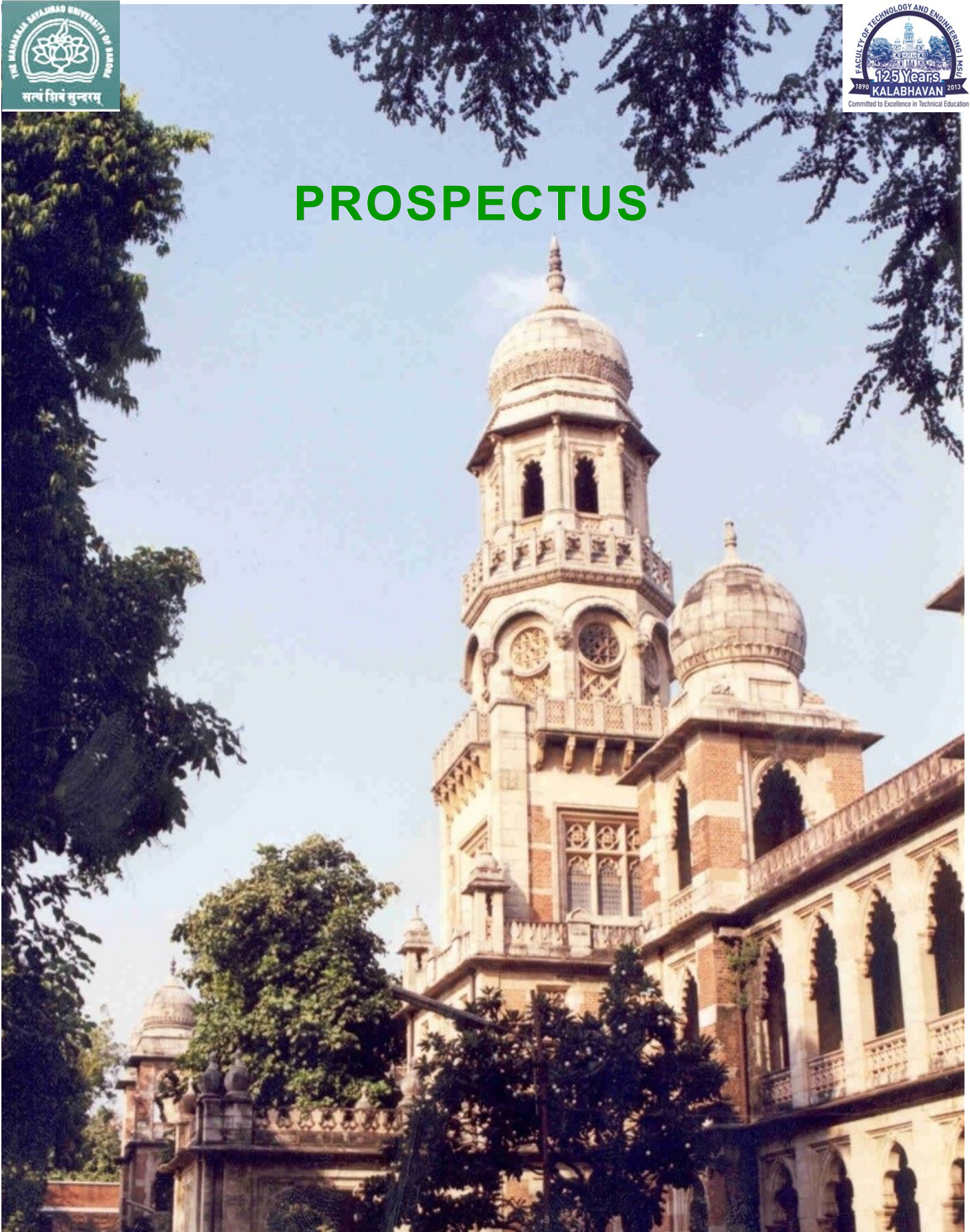




PROSPECTUS



**Faculty of Technology and Engineering
The Maharaja Sayajirao University of Baroda**



"The full-blown lotus growing out of the lake symbolises the emergence of the mind and its triumph over matter. The flame rising from the center of the lotus is the flame of the human knowledge, spreading light and learning for the coming generations. The motto inscribed below the lotus defines the purpose and existence of life which is love of beauty, goodness and intellectual curiosity."

महाराजा सयाजीराव विश्वविद्यालय गीत

अमे वडोदराना विद्यापीठनां सपनां सारवनारा
अमे ज्योत जलावी सृष्टि नवली सहसा सर्जनहारा.

अमे गगनकुसुम कर धरनारा
अमे मगन मगन थई फरनारा
अगनबाथ अमे भरनारा
अमे दैन्यतिमिरने हरनारा.

श्री सयाजी विद्यापीठना ज्ञानदीपने धरनारा
सत्यं शिवं सुन्दरम् नो मंत्र अनंतर भणनारा.

श्री सयाजीराव



Vision

To emerge as a Centre of Excellence in Technical Education, Training and Research.

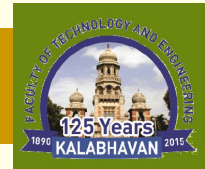


Mission

To develop it into a centre for technical education, which will be known for its contribution to the development of engineering leadership and corporate excellence through research, mid career executive education programs, consultancy and training in selected strategic areas. The guiding philosophy behind all the academic activities of the faculty is, therefore, to inculcate and regulate professionalism in engineering thought and practice, to help students, managers and organizations to lead to a better tomorrow.



From The Vice Chancellor's Desk



Prof. Parimal H. Vyas

VICE-CHANCELLOR



The Maharaja Sayajirao University of Baroda

Office : University Road, Fatehgunj, Vadodara-390 002, Gujarat, India.

From Vice Chancellor's Desk

Dear Students,

Greetings and Congratulations!

It gives me immense pleasure to welcome prospective students to the Maharaja Sayajirao University of Baroda and to the Faculty of Technology and Engineering! By choosing this institution you have put your career on the right path and your life in safe hands. Your passage through the next four years in the M.S. University of Baroda will open up new avenues for your success, growth and prosperity. The Faculty of Technology and Engineering, Kalabhavan, was established 126 years ago along with the foundation of this university. It is a proud moment for all of us that our university have been able to fruitful continuation of our journey for so many decades where our students and teachers alike have brought laurels to us. The Faculty of Technology & Engineering has nurtured professionals that cater to the needs of modern world by generating ideas and knowledge and also giving to the world professionals who can visualise and implement ideas.

I whole heartedly appreciate the constant endeavour of the teachers of all 14 Departments of the Faculty of Technology who have always keep up pace with the updated and modern technologies to impart quality education to our students. It is a matter of pride that the academic excellence and research output of this faculty had brought fame and repute to the University. I am happy to share with you that among the most productive research-driven Faculty that has given fresh substance glorify to this University. It has also provided ample opportunities for employability of our students. It has also opened new avenues of knowledge to explore. Apart from Departments, various Centres are also housed in this Faculty to promote research activities through industrial, national and international linkages.

We at the Maharaja Sayajirao University of Baroda are committed to faster creative and radical thinking. An intellectually stimulating atmosphere, value addition by training programs, emphasis on holistic development, all make Faculty of Technology & Engineering a unique place for professional education of high standards. The Faculty has received various grants from the Government as well as projects from industries which reflect its quality research. It regularly organizes three nationally recognised and acclaimed mega events for students like, the technical fest, *Footprints*, non-technical event, *Paramarsh* and discharges its social responsibility through, *Prerna*. Round the year, our students are engaged in several events and activities, academic and non-academic which ensure all round development and shaping of their personality in addition to their career.

I congratulate you and also express the immense pleasure for opting to be a part of this academic family, working with which you will further strengthen the core of the nation.

Wishing you a great success, wisdom and rewarding learning experience in this vibrant Faculty of the Maharaja Sayajirao University of Baroda.

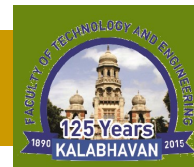
Warm Welcome to MSU.

(Prof. Parimal Vyas)

Vice Chancellor



From The Dean's Desk



FACULTY OF TECHNOLOGY & ENGINEERING
THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

Prof. S.S. Bhattacharya
Dean

Post Box Number: 51, Kalabhavan,
Vadodara – 390 001
+91-265-2434188
+91-265-2423898

E-mail: dean-techo@msubaroda.ac.in & deantecho@yahoo.in



Dear Students,

Welcome to Faculty of Technology & Engineering, The Maharaja Sayajirao University of Baroda, our Faculty is committed to excellence in technical education in Engineering & Technologies are instruments for advancement of human kind.

Faculty of Technology and Engineering (FTE) of The Maharaja Sayajirao University of Baroda, Vadodara was established in the year 1941 and is one of the prime institutes of higher studies in Technical education in western part of India. It was started as what was popularly known as the Kala Bhavan Technical Institute (KBTI) established in June 1890 by late His Highness the Maharaja Sayajirao Gaekwad III of Baroda state. Incidentally, year 2014 has been the year of celebration for the faculty as it has completed 125 years from the date of its inception. The Faculty has been a seat of technical education and advanced studies for more than twelve decades and has grown to such a level that today it is imparting technical education in almost all the branches of engineering to more than 3500 students every year, coming from various parts of the country through its well developed fifteen different departments.

We have close linkages with our past students through the Alumni Associations at department level. We are proud to have Late Shri Dada Saheb Phalke, Late Shri Amarsingh Chaudhary, Dr. Jaynarayan Vyas, Dr. S. S. Mantha, Shri Amit Shah, Dr. Vishal Sikka as some of our illustrious alumni.

We believe in overall development of our students. Besides studies, the students in this faculty are organizing and participating in extra-curricular activities like *Prerana*, *Paramarsh* and *Footprints* providing them an ideal platform to display their hidden talent and skills. Such opportunity is given to our students not only *on-campus* but *off-campus* as well. For instance, our students regularly participate at the Asia's biggest cultural festival 'Mood Indigo' organized by IIT, Mumbai every year.

Education and research are like two sides of a coin for any institute of higher learning. The students and teachers of our Faculty are actively engaged in research besides teaching and learning. The research scholars and the faculty members at FTE are getting research projects and funds for laboratory development from almost all the government funding agencies including UGC, AICTE, DST, MHRD, CSIR, DAE- BRNS, ONGC, GUJCOST, UNDP, USAID, etc leading to development of highly sophisticated research facilities in various laboratories of its departments. The faculty is bestowed with establishment of Centres of Excellence in the areas like Polymer Technology, Industrial mathematics, ANCHOR Institute for skilled manpower development in textiles and so on. We have a close interaction with the industries and R & D laboratories in and around Vadodara. The faculty is getting financial support from industries for research as well as laboratory development / modernization. The recently awarded 'Centre of Excellence in Industrial Automation' by Siemens India Ltd. is one of its kinds. On the other hand, various departments of the Faculty offer testing and consultancy services to industries on a regular basis using state of art facilities available on the campus.

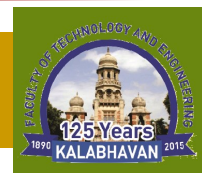
The compound effect of the academic and infrastructural growth of the Faculty over the years has resulted in publication of a large number of research papers in the journals of national & international repute and also in producing Ph.Ds in various branches of engineering and applied sciences.

I see a very bright future for the institute as well as our students in time to come and wish them a good luck in their future endeavor.

(Prof. S.S. Bhattacharya)
Dean



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The Maharaja Sayajirao University of Baroda



**MAHARAJA SAYAJIRAO GAEKWAD - III
(1863-1939)**

The M.S. University of Baroda is one of the oldest and largest Universities in India. It is attracting more than 35,000 students to its various faculties. Founded as Baroda College in 1879 by Maharaja Sayajirao Gaekwad – III as a college of Arts, the M.S. University came into existence in 1949 by combining all the independent then autonomous colleges in Baroda. Many brilliant scholars and renowned writers of the country have taught or graduated from this University. They included personalities like Shri Aurobindo, Shri Vinoba Bhave, Shri K.M. Munshi, Shri R.V. Desai, Shri I.G. Patel, Smt. Hansa Mehta, Shri Ambedkar, Shri Sam Pitroda and the Nobel laureate Dr. Ramakrishnan Venkatraman.

The University which started in 1949 with 8 faculties, two colleges and about 3500 students have grown tremendously over these years to 13 faculties (Arts, Commerce, Science, Education and Psychology, Law, Fine Arts, Performing Arts, Family & Community Sciences, Social Work, Management Studies, Journalism & Communication, Technology & Engineering), six colleges and a Polytechnic together having a total of 86 departments and a student population of more than 35,000. It is the only English medium University in the state of Gujarat, with a unitary and residential status.



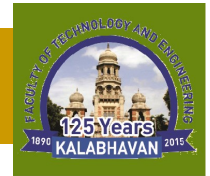
The Faculty of Technology & Engineering



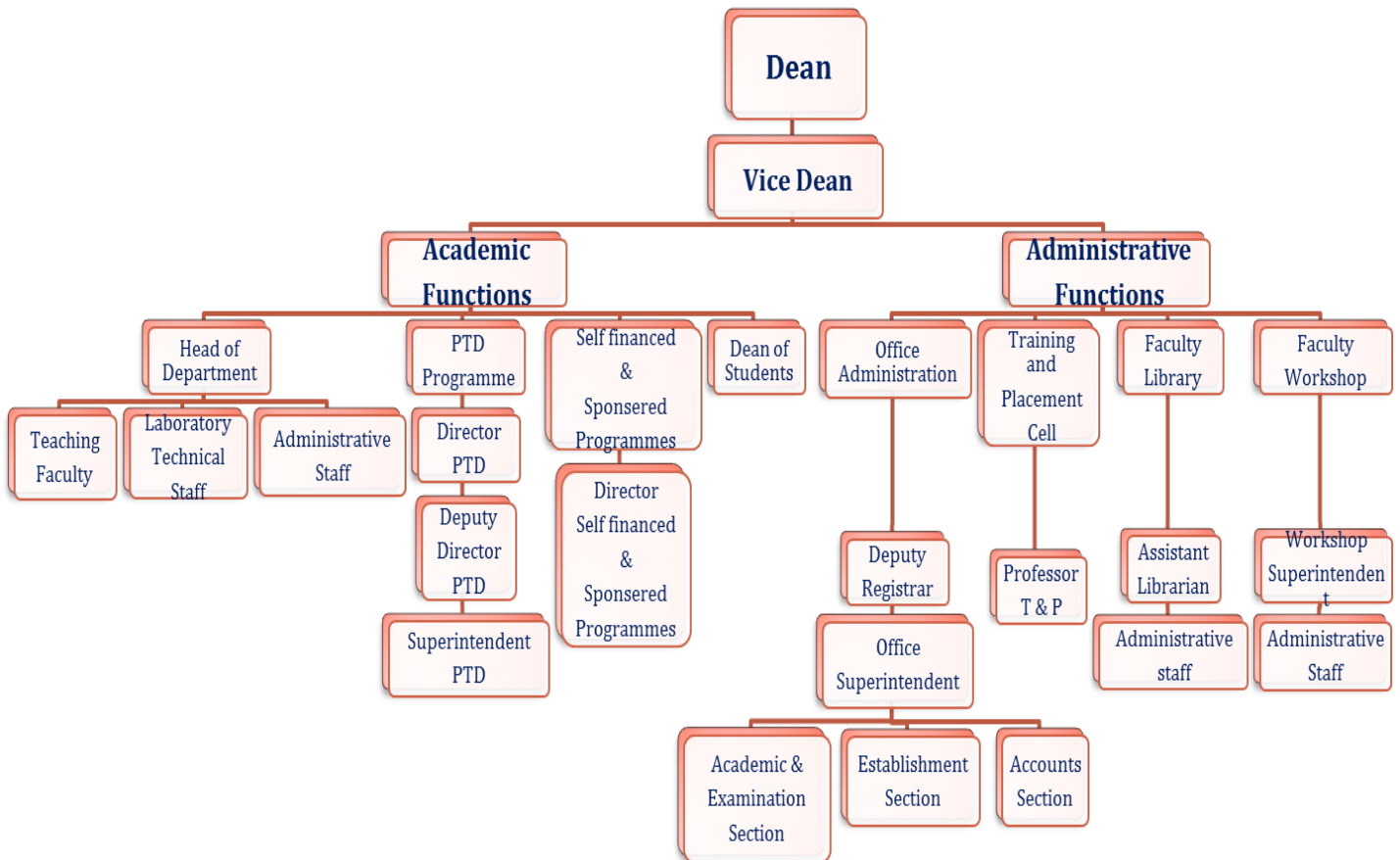
The Faculty of Technology and Engineering as it stands today formed along with the establishment of the Maharaja Sayajirao University in 1949 is an outgrowth of what was popularly known as the Kala Bhavan Technical Institute (KBTI) established in June 1890 by late His Highness the Maharaja Sayajirao Gaekwad III of Baroda state. In May 1990, it completed hundred years of glorious services for the cause of technical education.

The academic growth resulted in the creation of 15 departments, a Workshop, a Library and several buildings which were possible due to the financial support from various government organizations like UGC, MHRD, DST, AICTE and financial aid from UNDP, USAID, etc. and due to the dedicated efforts by the Institute, Deans and Teachers of the Institute.

The reputed Faculty members leave profound influence by demonstrating their expertise at the major national / international conferences, seminars and refresher courses that helps to shape the future trends in technical education. Our Alumni have performed excellently in higher education and on challenging jobs not only in India but abroad (particularly USA) also and have achieved key positions. Thus, it has taken more than a century dedicated efforts of a few pioneers and visionaries to raise the old Kala Bhavan to the stature of a mighty technical institute in the forefront of technical education in the service of the Nation.

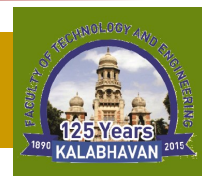


Organizational Chart





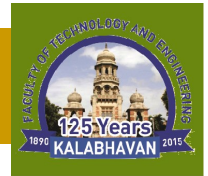
Office Bearers



Sr. No.	Designation/Department	Name	Qualification
1.	Dean	Prof. (Dr.) S.S.Bhattacharya	Ph.D
2.	Vice Dean	Prof. (Dr.) P.T.Deota	Ph.D
Head of Departments			
1.	Applied Chemistry	Prof. (Dr.) Pradeep T. Deota	Ph.D
2.	Applied Mathematics	Prof. (Dr.) D.C. Vakaskar	Ph.D
3.	Applied Mechanics and Structural Engineering (I/c)	Dr. Bimal A. Shah	Ph.D
4.	Applied Physics (Offg.)	Dr. B.S. Chakrabarty	Ph.D
5.	Architecture	Prof. (Dr.) Shishir R. Raval	Ph.D
6.	Chemical Engineering	Dr. Bina R. Sengupta	Ph.D
7.	Civil Engineering	Prof. (Dr.) H. M. Patel	Ph.D
8.	Computer Science & Engineering	Dr. Anjali G. Jivani	Ph.D
9.	Electrical Engineering (Offg.)	Prof. (Dr.) S. K. Joshi	Ph.D
10.	Mechanical Engineering (I/c)	Prof. (Dr.) D. S. Sharma	Ph.D
11.	Metallurgical & Materials Engineering	Prof. (Dr.) S. N. Soman	Ph.D
12.	Textile Chemistry	Prof. (Dr.) D. P. Chattopadhyay	Ph.D
13.	Textile Engineering	Dr. Milind V. Koranne	Ph.D
14.	Water Resource Engineering and Management Institute(Director)	Dr. Falguni Parekh	Ph.D
Centres of Excellence			
1.	Siemens Centre for Industrial Automation	Prof. (Dr.)S. S. Bhattacharya (Chairman) Mr. G. D. Karhadkar (Chief Cordinator)	
2.	Centre of Excellence in Polymers	Prof. (Dr.) Pradeep T. Deota (Cordinator)	
3.	Anchor Institute	Prof. (Dr.) S.S. Bhattacharya (Cordinator)	
4.	Centre for Industrial Mathematics	Prof. Dhanesh Patel (Director)	



Amenities at The University



Maharaja Sayajirao Union

The M.S.University Union is a statutory corporate body of the students and teachers to promote academics, social interaction, sports and cultural interests amongst the students of The M. S. University of Baroda, Vadodara. The M. S. University union has badminton hall and table tennis hall, cricket ground, skating ring, swimming pool, etc..



Halls of Residence

The Maharaja Sayajirao University of Baroda has one of the largest Hostel Campuses in the western India with 12 Boys Hostels and 4 Girls Hostels spread over an area of approximately 100 acres. The capacity of boys hostels is about 2500 students whereas that of girls hostels is around 1300 students. The students staying in hostels are provided with facilities like bed, a cupboard, a table and a chair in the room individually. Hostels are also equipped with a dining hall, a common room, and audio visual facilities, etc.





Amenities at The University



Health Center

The University Health Centre is a primary health centre, which provides basic medical and para-medical services of consultative, investigative, preventive and curative type to the staff and students of the University. The associated services offered are domiciliary facilities, observation beds, S.W.D. and physiotherapy services etc.



Library

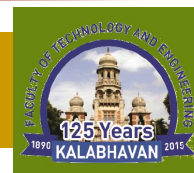
Smt. Hansa Mehta Library, the main library of the University is one of the largest well equipped library systems in India. It has over five lakhs documents, 287 subscribed journals and more than 26,000 e-journals. The Library also contains an E-Resource Centre offering electronic resources, and access to various journal storage data-bases. Apart from Central Library, The Faculty of Technology and Engineering has Prof. T. K. Gajjar Library having more than one lakh books, nineteen thousand bound periodicals, two thousand dissertation and thesis.



Committed to Excellence in Technical Education



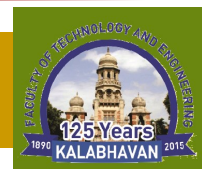
Undergraduate and Postgraduate Programmes



PROGRAMMES	BRANCH	ADMISSION
Bachelor of Architecture	Architecture	Through ACPC
Bachelor of Engineering	Chemical	
	Civil	
	Civil (IWM)	
	Computer Science & Engineering	
	Electrical	
	Electronics	
	Mechanical	
	Metallurgical & Materials	
	Textile Engineering	
	Textile Technology	
	Textile Chemical Processing	
Computing (Higher Payment)		
Bachelor of Engineering (Part Time)	Civil	As per MSU 's Admission Procedure
	Electrical	
	Mechanical	
Masters in Computer Applications	Computer Applications	Through ACPC
Masters of Chemical Engg.	Petrochemical Engineering	
	Polymer Technology	
Masters of Civil Engg.	Fracture Mechanics	
	Geotechnical Engineering	
	Highway & Transportation Engineering	
	Hydraulic Structures	
	Irrigation & Water Management	
	Structural Engineering	
Masters of Electrical Engg.	Water Resources Engineering	
	Automatic Control & Robotics	
	Electrical Power Engineering	
	Industrial Electronics	
Masters of Environmental Engg.	Microprocessor System & Application	
	Environmental Engineering	



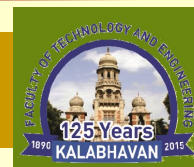
Undergraduate and Postgraduate Programmes (Contd.)



PROGRAMME	BRANCH	ADMISSION
Master of Mechanical Engg.	Jet Propulsion & Gas Turbine Plants	Through ACPC
	Production Engineering	
	Thermal Science	
Master of Metallurgical & Materials Engg.	Materials Technology	As per MSU 's Admission Procedure
	Industrial Metallurgy	
	Welding Technology	
Master of Textile Engg.	Man-Made Textile	Through ACPC
	Textile Chemical Processing	
	Textile Engineering	
Master of Science	Applied Chemistry	As per MSU 's Admission Procedure
Master of Science	Applied Mathematics, Industrial Mathematics	
Master of Science	Applied Physics	
Master of Science	Materials Science (Nanotechnology)	
Master of Science	Financial Mathematics	
Master of Urban and Regional Planning	Architecture	
Post Graduate Diploma	Analytical Techniques	
Post Graduate Diploma	Computer Applications	
Post Graduate Diploma	Corrosion Technology	
Post Graduate Diploma	Polymer Science and Technology	
Post Graduate Diploma	Solid State Electronics	
Post Graduate Diploma (Part Time)	Computer Applications	
Post B.Sc. Pre-Electronics Engg.	Pre-Electronics Engineering	
Post B.Sc. Bachelor of Engineering	Textile Chemical Processing	
Post B.Sc. Diploma (B.Sc.DTC)	Textile Chemistry	
Diploma (DTT)	Textile Technology	
Diploma (DTC)	Textile Chemistry	



Applied Chemistry Department



Introduction

The Applied Chemistry Department was established in the year 1975 to cater the needs of undergraduate teaching in Chemistry to the young engineering students. Subsequently the department expanded under leading luminaries like late Prof. J. S. Dave into a full fledged and independent department with its own location and laboratories. A full time two year postgraduate degree, M.Sc. in Applied Chemistry, was started. Teachers of the department have been actively engaged in teaching chemistry to Chemical Engineering, Metallurgical Engineering, Pharmacy and diploma students of Textile Chemistry and Textile Engineering apart from advanced chemistry to postgraduate students. Almost 90% students get placement in industries of repute; rest of them become either self entrepreneurs or opt for higher studies in India or abroad.

Major Laboratories and Equipments

The department has instruments like differential scanning calorimeter (DSC), polarizing microscope for liquid crystal study and a UV-VIS spectrophotometer, TGA, Digital Polarimeter, HPLC, microwave reactor. Apart from these the department also has a Sartorius balance and other analytical minor equipments like conductivity meter, pH meter, microwave oven, photochemical reactors, etc. to cater the need of post-graduate and research students. A separate computer room with internet connectivity is also functional.

Research and Sponsored projects

Department has been recognized for financial assistance by UGC, under DRS programme of about Rs. 40 Lacs (2010-15), Rs. 37 Lacs under DST-FIST Level I programme, more than Rs. 50 Lacs from various funding agencies like UGC, UGC-DAE, CSR, DRDO, GMDC, DST, etc. in the last five years and has successfully completed many research projects.

The department has been sanctioned to set up a Centre of Excellence in Polymers by Government of Gujarat with the generous grant of Rs. 5 crore. Department is in the process of procuring a few more major instruments under this grant (Rheometer, Transmission Electron Microscope (TEM)).

Courses:

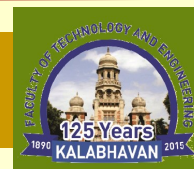
- Post-graduate course
M. Sc. (Applied Chemistry)
- P. G. Diploma
(Corrosion Technology , Analytical Techniques, Polymer Science and Technology)
- Ph. D

Major Thrust Areas:

Liquid Crystals, Metal incorporated Polymers, Pour Point Depressants, Natural Products & Drugs, Photochemistry, Catalysis, Inorganic Micro and Meso-porous Materials, Carbon Nanotubes, Fullerenes and Surfactants.



Applied Mathematics Department



Introduction

The department of Applied Mathematics was established in 1973 at Faculty of Technology & Engineering with the motto of providing application oriented mathematical teaching to Engineering students. The department teaches Applied Mathematics, Computational Science & Computer Applications related subjects to undergraduate students in all disciplines of Engineering. The department also teaches Applied Mathematics & Computational techniques, Operation Research and Statistical Methods to M.E. programs of various departments. Besides these department conducts post graduate courses in Applied Mathematics, Industrial Mathematics, Financial Mathematics, and Computer Applications. Department has carried out many collaborative industrial research projects and is a participating department in Industrial Mathematics Group (IMG) at IIT (Bombay).

Total 18 students have obtained Ph.D degree in Applied Mathematics. Currently 8 students have registered and are working for Ph.D and one post doctoral fellow with scholarship from NBHM is pursuing research.

Major Laboratories and Equipment

The department has three well equipped computer labs with latest gadgets like LCD projectors, smart board, internet connectivity with the following computers

- (i) Servers: IBM servers a.) Linux with Oracle b.) Linux
- (ii) 30 Intel Core i-7 state of the art machines.
- (iii) 40 Intel Pentium core-2 duo Machines.

Research and Sponsored projects

Various collaborative projects undertaken by the department are with R&D centre, Jyoti Ltd., ONGC, Asea Brown Boveri Ltd., Power Control Equipment Pvt. Ltd., PRL, Ahmedabad, PatwaKinariwala Enterprises, ISRO, Ahmedabad, PatwaKinariwala Electronics Ltd., Metal Power Analytical Ltd., Mumbai, Gujarat Gas CNG Filling Station, Gujarat Gas Company Ltd., Surat, Apollo Tyres Ltd.

Department has completed two MODROB and one Thrust Area Research Project from AICTE.

Courses:

Post-graduate courses

M. Sc. (Applied Mathematics, Industrial Mathematics)

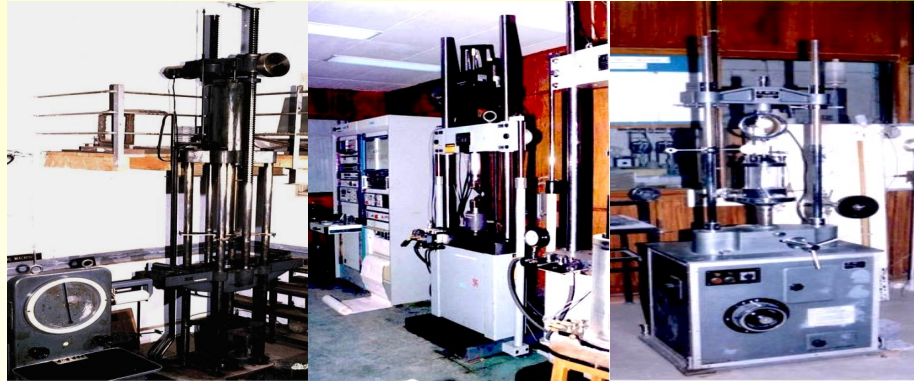
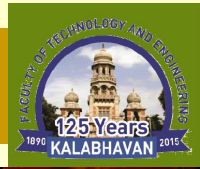
- M.Sc.(Financial Mathematics)
- P .G. Diploma Computer Applications (Regular & Part time)
- Ph. D

Major Thrust Areas:

Computational and Industrial Mathematics, Applied Fourier Analysis, Mathematical theory of Controls, Optimization, Wavelet Analysis & Applications, Neural Networks, Fuzzy systems, Image processing, Fluid dynamics, Tribology, Numerical solutions of PDE.



Applied Mechanics & Structural Engineering Department



Introduction

The Department of Applied Mechanics and Structural Engineering was established in 1949 with undergraduate course. Post-graduate courses started from 1962. The department teaches subjects of Applied Mechanics and Materials & Structures to under graduate students of almost all the disciplines of engineering. It also teaches subjects like Structural Analysis, Structural Design and Geotechnical Engineering to students of Civil Engineering, Water Resources Engineering, and Architecture. The growth of the department is largely due to its Post –graduate degree programs. On the path of its growth, 22 doctoral and about 500 Post-graduate candidates are produced by and now in addition to more than 600 research publications and 14 books from the date of establishment.

Major Laboratories and Equipment

The department has well equipped laboratories like Applied Mechanics, Theory of Structures, Soil Mechanics, Materials and Structures, CADD Center, AI Application Center, MTS System, Experimental Stress Analysis, Geotechnical Engineering, Soil Dynamics, Foundation Engineering, Grouting, Rock Mechanics, Fracture Mechanics etc. The department has number of major equipment like Material Test System (100kN); Universal Testing Machine (1000kN); Compression Testing Machine (200T); Loading Frame (40T); Vibration Analyzer; Motorized Load Frame for Triaxial Test; Universal Testing System for Geo- synthetics; Block Vibration Test Setup; Prototype Foundation Test Setup; Multimedia Projector and Computers (32). Computerized apparatus “Pin joined roof truss for measurement of forces in various members”, UK make.

Courses:

- Post-graduate courses
M.E.(Structural Engg., Geotechnical Engg. and Fracture Mechanics)
- Post-graduate course
M.Sc.(Tech.)
(Geotechnology)
- Post B. Sc. (Diploma)
Geotechnology
- Ph. D (Structural and Geotechnical Engg.)

Major Thrust Areas:

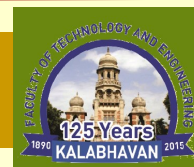
Computer Aided Design and Drafting, Soft Computing Tools, Earthquake Engineering, High Performance Concrete, Non Destructive Testing, Geotechnology, Rock Mechanics, Geosynthetics, Fracture Mechanics, Soil Structure Interaction, Ground improvement techniques.

Research and Sponsored projects

The department over these years has successfully completed many research projects sanctioned by the Government of India agencies like DST, UGC, AICTE, CSIR, and HRD. Also some of the projects are sanctioned from Government of Gujarat and local industries.



Applied Physics Department



Introduction

The postgraduate course in Applied Physics is one of its kind which is offered in very few universities across the country. The department comprises of various research groups working in the fields of condensed matter physics, applied optics and photonics, luminescence, theoretical physics, nano-crystalline alloys, laser diodes, fluorescent and display materials etc. They have made contributions in their respective fields through publications in internationally acclaimed Journals. The department has received major research funding from various Govt. of India funding agencies like UGC, DST, AICTE, DAE etc. Through these research projects, many new state of the art equipment have been procured.

Major Laboratories and Equipment

The department has very well equipped postgraduate laboratory. The experiments range from fundamental to applied side of the subjects. The experiments are constantly improved and evolved in view of the research and industrial requirements. We are the first in the country to introduce advanced experiments on digital holography and lateral shearing interferometry which are basis of many industrial nondestructive applications. Some of the experiments have got their simulation part being done on pc which enhances the understanding and application of the relevant subjects.

Research and Sponsored projects

The department of Applied Physics has been honoured with prestigious UGS-DRS Phase I (Rs 41.50 Lacs for the period 2007-12) and Phase II (Rs. 75.00 Lacs for the period 2013-18) by the University Grants Commission, New Delhi. It has also a received DST-FIST Level-I grant for Rs. 48.5 Lacs for the period 2006-11 from Department of Science and Technology (DST), New Delhi. Department also received Rs. 44.50 Lacs from Govt. of Gujarat in the year 2007 for starting interdisciplinary M. Sc. Nanotechnology course. Over and above this, the teachers of the department have been sanctioned funds close to Rs. 2 Crores by way of individual research projects from funding agencies like UGC, DST, DAE-BRNS, etc.

Courses:

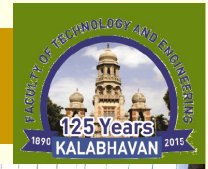
- Post-graduate course M. Sc (Applied Physics, Material Science (Nanotechnology))
- P. G. Diploma Solid State Electronics
- M.Phil. (Applied Physics)
- Ph. D

Major Thrust Areas:

- Condensed Matter Physics, Applied Optics, Optoelectronics and thin film devices, Display Materials, Theoretical Physics



Architecture Department



Introduction

The Department of Architecture is one of the oldest departments of the Faculty of Technology & Engineering and in India. The Degree Programme was started in 1954. The Kalabhavan Technical Institute of erstwhile Baroda State conducted a Four-year diploma in architecture in the pre-independence days. With the formation of the M. S. University of Baroda in 1949, these courses were taken over by the University and Kalabhavan was transformed into the Faculty of Technology and Engineering. Architecture became one of its five Departments at that time. Subsequently the diploma course was replaced by the (current) ten semester degree course which conforms with the Council of Architecture accreditation standards.

Major Laboratories and Equipment

Department has five well equipped drawing studios and one basic design studio. Audiovisual presentation, a small in-house library, a small computer lab, etc. facilities are also available in the Department. The Department also shares laboratories with the Departments of Civil Engineering, Mechanical Engineering, and Electrical Engineering of Faculty of Technology & Engineering.

Consultancy / Research

Faculty members have expertise in Sustainable Design, Ecology & Resource Management, Cultural Studies, Urban Planning, Urban Design, and Earthquake Resistant Architecture. The Department of Architecture set up a Consultancy Cell in 2000 and has been engaged in Consultancy work with various authorities such as the Vadodara Urban Development Authority (VUDA), Baroda Municipal Corporation (BMC), Department of Gujarat, Traffic Division, Western Railways, Lions Club and other Faculties within the University.

Other projects undertaken by the Department are Santramnagar, Bhuj, Kutch, Vision Vishwamitri (Revitalization) Project, Heritage Park for Vadodara Division - Western Railways, Heritage Listing, Narmada and Dahod District Regional Plans, etc. At MSU, the B.C.A./B.B.A. buildings, Extension to Sanskrit Mahavidyalaya, CASE Buildings, New Law Faculty Building, Convocation Ground, IASE building, Table Tennis Hall, and Donor's Plaza.

Courses:

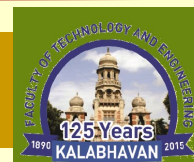
- Under-graduate course B.Arch.
- Post-graduate course in Urban and Regional Planning leading to the degree of MURP

Major Thrust Areas:

Architectural Design and Urban and Regional Planning based on a holistic awareness of environmental-ecological, socio-economic, functional, and aesthetic factors for conscientious and competent practice of the professions.



Chemical Engineering Department



Introduction

Chemical Engineering Department of The Maharaja Sayajirao University of Baroda was founded in 1963. It is the first department of Chemical Engineering to be established in the state of Gujarat. It also pioneered in post graduate studies in Chemical Engineering. In its five decades the department has produced more than 1500 graduates, around 250 Post-graduates and 19 Ph.D's. The department prides on receiving the coveted P.C. Ray award for the best B. E. project at an all India level by the Indian Institute of Chemical Engineers on five occasions. It has the credit of receiving the ISTE-IPCL award for the best ME thesis in Chemical Engineering on seven occasions.

The department takes immense pride in the success of its students who have excelled in every facet of the profession of Chemical Engineering from Academics to Entrepreneurship, from Operations to Management. To nurture young minds there is an active student's body "The Association of Chemical Engineering students" (ACES), to enhance their communication skills, promote sports activities and explore the hidden talent among the students.

Major Laboratories and Equipment

The department has a mini workshop and well equipped laboratories for UG students like mass transfer, heat transfer, fluid flow operations, mechanical operations, chemical reaction engineering, process control, chemical technology and computer aided design and simulation laboratory.

Research and Sponsored projects

The department has been awarded funds worth Rs. 50.00 Lacs by AICTE, and UGC for research and development in last 15 years. Major grants from MHRD were received earlier, infrastructural facilities for research include various instruments like, UV Spectrometer, Optical Microscope, Fermenter, Atomic Absorption Spectrometer, Cone and Plate Rheometer, and Laser diffraction particle size analyser, Gas Chromatograph, FTIR Spectro-meter, Dipcoater, BET apparatus, Refrigerated incubator shaker etc., which are used by the Masters and the Ph.D. students. Computers and Process Simulation Software were procured under the modernisation grant (MODROBS).

Courses:

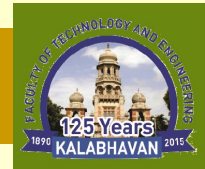
- Under graduate course B.E. (Chemical Engineering)
- Post graduate courses M.E. (Petrochemical Engineering, Polymer Technology)
- Ph. D

Major Thrust Areas:

- Environmental Chemical Engineering (Heavy metal removal, Toxic organic mitigation, Development of waste water treatment technologies, Metal reclamation from waste streams, e-Waste treatment)
- Polymer and Rubber technologies (Tire rolling resistance simulation, Rubber nanocomposites, Polymer degradation, Biopolymers and their applications)
- Thermodynamics of process systems (VLE and LLE studies, Polymer solution thermodynamics, Fluidization and process simulation)



Civil Engineering Department Applied Chemistry Department



Introduction

The Civil Engineering Department is one of the pioneer departments of the Faculty of Technology & Engineering. The department started its degree course (B.E.) in Civil Engineering in 1949. Keeping pace with the demand for advance knowledge in Civil engineering, the Post-graduate (M.E.) courses were started in 1956. Since then, the department is offering graduate, post-graduate and PhD programs in the areas of Civil Engineering. The department has also widened its horizon by getting involved in research and consultancy projects for many esteemed organizations. The department has been selected for funding under DST-FIST program. The department has established MSUCEAA (Maharaja Sayajirao University Civil Engg. Alumni Association) in November 1998 for providing platform for interaction with Alumni.

Major Laboratories and Equipment

Department has laboratories like Surveying, Fluid Mechanics, Environmental Engineering, Computer, Highways & Transportation Engineering. It has many advance and sophisticated instruments like Gas chromatography, Atomic absorption spectrophotometer, Stack monitoring kit, PM 2.5 sampler, Microbalance, Sand tank model, Tilting flume and Flow measuring devices, Marshall testing equipment, Automatic vehicle counter and classifier, Doppler radar speedometer and Conventional road materials characterizing equipments, EDM, Digital planimeter, Total station, Automatic level, Stereoscopes and other precision survey equipment. The computer lab is equipped with internet and advance software such as ARC GIS, GMS, Autocad, Autodesk Civil etc.

Research and Development

The department has successfully completed and ongoing sponsored projects of various organizations. Industry sponsored research projects are also undertaken. The department has recently completed few environment related studies assigned by National Green Tribunal. The department is recognized Auditor for Environmental Audit of Schedule I & Schedule II Industries. The department offers civil engineering testing of water, waste water, aggregates and bitumen etc. The department also offers value added consultancy services in areas like design & planning of water supply system, calibration of flow measurement devices, treatability studies for municipal, industrial waste water, hazardous waste, municipal solid waste etc., surface water & ground water modeling, hydrology and storm water, traffic behavior studies, pavement design and quality control of various roads, etc.

Courses:

- B.E. (Civil)
- M.E.(Civil) in Environmental Engg,
- M.E.(Civil) in Highway & Transportation Engg
- M.E.(Civil) in Hydraulic Structures
- Ph. D

Major Thrust Areas:

Environmental Management and Impact Assessment Studies, Monitoring of Environmental Mediums, Hazardous Waste Management. Optimization of Water Resources System, Reservoir Performance and Flood Related Studies, Hydroinformatics, Traffic Flow Analysis, Transportation Infrastructure Planning and Appraisal, Public Transport Management and Urban Transportation Planning & Road Safety



Computer Science and Engineering Department



Introduction

The Maharaja Sayajirao University was the first in the State of Gujarat to offer a Bachelor of Engineering Course in Computer Science and Engineering: BE(CSE) in the year 1982 and a Post-graduate Master of Computer Applications (MCA) course in the year 1984. Initially both the courses BE(CSE) and MCA were conducted under Electrical Engineering Department. In 1987 Department of Computer Science and Engineering was established as an independent department.

It has been our endeavor to bring excellence in every aspect of development and growth of departmental facilities both in teaching and extra-curricular activities. The main focus of the department is on strengthening UG/PG teaching, research in thrust areas and improving the infrastructure, which has resulted in reaching high degree of acceptance of students by IT industry reflecting almost 100% placement through campus recruitment.

Professors of our department are associated with National Board of Accreditation (NBA), UGC NET exams, UGC Standing Committee for Computer Centre and MCA course, AICTE committees, Selection Committees of teaching staff etc., in several capacities.

The Department is affiliated with other national level technical bodies like Computer Society of India (CSI), Institute of Engineers (IE), Institute of Electronics and Telecommunication Engineers (IETE) and Indira Gandhi National Open University (IGNOU). CSI, Vadodara Chapter Students Branch is co-ordinated by our department. In collaboration with CSI, the department has been organizing several workshops, seminars and technical talks.

Major Laboratories and Equipment

The department has six well established laboratories. Computer labs are equipped with nearly 200 personal computers of i5, dual core, C2D etc. Apart from that laptops, servers, overhead DLP projectors, printers and scanners are also available. Internet Facilities are available on most of the machines of the department. DLP projectors are available in all classrooms of the department. All classrooms are renovated and well-furnished.

There is a Seminar Hall with around 70 i5 machines as well as a well equipped audio/video sound system.

Courses:

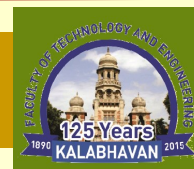
- Under graduate course BE (Computer Science and Engineering)
- Post-graduate course MCA (Master in Computer Applications)
- Ph. D

Major Thrust Areas:

- Data and Text Mining, Distributed Computing and Bioinformatics, Geographical Information Systems, Service Oriented Architecture, Network & Cyber Security, Artificial Intelligence and Distributed Systems.



Electrical Engineering Department



Introduction

The Department of Electrical Engineering, established in 1949, is one of the largest departments in the Faculty. The department introduced Post-graduate ME course in 1956 and the BE (Electronics) courses in 1965. The BE (Electrical) course covers electrical power engineering, power systems, electrical machines and high voltage technology. The BE Electronics course includes subjects like electronics, communications, microprocessors and digital systems, industrial electronics, signal processing, control systems and Instrumentation. The Department also teaches basic electrical engineering, electronics and instrumentation to other departments of the Faculty of Technology & Engineering. Syllabi of all courses are reviewed every year and course structure is reviewed at three years intervals to incorporate the current state of the technology.

Major Laboratories and Equipment

The department has 14 well equipped laboratories including Electrical Machines, Analog Electronics, Advanced Machines, Microprocessor, High Voltage, Relay, Microwave and Fiber Optics, Radio/TV and digital Communications, DST-FIST Research lab, Instrumentation, Measurements, Industrial Electronics, Digital Electronics & Control Systems labs.

The Computer labs are equipped with a total of 110 computers State of Art equipment like spectrum analyzer, logic analyzer, GHz oscilloscope, digital arbitrary signal generators, digital signal processors, fiber optic and laser communication equipment, dedicated computers and specialized software like MATLAB, ORCAD, Altera, Quartus, SKM Power tools, etc. are available for advanced studies, research and students' project work.

Research and Sponsored projects

Ours is a DST-FIST program sponsored department and also a recipient of supplementary funding through AICTE (R&D, MODROBS) grants. Department has completed several R & D and Modernization schemes sanctioned by AICTE, UGC and DST which include projects like IMPACT and SSS (World Bank / SDC/ DST). GUJCOST, Govt. of Gujarat and Technical Societies like IETE and IEEE have sponsored various technical student activities and projects. The Department also has M.O.U. with ABB and ERDA for collaborative activities.

The department offers Design Consultancy, Simulation and Analysis, Prototype Development and Testing and Certification facilities for various Electrical and Electronic products including High Voltage, Industrial Electronics, Communication and Digital equipment.

Courses:

- Under-graduate course B.E. (Electrical Engg., Electronics Engg.)
- Post-graduate course M.E. (Electrical Power Engineering, Microprocessor Systems Applications, Industrial electronics and Automatic Control and Robotics.)
- Ph.D (Electrical Engg.)

Major Thrust Areas:

High Voltage Engineering, Power Systems, Microprocessor Applications, VLSI, Optical and Digital Networks, Industrial Electronics and Control Systems and Robotics



Mechanical Engineering Department



Introduction

In 1949, a degree program of 3 year duration in [Mechanical & Electrical] began. From 1952, the two degrees were separated with each of three year duration. To maintain the needs for electro-mechanical engineers by industries, a supplementary degree of one year duration was offered to electrical and mechanical engineering degree holders. This scheme was discontinued in 1967. In 1952, Post-graduate courses were started.

Major Laboratories and Equipment

Besides training of student in conventional engineering trade practices like smithy, moulding, carpentry, fitting, turning, shaping & welding in traditional workshops, the students are exposed to laboratories like

- > Heat Engines Lab
- > Dynamics of Machines Lab
- > Unconventional Machining Lab
- > Heat Transfer Lab
- > Machine Tools Lab
- > Refrigeration & Air Conditioning
- > CAD/CAM/CIM Lab
- > Measurements Lab

Research and Sponsored projects

The department has been awarded funds worth Rs. 160.00 Lacs by BARC, Mumbai, DAE-BRNS, GEDA, UGC for research and development.

Apart from research projects, the department has been able to get funding for laboratory developments mainly from MODROBS, TAPTEC and MNRES amounting Rs. 100 Lacs.

Siemens Centre of Excellence: A Feather in the Cap of The Department on the eve of 125 the Anniversary of 'Kalabhavan Workshop'

Due Initiation of the proposal by the department in June 2013, Government Of Gujarat, under the Public-Private-Partnership [PPP] scheme, has sanctioned 'Siemens Centre of Excellence in Industrial Automation' to be set up in the department, with total outlay of Rs 102.00 Crores. The Centre of Excellence will impart state-of-art education and industry oriented training and will also establish as significant bodies of research on innovative learning in technical education.

Courses:

- Under-graduate course B.E. (Mechanical Engineering)
- Post-graduate course M.E. (Jet propulsion and Gas Turbine Plants, Production Engineering, Thermal Science)
- Ph. D

Major Thrust Areas:

Thermal Engineering
Science, Unconventional
Manufacturing Processes,
Computer Integrated
Manufacturing,
Alternative Energy
Sources, Turbo Machines
and Fluid Power
Engineering, Robotics
Refrigeration and Air-
conditioning



Metallurgical & Materials Engg. Department



Introduction

Department of Metallurgical Engineering of M.S University, Baroda, which started in the year 1966, is the only department for this discipline in the state of Gujarat. Under this fortunate setting, the department continues its journey towards excellence and quest for quality in education and research. Renaming of the department was done in the year 2007 as Department of Metallurgical and Materials Engineering. This is the only department in the State of Gujarat offering UG, PG and PhD degree in Metallurgical and Materials Engineering.

Major Laboratories and Equipment

The department has laboratories for Physical Metallurgy, Mineral Dressing, Foundry, Corrosion, Analytical Techniques, Melting Unit (Induction Furnaces and other furnaces), Heat Treatment, Powder Metallurgy, Thin Film Technology, Process Metallurgy, Scanning Electron Microscopy, X-ray Diffraction laboratory and Welding Metallurgy. These laboratories are equipped with Scanning Electron microscope, Image analyser, Micro hardness tester, Projection Microscope, Stereo microscope, Polishing machine, Magnetic separator, Crushers, Classifiers, Ball mill, Flotation cells, Jigging, Pelletiser, Carbon equivalent meter, Simulation software, Sand testing equipment, Potentiostat/galvanostat corrosion measuring equipment, XRF, Strohlein's apparatus, Heat treatment furnaces, Microwave furnace, Hydraulic press, Sintering furnace, High-energy mill, P.V.D., Electrobeam gun deposition unit, XRD, Atomic absorption spectrometer, SEM with EDAX, MIG welding machine, TIG welding machine, SMAW machine, Spot cum projection welding machine, Microplasma, narrow gap, synergic pulse MIG/MAG welding machines, Pin on disc type wear testing machine, Pycnometer for density measurement.

Courses:

- Under-graduate course B.E. (Metallurgical & Materials Engineering)
- Post-graduate course M.E. (Industrial Metallurgy, Materials Technology)
- Post-graduate course M.E. (Welding Technology) Sponsored by L&T, Ratnamani Metals and Tubes, and INOX India.
- Ph. D (Met. & Mats. Engg.)

Major Thrust Areas:

Process Metallurgy, Corrosion, Ferrous / Non Ferrous Alloy Development, Thin Film Technology, Powder Metallurgy, Welding and Composite (MMC)

Research and Sponsored projects

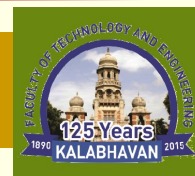
The department has been a recipient of various research projects from funding agencies like UGC, DST, AICTE, MHRD, DAE-BRNS, etc. over the past 30 years or so. More recently, the department has received funds from DAE-BRNS amounting to around Rs. 27.4 Lacs.

The department also extends testing and consultancy services to industries and academic institutions using its sophisticated testing facilities like Scanning Electron Microscope, X-Ray Diffractometer, Image Analyser, X-Ray Fluorescence Spectrometer, Corrosion Testing facilities, etc.

Committed to Excellence in Technical Education



Textile Chemistry Department



Introduction

The Textile Chemistry Department is the oldest department of The “Kalabhavan” Technical institute which was started in the year 1890, by his Late Highness Maharaja Sayajirao Gaekwad III of Baroda, in the Faculty of Tech. & Engg. At that time Textile Chemistry was popularly known as ‘Rangshala’, where various artisan courses were conducted on Bleaching, Dyeing, Sizing and others.

After independence, the year 1949, The Maharaja Sayajirao University was established and the Faculty of Technology & Engineering was started. Department of Textile Chemistry was also commenced with the establishment of the Faculty of Tech. & Engg. Since then, the department has kept moving from diploma courses to doctoral programme. The department produces textile chemical technologists suitable to work at various levels in the industries and research institutes. The students are absorbed in different organizations like Textile Mills, Dye & Auxiliary manufacturing units, Fibre/Polymer plants, etc.

Major Laboratories and Equipment

The department has well equipped laboratories namely Textile Chemistry Lab, Dye house Lab and Testing & Research Lab. The department regularly procures modern machineries and equipments to improve the quality of teaching and training to the U.G. & P.G students.

Major instruments of the department includes Contact Angle measuring system, F.T.I.R, Computer Colour Matching with UV-VIS Spectrophotometer, Lab Padding Mangle with Stenter & Compressor Open bath beaker dyeing(3 numbers), Image Analyzer, Tensile Tester (for yarn/fabric), Printing Machine, Winch Dyeing Machine, Lab Jiggar, Steam Ager, Colour Matching cabinet, Fad-o-meter, Launder-o-meter, Perspirometer, Crockmeter, etc.

Research and Sponsored projects

The department has completed many research sanctioned by various Government agencies like UGC, AICTE, and HRD. Also some of the minor projects are sanctioned from the University and local Industries. The department is presently coordinating RPS project funded by AICTE, New Delhi.

Courses:

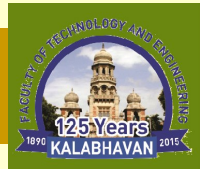
- Under-graduate course Post B.Sc. B.E. (Textile Chemical Processing)
- Four Years UG Programme B.E. (Textile Chemical Processing)
- Post-graduate course M. E. (Textile Chemical Processing)
- Diploma in Textile Chemistry (B.Sc. DTC) (Post B. Sc.)
- Diploma in Textile Chemistry (DTC)
- Ph. D

Major Thrust Areas:

Synthesis of Nano-particles and their application to textiles, Eco-friendly Textile Processing, Pollution control in textile effluent, Medical Textiles, Chemical Modification of Textile Fibers, Natural dye extraction & application



Textile Engineering Department



Introduction

In 1890 Kalabhavan Technical Institute was established and Textile Engineering Department was a part of it then. It was then known by the name “RANGSHALA” and during that time artisan courses were offered in Weaving and Sizing till we became University. First step was offering the Certificate course in Weaving (1897) and the Diploma in Weaving Technology (1907). Gradually the department has developed offering Degree, Post graduate and Ph.D. programmes.

Major Laboratories and Equipment

Department has full-fledged laboratories for Physical Testing, Spinning, Weaving & weaving preparatory, Garment manufacturing, Knitting and Manmade Textiles. Laboratories in the department are equipped with the state-of-the-art testing facilities and offer testing of fibers, filaments, yarns, fabrics, geo textiles, medical textiles etc. Some of the latest machines procured are Autoconer X5, Single end sizing machine, Sample loom, Chute feed system for the blow-room, Rieter make Card machine, Comber, Himson make Two for one twister, Rotor spinning machine and the HVI instruments besides the Premier make evenness tester. It is contributing well in the area of skill development also.

Research and Sponsored projects

The department has added another feather to its cap by having been selected as Anchor Institute by Industries Commissionarate Govt. of Gujarat in 2009. Department is engaged in solving problems of various industries like IPCL, Shri Dinesh Mills Ltd, Lohia Corp Ltd, Patwa-Kinariwala Electronics, NIMAKO synthetics, KBS Filters, Saurer-Peass Industrial Engineers pvt.ltd., Capiq Engineering Industries etc. The department has contributed in performance study of new Retro Fit Autolevellers with Capiq Engineering Industries, Standardization of requirements and specifications of packing bags for GSFC, development of Puncture resistance tester and Creep testers for Industrial Fabrics, in collaboration with TAIRO, product development/improvement of functional characteristics of woven industrial fabrics and Geotextiles with High-tech speciality fabrics and MasturlalChunilal Industrial Fabrics Ltd. Various proto-types machines like Friction spinning, Roller card, Nep tester, Air jet spinning, Tandem spinning, 3D shape weaving, air-jet type mechanical texturing machine, new type of filter winding machines have been developed and 2 patents have been filed. Research project sponsored by world renowned Oerlikon-Schlafhorst Company was also undertaken in the department.

Courses:

- Under-graduate course
B.E. (Textile Technology, Textile Engineering)
- Post-graduate course
M.E. (Textile Engg, Manmade textiles)
- Diploma in Textile Technology (DTT)
- Ph. D

Major Thrust Areas:

Technical textiles, Non-woven, Composites, Nanotechnology and Computer Aided Designs



Water Resources Engineering and Management Institute



Introduction

Water Resources Engineering and Management Institute (WREMI) is the youngest department of the Faculty of Technology and Engineering established in 1991. In view of the need of the state, the Govt. of Gujarat took an initiative for establishing Water Technology and Management Centre to run an undergraduate programme at MSU. In 1982, Govt. of India entered into a bilateral agreement with the USA as a result of which the Water Resources Management and Training Project of USAID became a reality. Initially, the Institute was a part of Civil Engineering Department of Faculty of Technology and Engineering and acquired the status of a full-fledged department from 1991. WREMI is the only institute in India which offers Under Graduate, Post-graduate and Ph.D courses in Irrigation Water Management.

Major Laboratories and Equipment

Department has 2.5 ha field micro irrigation and sprinkler irrigation lab, advanced indoor micro irrigation lab, rainwater harvesting project, computer lab, soil science lab, irrigation lab. Major equipment include micro irrigation system, sprinkler irrigation system, models on rain water harvesting systems, 24 channels and 16 channel data loggers with pressure transducers, Various flow measuring devices, Softwares: DSS_ET, SCS_Designer, Hydrology Calculator, SPSS, ILWIS 3.0, MATLAB.

Research and Sponsored projects

Since 1994 WREMI has completed 11 research schemes sponsored by Ministry of Water Resources, Govt. of India, Gujarat Council of Science and Technology, DST and Ministry of Environment and Forest, Govt. of India worth Rs. 8.86 million. The department has nodal coordinator project of the order of Rs. 40 Lacs total from AICTE -NCP, New Delhi of which Rs. 6 Lacs have been sanctioned for Research scheme at nodal level.

Courses:

- Under graduate course B.E. (Civil—IWM)
- Post-graduate courses M. E. (Civil) Irrigation Water Management
- M. E. (Civil) Water Resources Engineering
- Ph. D (Civil, Irrigation Water Management)

Major Thrust areas:

Climate change and its impact on Water Resources, Computer Aided Design in Water Resources Engineering, Computer Aided Canal Operation, Computer Aided Reservoir Irrigation Water Management,, Soft Compting Techniques in Water Resources Engineering Micro Irrigation Systems, Operation Research in Water Resources Engineering and Management Sedimentation, Watershed Development and Management, Application of GIS and Remote Sensing in Water Resources Engineering



Centers of Excellence



Siemens Centre for Industrial Automation (Rs. 102 crores)

Government of Gujarat, under its Public Private Partnership (PPP) scheme has sanctioned one of the five Centers Of Excellence (CoE) in Industrial Automation to the Department of Mechanical Engineering of The M. S. University of Baroda, Vadodara in association with Industries Commissioner Govt. of Gujarat, SIEMENS, Gurgaon, DESIGN TECH, Pune with total outlay of Rs. 102 crores. Under this Center of Excellence, seven state of art laboratories including Machine Lab, Mechatronics Lab, Electrical Lab, Automation Lab, Process Control Lab, Advanced Manufacturing Lab and Design Validation Lab are being set up at Mechanical Engineering Department, spread over more than 8000 square feet area.

This Center of Excellence will improve the quality of technical education by imparting industries need-oriented knowledge of engineering design, manufacturing, analysis and management to create a pool of skilled manpower acceptable throughout the world. It is also envisaged to offer UG & PG programmes in the area of ‘ Mechatronics’ in future. This CoE will not only boost lab infrastructure of M. S. University of Baroda but will be a vital catalyst, in ensuring the growth of industries in the state.

Anchor Institute (Rs. 10 crores)

In 2009, the Department of Textile Engineering was selected as a Centre of Excellence, named as the ‘Anchor Institute’ by Industries Commissionerate, Government of Gujarat with an estimated outlay of 10 crores under the scheme for “Technical competence and Enhancement of skilled manpower”. The department has been entrusted with the responsibility of grooming skilled manpower at different levels by imparting various technical training suited to specific requirement of Textile Sector and Allied Industries. The objective of the Anchor Institute are to design specific modules for ITI / Polytechnic / Engineering so that it can match Industry need. It aims to encourage faculties more towards R & D, identifying new areas of growth and consultancy and to create opportunities for generation of employment.



Centers of Excellence (contd.)



Centre of Excellence in Polymers (Rs. 8 crores + CIPET Rs. 8 crores)

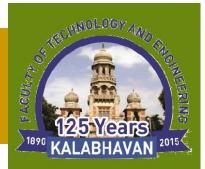
In 2012, the Department of Applied Chemistry was recognised as the 'Centre of Excellence In Polymers' by the Industries Commissionerate, Government of Gujarat. This grant was sanctioned to undertake research in polymers with specific reference to applications in the automobile sector. The centre will primarily develop infrastructure for testing as well as providing consultancy to medium and small scale manufacturers of polymers. Another major initiative of the Centre will be to train personnel in industries around Vadodara in this field.

Centre for Industrial Mathematics

The Center for Industrial Mathematics was started in January, 2012 at The Faculty of Technology and Engineering, The Maharaja Sayajirao University of Baroda, Vadodara to establish a close collaboration with industries in the areas of bilateral interest and to provide administrative and academic support to the faculty and students working on industrial projects. The objectives of the Centre are to promote Industrial Mathematics related activities in western part of the country by organizing workshops and training programs, collaborative industrial projects, joint discussions / meetings for industrial problem solving.



Awards and Scholarships



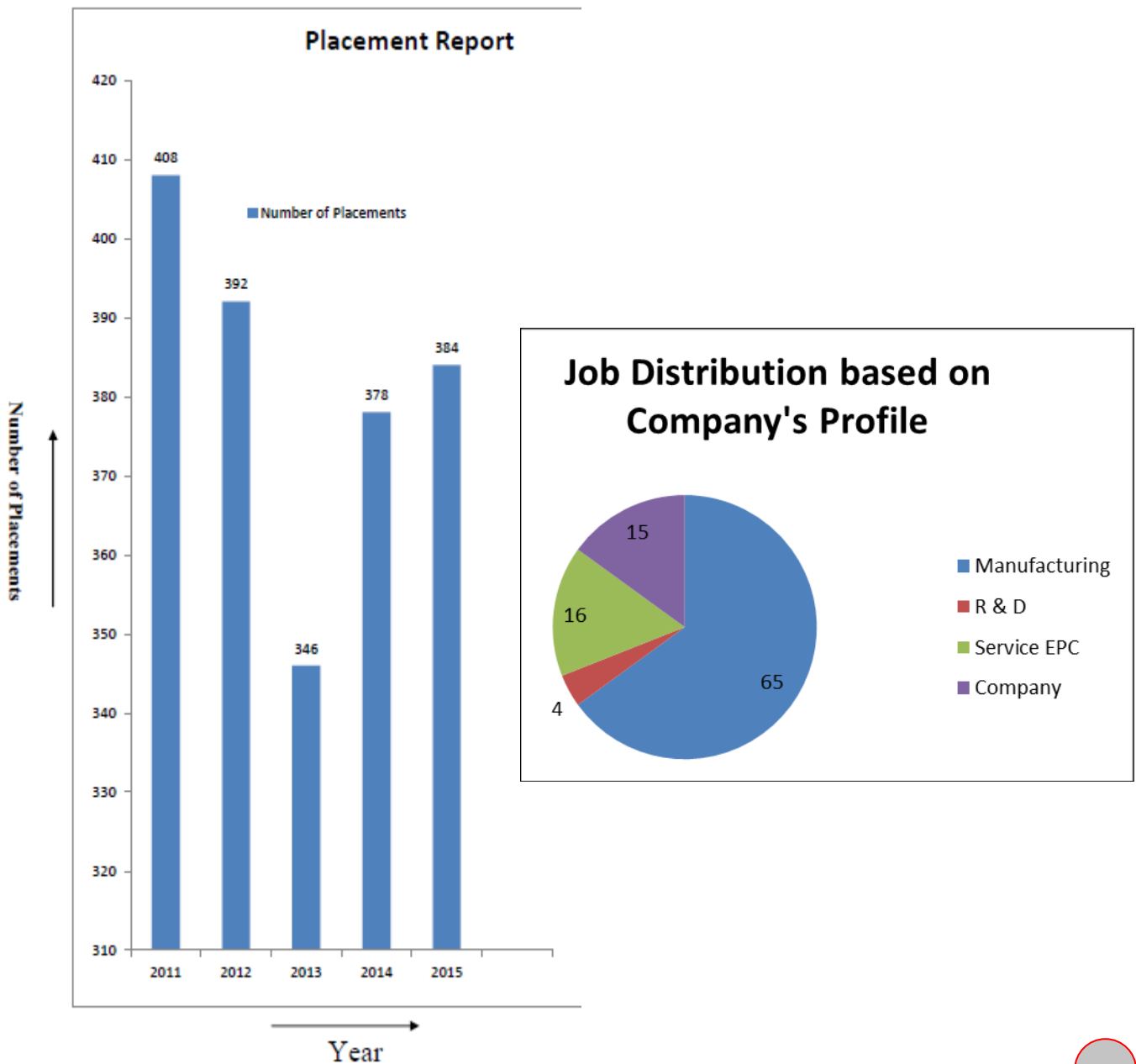
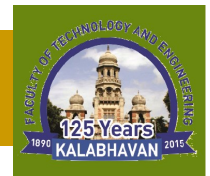
For financial support students are given different types of government and private scholarships. Government scholarships include Post Metric Scholarship for SC, SEBC and ST students. Private sponsored Scholarships are Lt. Col. Altodaria Saheb (Open Category), Anhat Education Trust, Shri Narhari Parivar Manav Shushrutha Trust, Srimati Radhikaben Himmatbhai Patel Trust, Free Students Scholarships and Merit Scholarships, ABB Jurgen Dorman Foundation Scholarship, M/S Harris & Menuk Chennai Scholarship etc.

The various departments of Faculty of Technology and Engineering award about 50 gold medals in different disciplines for the achievers at under graduate and post graduate levels.





Training and Placement Cell



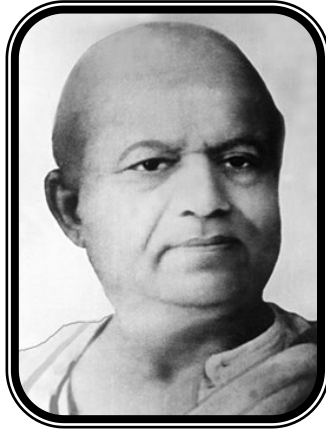
Students at the Faculty of Technology and Engineering of the Maharaja Sayajirao University of Baroda are recruited in various premier companies and organisations with packages comparable with those of the IITs and NITs. Our students have proved themselves to be excellent in technical competence as well as soft skills. Our students are able to get through all the competitive examinations of national and international level for higher degree courses like, GRE, GMAT, TOEFL, IELTS and CAT, etc. Through these exams they are able to secure admission for themselves in colleges of America and other countries as well as pursue M.E. or M. Tech. in IITs and Business Management courses leading to MBA degree in premier management schools of the country.



Alumni Cell



Late Shri Amarsinh Chaudhary



Late Shri Dadasaheb Phalke



Dr. Chandrakant Thatte



Shri A. K. Aggarwal

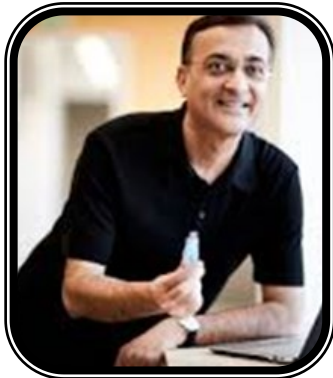
Few of our Eminent Alumni



Shri Vijay Bhatkar



Dr. Jaynarayan Vyas



Shri Ajay Bhatt



Dr. Vishal Sikka



Dr. S. S. Mantha

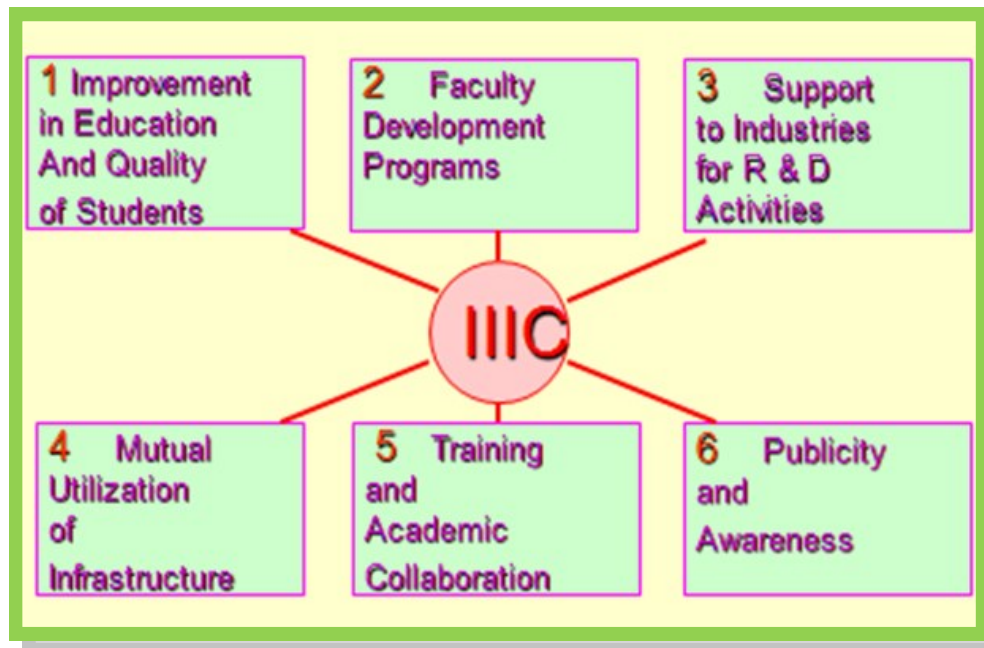


Shri Amit Shah

The Faculty of Technology and Engineering is one of the oldest institutions imparting education and training to the best minds from within and outside Gujarat for the past 125 years. Several of them have progressed remarkably in their lives and have accomplished great feats in their careers. They have brought laurels not only to themselves but to their alma mater. Celebrating 125 years of glorious past, FTE is strengthening the bond between the past and the present students to usher in a golden future for the budding engineers. We have alumni association in various departments of the Faculty besides a Faculty level body for this purpose. The students from within the country as well as abroad are active members of these Cells and have a lion contribution in growth of this Faculty.



Institute - Industry Interaction Cell

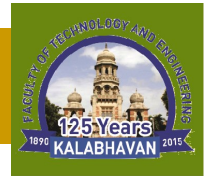


The Institute –Industry Interaction Cell (IIC) of the Faculty of Technology and Engineering is a dedicated cell to promote the close interaction of industry and various departments of the institute. The IIC facilitates consultancy, sponsored R&D projects and industrial and academic trainings those which are not prescribed in the syllabus in addition to conducting industrial exhibitions and interaction meets. The initial focus of this cell was to closely interact with industries situated in and around Gujarat State and later expand the efforts to move the partnership and activities across India and abroad. Industries and Technical Institution have a strong mutuality of interest which forms the basis of a partnership between them. This cell will enable the people and industries in particular to know about the facilities on training, testing and research activities in the Institute’s departments.

The objectives of IIC are to arrange industrial training for students and identify student project work in Industries. To encourage Industry to collaborate in Industry Study Tour and placement of students in Industries, to interact with R&D Organizations for conducting joint research work involving faculty/scientists and students/research scholars etc.



Students' Events



Footprints

“Foot Prints”, the largest technical extravaganza of Gujarat is organized yearly by the students of the Faculty of Technology & Engineering since more than a decade. In a unique way “FootPrints” has always kept the budding engineers engrossed in its evergreen innovating spirit, pioneering ideas and ultimately urging them to think beyond. As a technical event, “FootPrints” includes a variety of events ranging from guest lectures, workshops, technical exhibitions, concerts and various such events. Evolving as a hub of radical thinking and activity, this event ensures development in all dimensions for the future of the society.



Paramarsh

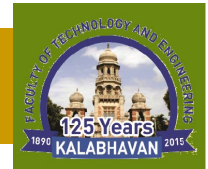
“Paramarsh” is the largest non technical fiesta in the western zone organized by the students of the Faculty of Technology and Engineering since 2000. “Paramarsh” aims at instilling the qualities like ‘Leadership’, ‘Art of Oration’, ‘Science of Deduction’, ‘Spirit of Adventure’, ‘Team Spirit’, ‘Sportsmanship’ and ‘Creativity’, which are essential for excelling in the corporate sector. Apart from this, various workshops and interplays are organized involving several eminent personalities.

Prerna

“Prerna” is a unique social event organized at National level by the students of Faculty of Technology and Engineering for the last 8 years. Now an active movement, “Prerna” provides a platform to showcase the abilities of the differently abled students. “Prerna” is also active in association with various institutes throughout the year by celebrating various festivals with them and being a part of different causes in the city.



Students' Activities



National Cadet Corps

NCC is one of the biggest youth forums which brings the vibrant students together and guides them in a proper direction so that they can play a constructive role in the development of the country. Besides military training, NCC provides an excellent opportunity for various adventurous activities like Para Sailing, Gliding, Para dropping, Training Camps, National Integration Camps, Rock climbing and Mountaineering activities Boat Pulling/Sailing and Ship Modelling which helps the students to become well disciplined members of the society.



National Service Scheme

The National Service Scheme (NSS) run by the Department of Youth Affairs & Sports under the ministry of Human Resource Development caters to the development needs of the youth in the University. The department runs two kinds of programmes, i.e., National Service Scheme (NSS) and Nehru Yuva Kendra (NYK) for organised youths. NSS has now taken a form of movement through which teachers and students are involved jointly for their effective participation in developmental work as well as for making education socially relevant.





International Interactions



The Faculty of Technology and Engineering has academic and research interaction with the following institutes world-wide:

- Oxford Center for Industrial and Applied Mathematics (OCIAM)
- University of Southampton, UK;
- University of Kaiserslautern, Germany;
- Witwatersrand University, Johannesburg, South Africa;
- ICTP Italy;
- Institute für Techno und Wirtschaft Mathematik (ITWM), Germany;
- University of Twente, Netherland;
- University of Delaware, USA.
- University of Eastern Finland, Finland
- Sumy State University, Ukraine;
- University of Connecticut, USA;
- Institute for Technical Optics; University of Stuttgart, Germany;
- Medical University of Vienna, Austria;
- Israel and Kwangwoon University, South Korea;
- SIMAP Lab, University of Joseph Fourier, Grenoble, France;
- Laboratoire Charles Coulomb, Université Montpellier, France.
- Many More....

MOU with Lappeenranta Institute of Technology, Finland, and The Institute National des sciences appliqués de Rouen, France



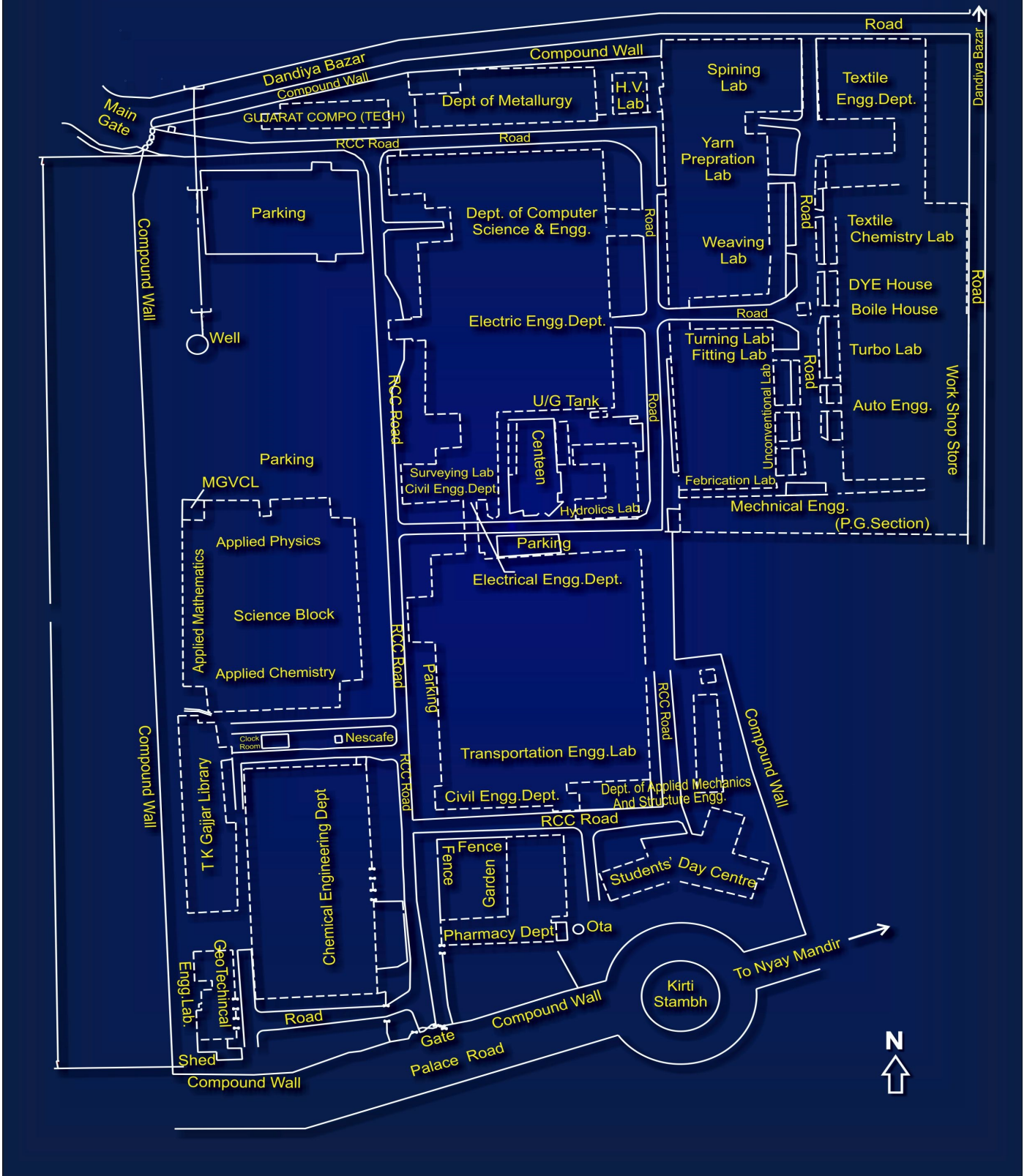
Kalabhavan's 125 years Celebration (1890 - 2015)

(www.kalabhavan125.com)



Let Us Unite for this Grand Celebration

Faculty of Technology and Engineering The Maharaja Sayajirao University of Baroda



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