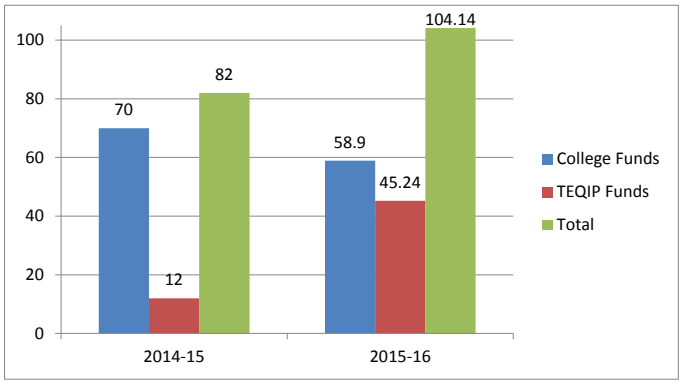
School of Electronics Engineering

Musical Fountain

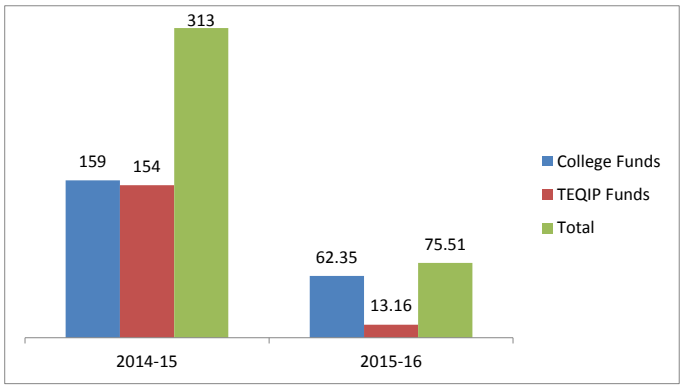
Laboratory Development

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



Computers



IT Platforms and Services

The University network is on OFC. 39 managed switches, 150 access points, UTM, AAA server are part of new network. Back bone capacity is 10 Gbps Internet speed is 225 Mbps

Current network can cater up to 25000 plus student and 5000 faculty with very effective bandwidth management, currently more than 30 servers are running, with modern audio and visual facilities, servers like NPTL video learning and moodle open source learning platform are part of new network.

The present status of KLE Tech Campus network

- Campus back bone is of OFC link with capacity of only 10 Gbps.
- L3 based core switch with 250 Gbps capacity
- CPE Based technology for telephone.
- Number of nodes in Campus is 2300 plus(desk tops)
- With 08 sub nets and internal LAN with different topologies
- Internet speed is 225 Mbps (service provider is BSNL and TATA)
- 150 wireless access points across campus, 76 access points covering entire hostels.
- Modern equipment like Cyber roam 750ing,AAA server, controller unit, NMS etc

Details of existing smart class facilities

- All classrooms are covered with visual equipments.(lcd, push pull screen)
- All laboratories are covered with visual equipment
- 5 conference halls and 2 auditoriums with audiovisual facilities
- 15 classrooms are equipped with lecture capturing systems.
- Video conference facilities at 2 conference halls.

Governance

Board of Governors

Chairman

Dr. Prabhakar B. Kore

Members of the Trust/Society/Management

Sri. S. 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 permanent invitees

Dr. Ashok Shettar

Prof. B. L. Desai

Member Secretary

Dr. P. G. Tewari

Student accolades

KLE Tech - BVB sweeps top prizes at BOSCH Inscribe 2015

BVB has won 2nd, 3rd & 4th Prizes at prestigious Bosch Inscribe-2015 Technical Idea Presentation Competition held yesterday (24th November) at Robert Bosch, Bangalore

KLE Tech - BVB wins "Idea Incubator" award at KPIT Sparkle-2016

KPIT Sparkle is annual national design and development innovation contest for engineering and science students across India organized by KPIT Technologies.

KLE Tech - BVB Wins "Ultra Golf Kart Championship (UGKC) – 2016"

BVB-KLE Tech. student team 'BVB Superstars', comprising of students from Department of Automobile, Automation & Robotics, Instrumentation and Electronics, and Electronics and Communication, Engineering have won the "Ultra Golf Kart Championship (UGKC) - 2016".

KLE Tech - BVB Wins National Championship in Hybrid Vehicle Challenge-2016

BVB was one among the top ten teams at BVB-KLE Tech. Student team 'R-Evolution Minds', comprising of students from Department of Automobile and Instrumentation Engineering under the aegis of 'BVB Motorsports Club' has won the prestigious National Championship in Hybrid Vehicle Challenge-2016.

KLE Tech - BVB shines in Internationals

KLE Tech - BVB student team "Racing Rebels", a group of interdisciplinary students from Department of Automobile, Mechanical, Civil and Computer Science Engineering under the aegis of "BVB Motorsports Club" have brought laurels to the institution by winning third place in an international level event, "International Series of Karting-2016" held at Lahari Resorts, Hyderabad from 8th to 11th March 2016.

KLE Tech - BVB Bagged Overall Championship in SRISHTI-2016

BVB College of Engineering and Technology, Hubli, won the "CHAMPIONSHIP TROPHY" at the 3 days State level Project Exhibition and Competition organized by Akhila Bharatiya Vidyarthi Parishad at CMR Institute of Technology (CMRIT), in Bangaluru.

KLE Tech-BVBCET Bags 4th Place on Debut

TEAM VEGADOOTH RACING from B.V. Bhoomaraddi College of Engineering & Technology participated in SAE India SUPRA competition and secured 4th position in their debut year among 124 teams at Buddh International Circuit, Greater Noida during 3rd to 9th July, 2016. An interdisciplinary team of 21 students from BVB Motorsports Club participated in SUPRA SAEINDIA 2016

Financials

K.L.E. Society's B.V. Bhoomaraddi College of Engg. & Tech., Hubli
Consolidated income and expenditure statement for the year 2015-2016
(Includes Teqip grants and Capital expenditures)

Income	Amount (Rs.)	Revenue Expenditures	Amounts (Rs.)	Capital Expenditures	Amount (Rs.)
Grants	879,70,719.00	Salary to staff	2912,04,296.00	Building	98,09,921.00
Fees	2263,06,995.00	Establishment Expenses	444,18,281.00	Equipments	58,90,910.00
Specific Fees	554,26,046.00	Departmental Current Expenses	146,20,514.00	Computers	62,35,687.00
Interest on Bank Accounts	91,53,499.00	Expenses against Specific Fees	386,55,105.00	Furniture & Fixtures	24,11,212.00
Rent	7,61,148.00	Repairs & Maintenance	109,24,955.00	Library Books	4,02,352.00
Miscalleneous Receipts	22,05,290.00	Depreciation	512,83,988.00	H.T. Installation	-
AICTE and Other Grant	-	Revenu Expenses (TEQIP Grant)	137,39,647.00	Books & LR Software (TEQIP Grant)	8,25,863.00
TEQIP Grant	200,00,000.00		-	Equipments (TEQIP Grant)	58,40,750.00
Total	**4018,23,697.00**	**Total**	**4648,46,786.00**	**Total**	**314,16,695.00**
		Revenue Expenditures Total	314,16,695.00		
To Deficit (Excess of Expenditure over Income	944,39,784.00				

Alumni Association -Events

Felicitation

Dr.Anil Sahasrabudhe, BVB alumnus from 1980 Mechanical and a Gold Medalist, has been felicitated BVBCET by Dr.Ashok Shettar, Shri Shankaranna Munavalli and Prof.Prakash G. Tewari on 21st May, 2016 for having assumed office as the Chairman of AICTE, New Delhi.. Shri.M.K. Patil and Prof.T. Veeramahantesh Swamy also shared the dais from BVB Alumni Association.

Annual General Body meeting

Annual General Body meeting for the year 2015-16 was held on the 24th December, 2016, wherein Nurture Merit @ BVBCET were given the financial assistance to the tune of Rs.5.2 lakhs for 26 students for their hostel needs. Incubation Centre along with Alumni office construction work has been in progress, where nearly Rs. 92 lakhs has been invested by BVB Alumni Association. Alumni after the AGM visited the construction of Incubation Centre on campus.

Get-together

BVB-Pune Alumni Team have arranged a family get-together on 26th January, 2016 at Dephe Wada, near Pune. Active participation from Mr.Dileep Miskin, Mr.Gururaj Joshi and Smt.Chetana Rao made this event possible.

BVB Executive Leadership Team

Dr. Ashok Shettar
Vice Chancellor
KLE Technological University

Prof. B. L. Desai
Registrar
KLE Technological University

Dr. P. G. Tewari
Principal

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

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. G H Joshi
Computer Science

Dr. A. B. Raju
Electrical & Electronics

Dr. Uma Mudenagudi
Electronics & Communication

Dr. V. N. Gaitonde
Industrial Production

Dr. Meena M
Information Science

Dr. Nalini Iyer
Instrumentation

Dr. B. B. Kottursheṭtar
Mechanical

Prof. P R Patil
Master of Computer Applications

Dr. S. V. Patil
Master of Business Administration

Dr. G. B. Marali
Mathematics

Dr. S. B. Kapatkar
Physics

Dr. V C Havanur
Chemistry

Dr. Sanjay Kotabagi
Humanities

Prof. T. V. M. Swamy
First Year

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

Campus Snapshots

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.

ISO 9001:2008
CERTIFIED

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